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Richard Breen

Social Mobility in Europe

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Edited by
Richard Breen

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FOREWORD

Work on this volume began when I held the chair of Social Inequality in the Department of Political and Social Sciences of the European University Institute, Florence, and I would like to record my thanks to that institution, and particularly the Research Council of the EUI, for its support. The book was concluded after I moved to Nuffield College, Oxford, and it would be hard, not to say impossible, to imagine a setting more conducive to academic research.

Over the course of many years' work on social mobility I have benefited greatly from conversations and discussions with a large number of people, including the contributors to this book, but three of my collaborators should be singled out. Chris Whelan introduced me to the study of social mobility when we were colleagues at the ESRI, Dublin, and together we have written more on the topic than I can easily call to mind. Janne Jonsson and I have passed many enjoyable hours working on social mobility and related topics, many of them spent in the Swedish Institute for Social Research, an institution for whose continuing hospitality I am extremely grateful. Ruud Luijkx is also the co-author of three chapters in this volume, two of them written with me. The analyses reported in our chapters are, indeed, the tip of the proverbial iceberg. In trying to make sense of 30 years' mobility data from 11 countries many wild geese were chased and many alleys were found to be blind, but it was a hugely enjoyable undertaking (at least in retrospect) which, as I hope the reader will discover, produced a few unexpected and interesting results.

I owe a particular debt to John Goldthorpe – as, indeed, must anyone who has an interest in social mobility. His work with Robert Erikson was the starting point for this book and, beyond that, in conversations and collaborations over the ten years of our acquaintance (latterly as colleagues), I have learned a great deal – not only about social mobility – and profited enormously. Many other people have contributed to this book in ways both direct and indirect but I should particularly like to thank Lin Sorrell at Nuffield and Liz Webb at the EUI for all their help, Robert Erikson, David Firth and Adam Swift for their comments and assistance, and my colleagues and friends in Nuffield College, in Research Committee 28 of the International Sociological Association, and in the European Consortium for Sociological Research.

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LIST OF ABBREVIATIONS

A–C–P	Age–Cohort–Period
AF	Affinity matrices
AFX	Additional positive affinity term
BGES	British General Election Surveys
bic	Bayesian information criterion
CASMIN	Comparative Analysis of Social Mobility in Industrial Nations
CMLR	Conditional Multinomial Logistic Regression
CnSF	Constant social fluidity model
CSO	Central Statistical Office
d.f.	Degrees of freedom
EGP	Erikson, Goldthorpe, Portocarero
FJH	Featherman Jones Hauser
GHS	General Household Survey
HDI	Human Development Index
HI1	Hierarchical movements 1
ILO	International Labour Office
IMS	Increased merit selection hypothesis
IN	Inheritance effect
ISCO	International Standard Classification of Occupations
ISEI	International Socio-Economic Index
LmSF	Log-multiplicative social fluidity
LZ	Lipset–Zetterberg
OMS	Oxford Mobility Study
PAF	Postcode Address File
PSUs	Primary Sampling Units
SEGs	Socio-Economic Groups
TD	Total downward
TMR	Total Mobility Rates
TNV	Total non-vertical
TU	Total upward
TV	Total vertical
Unidiff	Uniform difference

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1 The Comparative Study of Social Mobility

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The study of social mobility is concerned with the description and analysis of the trajectories of social position that individuals and families follow, and research into intergenerational class mobility (i.e. the relationship between the class position an individual occupies and the class in which he or she was brought up) has long been one of the core areas of empirical sociological research. During the past half century, many books and papers have been written dealing with intergenerational mobility in specific locations, but, within the past fifteen or twenty years, the focus has shifted towards an emphasis on internationally comparative studies, of which a good example is Erikson and Goldthorpe's *The Constant Flux: A Study of Class Mobility in Industrial Societies* (1992). There has also been a growing interest in studying how social mobility patterns change over time: notable examples include the work of Featherman and Hauser (1978), Hout (1988), DiPrete and Grusky (1990), Ganzeboom et al. (1989), Goldthorpe and Portocarero (1981), Goldthorpe (1995), Hauser and Huang (1997), Luijkx and Ganzeboom (1989), Jonsson and Mills (1993), and Vallet (1999). This book continues the trend towards comparative analysis and marries it to the study of temporal change, reporting, as it does, on the analysis of social mobility in eleven countries over a period of almost thirty years.

The eleven countries represented in this study are Britain, France, Ireland, West Germany, the Netherlands, Italy, Sweden, Norway, Poland, Hungary, and Israel, and the period covered is from the early or mid-1970s to the mid-or late-1990s. The book contains chapters dealing with each country, written by an author or authors from that country. In each case the authors base their analyses on datasets comprising as many high quality, nationally representative surveys carried our during this period as possible. There are some common elements to each of these chapters but, by and large, each authorial team was asked to analyse and discuss the trends in social mobility in their own

country and provide some explanation of them. This has necessarily led to different approaches as circumstances dictated. But, in addition to the eleven single country chapters, there is a further empirical chapter, the aim of which is explicitly comparative. Here the datasets from all the countries have been combined to allow formal analyses of the differences between countries and the changes through time. By using this design it was hoped to marry the advantages of an edited collection of country chapters (namely, the insight that can be brought by authors who have extensive knowledge of their own language, culture, and institutions) to those of a proper comparative study (the ability to test, rather than simply hypothesise, patterns of similarity and difference between societies and of variation over time).

This book is a collaborative venture—and not only in the obvious sense that it has involved the work of many authors. It is collaborative because it is one of the fruits of a long sustained programme of international social mobility research that has been associated with Research Committee 28 (Social Stratification and Mobility) of the International Sociological Association. Scholars associated with this group have created a rare phenomenon in sociology, namely, a research paradigm. Thus the study of social mobility—and particularly of intergenerational class mobility—is an area that, to a greater extent than probably any other in the discipline, is characterised by an interest in addressing a set of widely agreed upon questions, and shared sets of concepts and methods applied to this end. As a result, all of the authors of this book's chapters have used the same schema for measuring social class position, have drawn on the same body of methods for analysing their data, and have, to a large extent, orientated their analyses around tests of the same group of theories. Without such a broad basis of common assumptions it is doubtful whether this book could ever have been put together.

The motivation for this study was our lack of detailed knowledge about how patterns of social mobility had evolved since the 1970s and whether societies were becoming more similar or more diverse in this respect. We took 1970 as the baseline for our study because we know a great deal about national variations in social mobility at that time largely thanks to the CASMIN (Comparative Analysis of Social Mobility in Industrial Nations) project which culminated in *The Constant Flux* (1992). Here Erikson and Goldthorpe used cross-sectional data (i.e. one mobility table per country) drawn, for the most part, from the late 1960s and early or mid-1970s, to compare patterns of social mobility between, initially, nine European countries: England and Wales, France, Northern Ireland, Scotland, the Republic of Ireland, West Germany, Sweden, Poland, and Hungary. Supplementary analyses were also carried out on data from Czechoslovakia, Italy, and the Netherlands (though these data came from the 1980s rather than the 1970s) and also from the United States, Australia, and Japan (again using data from the early 1970s).

There is considerable overlap in the coverage of Erikson and Goldthorpe's study and the present one: nine of the countries represented in their work are included here (eleven if we count England, Wales, and Scotland separately, though in our analyses we consider them together) and, indeed, the first mobility table in the time series of tables for some of these countries is the same as that used by Erikson and Goldthorpe. The United States, Northern Ireland, Australia, Japan, and Czechoslovakia are not included in the present study, while Israel and Norway were absent from *The Constant Flux*.

What has happened to social mobility in the last decades of the twentieth century is what the chapters in this volume will tell us. But before turning to the results it may be useful to discuss what we might have expected to happen in the light of the major theories concerning social mobility. To do this we first need to draw an important distinction.

Absolute and relative mobility

Sociological studies of social mobility can be divided into two broad types. Studies of *intergenerational* mobility, such as are reported here, examine the relationship between people's current circumstances and those in which they originated. What we mean by 'circumstances' is itself variable. The focus might be on the relationship between parents' and children's earnings or, as here, on the class position an individual occupies and the class in which she or he grew up. Studies of *intragenerational* mobility look at the change in circumstances during an individual's own (working) life. A very common strategy here is the analysis of the relationship between the social class of first job and of current job, but many studies of intragenerational class mobility are much more sophisticated than this, seeking to model respondents' detailed career trajectories.[1] The data demands for the study of class career mobility are far greater than for the study of intergenerational class mobility and it is perhaps no accident that the kind of large cross-nationally comparative studies of intergenerational mobility that have been carried out have no counterpart in the study of career mobility.

The basic datum for the study of intergenerational social mobility is a mobility table. Such a table is normally constructed using information drawn from a sample of people of the working age population of a particular country at a particular point in time. Each member of the sample is allocated to a cell of the mobility table according to his or her own class position and the class position of his or her family when he or she was growing up (usually around the age of fifteen). This cross-tabulation of class origins by current class position (or class destination) quite easily reveals patterns and rates of

[1] Good examples are provided in the collection edited by Mayer and Tuma (1990).

mobility, where mobility is understood simply as movement between origins and destinations. These sorts of analyses are usually said to refer to absolute mobility. But the mobility table also lends itself to the analysis of relative mobility or social fluidity and, indeed, contemporary mobility research tends to pay a good deal more attention to this than to absolute mobility. Social fluidity concerns the relationship between class origins and current class position: specifically it is based on the comparison, between people of different class origins, of their chances of being found in one destination class rather than another. If these chances were the same regardless of origins then the mobility table would display perfect mobility: the class in which a respondent was found would not depend on (would be independent of) the class in which she or he was brought up. It is an empirical fact that perfect mobility is never observed. Attempts to model social fluidity can be thought of as attempts to model the way in which what is observed in a given mobility table departs from perfect mobility. The degree of social fluidity is generally taken as an indicator of societal openness: that is to say, the extent to which the chances of access to class positions are equally or unequally distributed. Chapter 2 presents the methods most commonly used in the measurement and modelling of both absolute mobility and social fluidity.

Variation between countries and trends over time in social fluidity

When we turn to theories concerning social mobility, we find that those dealing with absolute mobility are nowadays usually given short shrift. The best known of them is the Lipset–Zetterberg (or 'LZ') theory 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). But the social mobility that we observe in a mobility table depends on the pattern of social fluidity and on the marginal distributions of class origins and destinations. As noted below, although some authors have argued that the pattern of social fluidity seems to show little variation between countries or through time, the marginal distributions of mobility tables do appear to vary sufficiently as to invalidate the LZ thesis. Erikson and Goldthorpe (1992: 375), for example, write: 'the structural contexts of mobility that are created by the development of industrial societies vary substantially—and so, in turn, then do their absolute mobility rates.'

There are two long established hypotheses about how patterns of social fluidity might be expected to vary through time, and from these it is also possible to derive some suggestions of how countries might differ in this respect. Perhaps the best known is the 'Featherman Jones Hauser' (FJH) hypothesis, which its authors see as replacing that of Lipset and Zetterberg. They write

(Featherman et al. 1975: 340): 'the genotypical pattern of mobility (circulation mobility) in industrial societies with a market economy and a nuclear family system is basically the same. The phenotypical pattern of mobility (observed mobility) differs according to the rate of change in the occupational structure, exogenously determined (as far as an individual family is concerned)'. The implications of this are that we should expect to find rather little in the way of variation either over time or between countries in their patterns of fluidity; and that patterns of social fluidity are likely to be largely resistant to attempts to change them by political, or indeed most other, means. This contrasts with the predictions of the slightly earlier 'liberal theory of industrialism' or modernisation hypothesis, often associated with the work of functionalist sociologists (Parsons 1960; Kerr et al. 1960). Here it is argued that economic development will of itself lead to higher rates of absolute mobility. But, in addition, increasingly intense economic competition associated with development will force employers to recruit individuals to positions on the basis of meritocratic, or achieved, rather than ascribed, characteristics. As a consequence educational qualifications will become a more important determinant of an individual's class position and (because educational attainment will also become more meritocratic) the qualifications that someone attains will depend less on parental status (see, for example, Treiman 1970: 218). Furthermore, the increasing complexity of modern labour forces and the shift in the occupational structure towards industrial and then to service employment should also weaken the tendencies towards direct inheritance of class position. The overall result should then be a general trend, associated with modernisation and development, towards the weakening of the association between an individual's class origins and her or his own class position.

Although there are many contradictory findings in the mobility literature, by and large the weight of evidence leans more towards the FJH thesis. In particular, Erikson and Goldthorpe (1987*b*: 162), on the basis of their comparative analyses, argue for a slightly amended version of the thesis as follows: '… a basic similarity will be found in patterns of social fluidity… across all nations with market economics and nuclear family systems where no sustained attempt has been made to use the power of the modern state apparatus in order to modify the processes, or the outcomes of the processes, through which class inequalities are intergenerationally reproduced'.

Thus, Erikson and Goldthorpe, although largely concurring with the FJH hypothesis, nevertheless leave open the possibility that state intervention in appropriate areas (notably in areas which affect equality of condition and of opportunity) will be able to influence relative mobility.

In addition to the absence of major differences between countries, they also claim that there is little systematic temporal variation in patterns of social fluidity within countries—again lending support to FJH. But this result is based on analyses in which age groups are taken to represent different birth cohorts.

As Breen and Jonsson (2003) have pointed out, this approach confounds lifecycle and cohort effects and makes no allowance for either selective mortality or recall errors. In an assessment of the reliability of measures of class origin and class destination in mobility tables, Breen and Jonsson (1997) found that reliability was lower for origin information from older age groups, implying that the common practice of using age groups to draw conclusions about cohort change over time in mobility regimes may be unsound.

Nevertheless, their findings of little variation in social fluidity, either between countries or through time, lead Erikson and Goldthorpe to argue that inequalities in mobility chances have a self-reinforcing quality. They write (1992: 393): 'we see [the lack of variation in class inequalities]… as the outcome of individuals and groups acting in pursuit of their interests and goals and, in particular, of the actions of those who are relatively advantaged and powerful… seeking to use their power and advantage precisely in order to maintain their position.' Thus the 'constant flux' to which Sorokin (1959) drew attention can be seen as the outcome of individuals and families pursuing their own goals within the changing circumstances to which economic and political developments (and their own actions) give rise.

Set against this, one widely cited study that makes the case for the modernisation thesis is that of Ganzeboom et al. (1989). They use 149 mobility tables for men drawn from thirty-five countries spanning the period 1947–86 to analyse variation between countries and over time.[2] Their analyses show that 'although… there is a basic similarity in mobility *patterns*… at the same time there are substantial cross-national and cross-temporal differences in the *extent* of mobility… about a third of the variance across mobility tables is attributable to societal differences in mobility regimes'. Furthermore, 'a smaller but significant part of the variance in mobility regimes can be explained by the trend towards increasing openness over time' (Ganzeboom et al. 1989: 47). They suggest that this trend is a reduction of the order of 1 percent per annum in the strength of the association between class origins and class destinations.

The advantage that Ganzeboom et al. enjoy over Erikson and Goldthorpe is that the former have data that allow for proper tests of change over time. Nevertheless, the results of their analyses and thus the conclusions they draw have been challenged on grounds of data quality and model choice (these are summarised by Erikson and Goldthorpe 1992: 100–1) and a reanalysis by Wong (1994) fails to support their findings about a general trend towards increasing openness. 'Even as temporal change is significant (but small) in a number of countries, the model of temporal invariance cannot be rejected for a majority of countries. Of the six countries that indicate possible changes

[2] The thirty-five countries each account for a highly variable number of tables. Some countries—such as New Zealand and Ireland—contribute only one each, while the United States contributes twenty.

over time, Hungary and Sweden are the only countries giving irrefutable evidence of temporal variation' (Wong 1994: 138).

The FJH hypothesis, and its slight modification by Erikson and Goldthorpe, would thus suggest little variation between countries in their patterns of social fluidity and no change—at any rate no systematic change—over time. But variation in observed mobility rates is expected to demonstrate no particular similarities between countries nor to be reducing. Modernisation theory or the liberal theory of industrialism, on the other hand, suggests that, to the contrary, we should observe a trend towards greater openness in social fluidity and, because this will be a common trend, we should also expect some degree of convergence between countries.[3] Similarly, on some accounts associated with the liberal theory (e.g. Treiman 1970: 215–6), different countries' class or occupational structures should be growing increasingly similar. Taken together these imply a convergence in absolute mobility rates too.

But one might also argue for a third possibility: namely, that nations have come to follow increasingly different trajectories, with some possibly showing increased fluidity but others the opposite tendency, and, as a consequence, there will be a growing divergence between them. One characteristic of mobility analyses is that the data they have used have, for the most part, come from advanced industrial nations during the period of the so-called Golden Age of Capitalism (from the end of the Second World War until the mid-1970s). This period was characterised by, among other things, economic growth, full employment, the initiation and development of more or less extensive welfare state programmes, and educational reform, all undertaken within the broad framework of Keynesian economic management. But starting in the late 1970s and accelerating in the 1980s, countries began to follow rather more divergent paths, a very simple characterisation of which might be to say that the English-speaking countries began to pursue, or pursued with greater purpose, a policy of deregulation and extension of market principles to more sectors of the economy and society, while the non-English speaking countries by and large did not, or began to do so much later. The consequences of this are evident in many spheres—for example, in patterns and rates of economic growth, levels of income inequality, and the rate and distribution of unemployment. We might reasonably expect to see similar variation in mobility outcomes. Furthermore, the extended periods of low economic growth and the occurrence of several recessions during the final quarter of the twentieth century—more generally, the more variable and less uniformly benign economic situation—may well have made national

[3] Of course, a common trend beginning from different staring points will maintain variation, rather than causing convergence. But in this case 'common' should be taken to mean 'in the same direction' rather than necessarily 'at the same rate' (though Ganzeboom, Luijkx, and Treiman do claim a similar rate as well as a similar direction of change among countries) since it seems implicit in the liberal theory that the end point will be countries with rather similar patterns of fluidity and, indeed, of observed mobility.

variations in institutions and policies more consequential for patterns of social mobility.

Social mobility of women

Many studies of social mobility exclude women. Often this has been because the datasets on which mobility analyses are based drew information from a sample of men only: this was the case for the data used in Goldthorpe's (1980) study of mobility in England and Wales, among others. In the present book we analyse both male and female mobility, though, because some of the datasets used do not include women, there are some limitations on the extent to which the authors of the different chapters have been able to do this.

Including women in social mobility studies is far from straightforward, as many authors have recognised. The major difficulty concerns the measurement of a woman's social class. As far as class origins are concerned, the contributors to this volume have taken the respondent's father's occupation as the basis on which this is established. This seems reasonable, given that most of the respondents to the surveys used here were born prior to 1970 and thus their father's occupation would be at worst an adequate, but in most cases by far the better, index of the class from which they originated. But this means that, for women, we are examining mobility from father's class to daughter's class, rather than from mother to daughter.

A larger problem, however, arises in respect of women's current class position. In the 'conventional' view, championed by Goldthorpe (1983; see also Erikson and Goldthorpe 1992: 234), the family, not the individual, is the appropriate unit of class analysis because individuals' life chances are determined by their membership of families or households and not simply by their own relationship to the labour market (Breen and Rottman 1995*a*: 163–4). This is most evident, of course, in the case of children and of married women who do not themselves participate in the paid workforce. The class position of the family might then be established in various ways. Some of the authors of the chapters in this book adopt an approach developed by Erikson (1984) in which so-called complete mobility tables are constructed, taking, as the class position of the household, that of whichever spouse is considered to have the 'dominant' position in the labour force. Here the 'dominant' partner is the one who works full time rather than part time or, if this criterion does not serve to distinguish, it means the partner occupying the more advantaged class position (for an example of this approach see the British chapter by Goldthorpe and Mills in this volume). Unsurprisingly, although complete mobility tables could in principle differ greatly from men's mobility tables, they never do.

But if we believe that, for whatever reason, women's mobility itself is an interesting and important object of study, then 'complete' tables will not

serve our purpose, and we will require that women are assigned to their own class position. Individuals are normally assigned to classes on the basis of their current job or, if they do not have a job, their previous one. But, particularly for some married women who do not work outside the home, this will lead to their being assigned a class position on the basis of a job they held many years ago. This is clearly unsatisfactory. A simple resolution, and the one that is adopted in the comparative analyses that we report here, as well as in many of the country chapters, is to focus only on women who are currently in the labour force. This means that interpreting change over time and differences between countries has to be undertaken cautiously because of the considerable influence that variations in the rate of female labour force parti-cipation might exercise over any conclusions we seek to draw. It is also the reason why we do not try to make formal, model based comparisons between men's and women's mobility.

Social class and the Goldthorpe class schema

Inequalities in the social positions occupied by individuals and families are of several types: we can speak of the distribution of income, differences in status, and so forth. Class inequalities are widely spoken of, but there is often little agreement about the concept of class, what it refers to and how it should be used. The authors of the chapters of this book follow the approach usually called 'class analysis', understood as 'the empirical investigation of the consequences and corollaries of the existence of a class structure defined *ex ante*' (Breen and Rottman 1995*b*: 453). By starting from a particular definition of class, sociologists can assess the extent to which such things as inequality in life chances among individuals and families are structured on the basis of class. Nowadays there are two main class schemata employed for this purpose: one is associated with Erik Olin Wright (1976, 1985), the other with John Goldthorpe (Erikson et al. 1979; Goldthorpe 1980, 2000; Erikson and Goldthorpe 1992). It is the latter which is used in this volume, and we understand the Goldthorpe schema as being one which is based on a set of principles that allocates positions to classes so as to capture the major dimensions of differentiation in labour markets and production units that are consequential for the distribution of life chances (Breen, forthcoming: 17). More simply, jobs or occupations are placed in the same class according to certain criteria, and these criteria are such that there is important variation in the life chances of individuals, and their families, depending on which class position they occupy.

This leads to the question: what are these principles? Initially, the Goldthorpe schema was presented as distinguishing occupations on the basis of their market and work situations. Market situation refers to an occupation's

sources and levels of income, its associated conditions of employment, degree of economic security, and chances, for its holders, of economic advancement. Work situation refers to an occupation's location within systems of authority and control in the production process (Goldthorpe 1980: 40). Occupations that typically share common market and work situations were held to constitute classes and occupants of different classes were held to enjoy different life chances.

More recently, and in his work with Robert Erikson, Goldthorpe has provided a slightly different set of principles for the same class schema. 'The aim of the class schema is to differentiate positions within labour markets and production units or, more specifically… to differentiate such positions in terms of the employment relations that they entail' (Erikson and Goldthorpe 1992: 37). Now classes are held to capture two main distinctions: between those who own the means of production and those who do not, and, among the latter, according to the nature of their relationship with their employer. The important dichotomy here is between positions that are regulated under a labour contract, and those that are regulated by a 'service' relationship with the employer. Under a labour contract there is a very specific exchange of wages for effort and the worker is relatively closely supervised, while the service relationship is more long term and involves a more diffuse exchange.[4]

The basis for this distinction is the problem that employers face of ensuring that their employees act in the best interests of the firm. Employees always have at least some discretion about how they carry out their job—how hard they work, what degree of responsibility or initiative they exercise, and so on (Goldthorpe 2000: 212)—and so the problem for the employer is to ensure that this discretion is exercised appropriately. How this is done depends on the type of work that the employee undertakes, and thus the solution to the problem is the establishment of employment contracts tailored to different kinds of work.

The crucial dimensions along which work is differentiated are, according to Goldthorpe, the degree of 'asset-specificity' involved and the extent of monitoring difficulty (Goldthorpe 2000: 213). Asset specificity refers to the extent to which a job calls for job-specific skills, expertise, or knowledge, in contrast to jobs that require general, non-specific skills. In the former case, an employee has to be persuaded to invest in these skills, despite the fact that they may be of no value to her in another firm or occupation. But equally, once an employee has gained these skills, the employer needs to ensure, as far as possible, that the skilled employee is retained, since these skills cannot be bought on the open labour market. Monitoring difficulties arise when the employer cannot, with any reasonable degree of clarity, assess the extent to which the employee is acting in the employer's interests. This is the classical

[4] The service relationship, and the service class, should not be identified or confused with the service sector.

'principal–agent problem'. In certain jobs the employee has appreciable autonomy and discretion about exactly how to carry out the tasks that the job calls for, and thus, while the employee (the agent) knows whether he or she is working in the interests of the firm, the employer (the principal) does not. This informational asymmetry establishes an incentive for the agent to act only in her interests when these conflict with the interests of the principal.

Problems of asset specificity and monitoring are countered by setting up, through the service relationship, incentives to persuade employees to act in the employer's interest. These incentives must align the interests of the two parties, and this is done by establishing a link 'between employees' commitment to and effective pursuit of organisational goals and their career success and lifetime material well-being' (Goldthorpe 2000: 220). To secure this, prospective elements in the employment contract play a major role: 'for example, salary increments on an established scale, assurances of security… pension rights… and… well defined career opportunities' (Erikson and Goldthorpe 1992: 42). As far as monitoring difficulties are concerned this solution is one which is familiar in the game theory literature: the temptation to defect and gather a short-term gain is offset by the prospect of extended and long-term payoffs as a reward for cooperation.

The labour contract is found where neither asset specificity nor monitoring problems occur. In this case, even if the work tasks require skills, these will be general and readily available in the labour market. Monitoring problems are largely absent because what the employee does in the service of the employer and what he or she actually produces is readily observable. There is then no need for the kinds of incentives established in the service relationship, and, according to Goldthorpe, the two defining characteristics of the labour contract are payment for discrete amounts of work and the absence of any attempts to secure a long-term relationship between the parties.

The class schema is operationalised by first distinguishing between employees and non-employees. Class IV (the schema uses Roman numerals) comprises the petty bourgeoisie and is subdivided into IVc (farmers), IVa (non-farm petty bourgeoisie with employees), and IVb (non-farm petty bourgeoisie without employees—that is, the self employed). Somewhat controversially, large employers (which, in the British case, means those with more than twenty-five employees) are neither placed in class IV nor in a separate class but are included in one of the employee classes. Goldthorpe's reasons for this have been extensively discussed (Erikson and Goldthorpe 1992: 40–1; Breen and Rottman 1995*a*: 72). However, given the scarcity of large employers in modern society they are unlikely to be represented in appreciable numbers in the sample surveys used in this volume and so, whatever the issues of principal might be, the practical consequences of this decision are likely to be unnoticeable.

The schema as a whole, distinguishing eleven classes, is shown in Table 1.1, which reports the Roman numeral identification, the class name, and the

TABLE 1.1. *The Goldthorpe class schema*

Goldthorpe class	Description	Employment relations	CASMIN version
I	Higher-grade professionals, administrators, and officials; managers in large industrial establishments; large proprietors	Employer or service relationship	I+II Service class
II	Lower-grade professionals, administrators, and officials; higher-grade technicians; managers in small industrial establishments; supervisors of non-manual employees	Service relationship	
IIIa	Routine non-manual employees, higher-grade (administration and commerce)	Intermediate	III Routine non-manual
IIIb	Routine non-manual employees, lower-grade (sales and services)	Labour contract	
IVa	Small proprietors, artisans, etc., with employees	Employer	IVab Non-farm petty bourgeoisie
IVb	Small proprietors, artisans, etc., without employees	Self-employed	
IVc	Farmers and smallholders; other self-employed workers in primary production	Employer or self-employed	
V	Lower-grade technicians; supervisors of manual workers	Intermediate	V+VI Technicians, supervisors, and skilled manual workers
VI	Skilled manual workers	Labour contract	
VIIa	Semi- and unskilled manual workers (not in agriculture, etc.)	Labour contract	VIIa Semi- and unskilled manual workers (not in agriculture)
VIIb	Semi- and unskilled manual workers in agriculture	Labour contract	VIIb Semi- and unskilled manual workers in agriculture

typical type of employment relationship between the class member and his or her employer. Classes I and II are made up of those occupations that most clearly have a service relationship. Class I comprises higher grade, and class II lower grade, professionals, administrative, and managerial workers. In these occupations problems arise of both monitoring and asset-specificity. At the other extreme, members of classes VI (skilled manual workers) and VII (unskilled manual workers) most clearly have a labour contract with their employer. Class VII is divided sectorally: VIIb is non-skilled agricultural workers, VIIa is non-skilled workers outside agriculture. The labour contract is also shared by workers in what are termed 'lower grade', routine non-manual occupations (Class IIIb). These occupations include 'the lowest grades of employment in offices, shops, and other service outlets—machine operators, counter staff, attendants, etc.' (Erikson and Goldthorpe 1992: 241). The remaining classes, IIIa (higher grade, routine non-manual occupations) and V (lower technical and manual supervisory occupations), 'comprise positions with associated employment relationships that would appear characteristically to take on a very mixed form' (Erikson and Goldthorpe 1992: 43). In Table 1.1 this type is labelled 'intermediate'. The occupations in IIIa (clerks, secretaries, and other routine administrative personnel) typically require no asset-specificity but do present some difficulties of monitoring, while those in class V have the opposite combination. Class IIIa occupations enjoy many elements of the service relationship but often lack any clear career structure, while class V occupations enjoy such a career structure but are relatively closely monitored and paid according to the number of hours they work.[5]

The Goldthorpe schema is rarely used in its eleven class version. In his work on mobility in England and Wales, where the schema was first employed, Goldthorpe collapsed the sub-classes to yield seven classes, I, II, III, IV, V, VI, and VII. In *The Constant Flux,* however, Erikson and Goldthorpe use a seven class classification comprising I+II, III, IVa+b, IVc, V+VI, VIIa, and VIIb. In part this reflects the need to ensure that numerically important classes were represented and, in part, the difficulties of drawing the necessary distinctions (e.g. between the self-employed with and without employees and between classes I and II) in a consistent fashion across all their national datasets (Erikson and Goldthorpe 1992: 52). This version is sometimes termed 'the CASMIN schema' and it is the one used here. It is shown in the last column of Table 1.1.

When the 'dominance' approach is applied to determine a single class position for a household in which both spouses are working outside the home, two criteria are used. First, a full-time worker 'dominates' a part-timer, so the former's class position is taken as that of the household. If this does not distinguish between them, the 'higher' class position is used, and in this case the

[5] The validity of the schema itself has been extensively tested (with largely positive results) in a series of papers by Evans and Mills (Evans 1992; Evans and Mills 1998, 2000).

classes are ranked: I + II; IVa + b; IVc; IIIa; V + VI; IIIb + VIIa; VIIb. In general, however, Goldthorpe and his co-workers have been at pains to stress that there is no single hierarchical dimension on which the classes of the schema may always be ordered and, indeed, they explicitly contrast the class approach with those that adopt a 'hierarchical perspective on the basis of prestige or status scales' (Erikson and Goldthorpe 1992: 34), for example.

The CASMIN educational schema

Education is an important determinant of the class position that an individual comes to occupy, and much mobility research examines the relationships between, on the one hand, class origins and educational attainment, and, on the other, educational attainment and class destination. But in order to make cross-national comparisons of relationships such as these, educational qualifications from different countries must be rendered comparable for analytical purposes. Several ways of doing this have been proposed: simply using years of full-time education completed is frequently used but likely to prove unsatisfactory when educational systems are differentiated into academic and vocational tracks and where the equivalent years of education may thus give rise to very different kinds of qualification.

As part of the CASMIN project, Walter Müller and his colleagues devised a categorical educational schema that attempts to capture the salient distinctions within the educational systems of different countries in a way that allows for international comparisons.[6] The CASMIN educational classification is based on two primary classification criteria: (1) the differentiation of a hierarchy of educational levels, both in terms of the length of the educational experience as well as in the required intellectual ability and corresponding curricular contents; and (2) the differentiation between 'general' and 'vocationally orientated' education. The schema also distinguishes between the elementary, secondary, and higher (tertiary) levels, and between the value of the educational certificate achieved within each level. Vocationally oriented qualifications are differentiated according to whether the programmes intend to teach general knowledge or practical knowledge and skills for specific occupations. A description of the categories is given in Table 1.2.

One criticism that can be made of the CASMIN classification is that its rather broad categories may not capture all the salient distinctions within a particular educational system. For example, in a system which contains 'elite' universities, there may be important differences in the returns to a degree obtained at one of them compared with a degree from a non-elite institution.

[6] The first publication of the CASMIN educational classification is Müller et al. (1989). Its most extensive presentation is in König et al. (1988). A discussion comparing CASMIN to other classifications is given in Braun and Müller (1997).

TABLE 1.2. *The CASMIN educational classification*

1a[a]	*Inadequately completed elementary education*
1b[a]	*Completed (compulsory) elementary education,* corresponding to the 'social minimum' of education that individuals are expected to have obtained in a society. This level of education is mostly of a general nature and generally can be obtained by following the least demanding courses of education until the legally fixed age of compulsory schooling.
1c[a]	*(Compulsory) elementary education* and *basic vocational qualification.* These are qualifications that go beyond the compulsory minimum and provide mainly basic vocational qualifications.
2a[a]	*Secondary, intermediate vocational qualification or intermediate general qualification* and *vocational qualification.* This category includes all types of programs in which general intermediate schooling is joined by additional vocational training, or in which qualifications have been obtained in largely practical, vocational components that go beyond the basic level.
2b[a]	*Secondary, intermediate general qualification*; includes educational tracks at the intermediate level that are part of *general* education or are academically oriented.
2c_gen[a]	*Full general maturity certificate.* Consist in successfully passing those exams that mark the completion of secondary schooling (e.g. the Abitur, Maturity, Baccalaureat, A-level exams), and which are obtained in tracks with a general, academic orientation.
2c_voc[a]	*Full vocational maturity certificate or general maturity certificate* and *vocational qualification.* Includes either maturity certificates obtained via vocational secondary education (e.g. maturità obtained in Istituti Tecnici in Italy) or maturity level certificates from general tracks that are supplemented by additional vocational qualifications (e.g. in Germany: passing the Abitur plus completing an apprenticeship).
3a	*Lower tertiary education.* Generally characterised by a shorter length of study at the tertiary level and more practically oriented study programs (e.g. technical college diplomas, social worker or non-university teaching certificates).
3b	*Higher tertiary education.* Upper-level tertiary degrees including the successful completion (with examination) of a traditional, academically oriented university education.

[a] The distinction between elementary, intermediate, and full secondary education is to be understood in the following way. Full secondary qualifications consist of successful passing of those exams that mark the completion of secondary schooling and, in general, provide access to tertiary education. Intermediate secondary education (2a, 2b) relates to certificates between elementary and full secondary education. In making the distinction between elementary and intermediate secondary education, which in some cases is not clear-cut, essentially all those courses and certificates that go beyond the elementary level are ascribed to the intermediate level, be it through education in selective schools, or the length of education that clearly extends beyond the compulsory years of education, or through passing exams which are clearly above the elementary level.

More simply, the subject area in which a degree was obtained is another potentially important source of variation that is not captured.

This book

This book, and the research on which it is based, was designed to marry two styles of comparative analysis, both of which have been used in studies of social stratification in recent years. In the first, authors are asked to write about the subject of interest in their particular country, perhaps following some analytical template, and the editors then seek to draw some comparative conclusions on the basis of the resulting chapters. Examples include Shavit and Blossfeld (1993) and Shavit and Müller (1998). The second involves a single authorial team bringing together data from several countries, rendering them comparable, as far as possible, and then carrying out an explicitly comparative analysis. Erikson and Goldthorpe (1992) and Ganzeboom et al. (1989) are cases in point. Here both styles have been used. Chapters 4 through to 14 are single country studies written by sociologists from those countries. Their data were collected according to internationally recognised standards and coded into the CASMIN class and educational schemata. The authors fitted a set of common models to their data to test for change over time in both absolute mobility and social fluidity, but beyond this they were free to explain change, or its absence, in whatever way seemed to them appropriate. Chapter 3 of the volume, written by Richard Breen and Ruud Luijkx, is based on a dataset that contains all the mobility tables used by the authors of the single country chapters. These data were subjected to a number of analyses that aim to provide a comparative perspective on trends in social mobility—something which could not, of course, be done in the individual country chapters. By bringing together these two styles we sought to combine their strengths—the depth of knowledge that sociologists can provide about their own society, in the first case, and, in the second, the opportunity to make proper comparisons. Whether or not we succeeded may perhaps best be judged in the final chapter, Chapter 15, which summarises our findings, attempts to provide some explanation of them, and evaluates the main theories of mobility in the light of them.

Mobility analysis has a well deserved reputation for being highly technical (at least by the standards prevailing in sociology). While we have all endeavoured to make our work in this volume accessible to non-specialists we may have enjoyed only partial success. So the next chapter attempts to provide a brief and not too technical introduction to the measures and models used in contemporary mobility research. For those unfamiliar with these things the chapter is not required reading in order to understand the conclusions that we draw, but is recommended for those might wish to follow the path by which we reached them.

2 Statistical Methods of Mobility Research

Richard Breen

The basic datum for intergenerational mobility analysis is a table whose cells contain the frequencies in each combination of current class (usually called destination class) and class origin. The information for such a table usually comes from a sample of individuals who are drawn from the population, and it is this population (of a country at a given point in time, for example), rather than the sample per se, about which we want to be able to say something. Class origins are most commonly measured as the social class occupied by the respondent's family when the respondent was in his or her mid-teens, and, as noted in Chapter 1, the family's class is usually taken as the class position of the respondent's father. The table is usually arranged with the origin classes as the row variable and class destinations as the column variable.

Measures of absolute mobility

From any mobility table several useful measures of absolute mobility can be derived. Most obviously, the cases that fall in the cells on the main diagonal of the table, running from top left to bottom right, can be used to tell us the proportion or percentage of individuals whose own class is the same as their class of origin. This is a measure of total immobility, and thus total mobility (the proportion occupying a class different than that of their family of origin) is the percentage of cases that do not fall on the main diagonal. This measure will be sensitive to the number of classes we identify, but, using the seven-class Comparative Analysis of Social Mobility in Industrial Nations (CASMIN) version of Goldthorpe's class schema, between 60 and 70 percent of individuals in the countries featured in this book are mobile.

If we can order the classes then it is possible to talk about upward and downward mobility. Erikson and Goldthorpe (1992: 45) propose a grouping of

the seven CASMIN classes into three:

(a) class I + II;
(b) classes III, IVa, b, and c, and V + VI;
(c) VIIa and b.

Upward mobility is movement from an origin in (c) to either (a) (this is sometimes referred to as 'long-range' upward mobility) or (b), or from (b) to (a) (both of these are short-range upward mobility), and downward mobility is movement from (a) to (b) or (c) or from (b) to (c). Thus, one can compute the proportion or percentages who are upwardly or downwardly mobile. Upward and downward mobility together are referred to as vertical mobility. Non-vertical mobility is thus movement between classes but within one of the three groups, (a), (b), and (c).

One can also, of course, calculate other measures based on the proportions of people who move between specific pairs or sets of classes (e.g. movement from the working class to the service class). However, these are special cases of a more general way of representing the mobility table as a set of outflow percentages. This simply involves replacing the frequencies in the table with the percentages of those from each origin class who are found in each destination class. Thus, the entries of the outflow table sum to 100 percent along each row of the table. Such a table shows what share of people originating in any particular class are found in any other class, and is a convenient way of showing how class origins are associated with different propensities of occupying given class positions.

The counterpart to the outflow table is the inflow table, which shows the percentages of people in each class destination drawn from each class origin. The purpose of this table is to reveal the composition of each class in terms of the class origins of its members. Typically, classes that are expanding (which account for a larger share of the total sample as a destination than as an origin) will be diverse in the class origins of their members. This is usually the case with the service class (I + II). Declining classes on the other hand (such as class VIIa or VIIb), tend to have a large share of their members with origins in that same class, as do classes such as IV, in which entry is facilitated by inheritance of the means of production.

Discussion of whether classes are growing or declining directs attention to the marginal distributions of the mobility table. These are simply the frequency totals in the rows (origin distribution) and columns (destination distribution) and they are often expressed as percentages or proportions of the total sample size. Comparing the two enables us to see which classes are larger in one distribution than the other, in the light of which we sometimes speak of growing or declining classes. Strictly speaking, this is incorrect. The data for mobility analyses are usually drawn from surveys which gather information from respondents that allow us to assign them to their own class position and

to an origin class (based on what they tell us about their parents). In this sense mobility analyses have a retrospective design. So while the destination distribution represents the class structure of a given country at the time that the survey was conducted (under the assumption that we are dealing with a random sample of the working population), the origin distribution does not represent that structure at any given earlier point in time (Duncan 1966). For one thing, class origins are measured relative to the respondent's age, and the respondents to a mobility survey are typically drawn from a wide age-range. For another, childless men and women in the class structures of the past can never be represented in mobility surveys that have this retrospective design.

Having said this, there is no doubt that comparisons between the origin and destination distributions do reflect, albeit imperfectly, historical change in the class structure. The greatest such changes of the twentieth century were, first, the decline of the agricultural occupations and the growth of non-agricultural manual jobs,[7] usually followed by the growth of white-collar employment. These trends are then reflected in mobility tables.[8] In tables from the 1970s, and particularly in those countries where agriculture remained important well into the second half of the century (such as Italy, Ireland, and Poland), we see a marked difference in the importance of classes IVc and VIIb as origins and as destinations. Similarly, in mobility data from the 1980s and 1990s we see that classes I + II and III are larger in the destination than in the origin distribution, while classes V + VI and VIIa tend to show the opposite tendency.

The origin and destination distributions are often compared using a measure called the index of dissimilarity (referred to as DI or Δ), which can be expressed as a percentage or a proportion. It tells us the percentage of cases that would be required to 'change class' to make the origin and destination distributions identical.[9] Nevertheless this measure can be applied to compare any two distributions provided they have the same number of categories. So, for example, if we had a mobility table for men and one for women, we could compute Δs not only for the origin/destination distributions in each table, but also for the two (men's and women's) destination distributions and for their origin distributions. We will see examples of these and other uses of Δ throughout this volume.

[7] Though in some cases, notably Britain, the greatest period of decline in agricultural jobs occurred before the start of the twentieth century.

[8] This is more true of men than women. Because women have always been concentrated in classes III and VIIa, and because their class origins usually refer to the class position of their father, their origin and destination distributions always differ sharply, reflecting sex segregation in the labour market.

[9] It is clear that $\Delta = 0$ means that the two distributions are identical, but no matter how different the distributions, Δ can never attain a value of 100. The maximum value it can attain in fact varies depending on the number of categories in the distributions.

Models of relative mobility or social fluidity

Given a society in which the service class is expanding and the working class is contracting, we would expect, everything else equal, to see a good deal of upward mobility as children of working class origins move into the service class. In another society in which the class structure was not changing in the same way, we might see rather less upward mobility. From such a comparison we would conclude that rates of absolute mobility differed between these two societies. But in mobility analyses we are often interested in a question that concerns relative, rather than absolute, mobility. The question is: how much difference is there between people coming from different origin classes in their chances of occupying a place in one destination class rather than another? For example, how do the chances of being in the service class (I + II), rather than the skilled working class (V + VI), differ, depending on whether someone was raised in the service class rather than the petty bourgeoisie (IVa + b)? Once we answer this question, we can compare different societies in terms of their relative mobility, as well as their absolute mobility.

Why is this question important? Because it compares the chances of access to one class rather than another for people from different class origins and so it tells us something about the advantages and disadvantages associated with being born into one class rather than another. Of course, we have to be careful about exactly what we can conclude from the study of relative mobility. When we refer to 'chances' here we mean chances computed *ex post,* that is, after the fact. Our data tell us the classes that people occupy; they do not tell us the classes that they would have liked to occupy: we see the outcomes but not the processes that gave rise to them. As far as class origins are associated with different relative chances of being found in a given class, we observe differences in outcomes rather than inequality of opportunity per se. These outcomes surely reflect inequality of opportunity, but they are the product of other things too, and we should therefore be cautious in our interpretation of them. One common argument is that they reflect differences in preferences, rather than in the resources to overcome constraints; another is that they reflect differences in abilities—such as intelligence (Herrnstein and Murray 1994; Saunders 1995)—which it may be thought appropriate to reward differentially.[10] Preferences are difficult to measure, as is ability, but in two recent papers, Breen and Goldthorpe (1999, 2001) have found that, among two cohorts of young British adults in their mid-twenties and in their early thirties, ability (measured on standardised tests at the age of ten) does indeed influence class destinations. However, this effect operates largely alongside, rather than through, class origins, because the pattern of relative mobility observed in these two cohorts is little changed when the effects of ability are

[10] See Marshall et al. (1997), especially chapters 7 and 8, for an insightful discussion of these and related issues.

taken into account. This suggests that, in Britain at least, relative mobility chances do not reflect variation between classes in their average ability.

One extreme instance of relative mobility would arise if there was in fact no difference between people coming from different origin classes in their chances of being found in one destination class rather than another. This is a situation of perfect mobility or perfect 'social fluidity'. Indeed, the term 'social fluidity' is synonymous with relative mobility. Perfect mobility acts as a kind of statistical yardstick for the measurement of social fluidity in the sense that quantitative measures of fluidity take their minimum value under this circumstance; but it should not be taken as anything more than this, not least because it is never observed in any real mobility table.

Measures of relative mobility or social fluidity, because they focus on the relative chances of people from different class origins, are distinct from measures of overall or absolute mobility. That is, even if society A displays more upward mobility from the working class into the service class than society B, this implies nothing about which of them will show greater social fluidity (measured as the chances of people from service and working class origins being found in the service rather than the working class). The basic measure of social fluidity is the odds ratio. We are interested in how the chances of being found in one class, say A, rather than another, B, differ between people from class origins C and D. The ratio of the frequencies in A and B among people who originated in C is the odds of being in A rather than B for people from class C. The same ratio involving A and B can be computed for people from class D. The odds ratio is then the ratio of these odds. That is,

$$\text{Odds ratio} = \frac{\begin{array}{c}\text{(Number in class A who originted in C divided}\\ \text{by number in class B who originated in C)}\end{array}}{\begin{array}{c}\text{(Number in class A who originted in D divided}\\ \text{by number in class B who originated in D)}\end{array}}$$

Under perfect mobility the odds ratio will equal one. Odds ratios are sometimes said to capture the 'association' between origins and destinations. Odds ratios involve quantities from four cells of a mobility table. But the mobility tables used in the chapters of this book have seven classes in origins and destinations and thus we could compute a very large number of odds ratios using all possible sets of four cells from the forty-nine in each table (there are 441 possible odds ratios in such a table[11]). This would seem to make the process of analysing relative mobility somewhat cumbersome.

In fact, analyses of relative mobility approach the problem by specifying a statistical model (usually called a log-linear or log-multiplicative model) of the full set of independent odds ratios or, equally, the overall association

[11] But because the same cells of a table appear in several odds ratios the number of independent odds ratios (from which all of the odds ratios can be calculated) is equal to $(7 - 1) \times (7 - 1) = 36$.

between origins and destinations. These models, when applied to a single mobility table, have a common and simple form. Assume that the mobility table has I rows and J columns, indexed by $i = 1, \ldots, I$ and $j = 1, \ldots, J$, respectively; f_{ij} is the expected (under the model) frequency in the ijth cell of the table and this is a function of a constant term, μ; an effect associated with being in the ith row (i.e. coming from the ith origin class), τ_i; an effect associated with being in the jth destination class, τ_j; and the effect, on the ijth cell, of the association between origins and destinations, τ_{ij}. That is

$$f_{ij} = \mu\tau_i\tau_j\tau_{ij} \text{ for all } i = 1, \ldots, I;\ j = 1, \ldots, J\ .$$

Because the model is multiplicative all the parameters must be strictly positive. This model can also be written additively when we replace the expected frequency with its logarithm, F_{ij}. Then we have

$$F_{ij} = \lambda + \lambda_i^O + \lambda_j^D + \lambda_{ij}^{OD}, \text{ for all } i = 1, \ldots, I;\ j = 1, \ldots, J\ .$$

In (2.2) each effect is labelled l but they are distinguished by their superscript, O for origins and D for destinations. In this case, the parameters may be positive or negative. The parameter values in (2.2) are equal to the logarithm of the corresponding values in (2.1). Henceforth we will concentrate on the logarithmic representation of the model, (2.2).

It would be possible to estimate parameters of (2.1) or (2.2) that reproduced the observed cell frequencies exactly. Given the usual parameterisation of these models this would involve fitting $I \times J$ (forty-nine in our cases) parameters. But we want to develop models that fit fewer parameters than this but come close to reproducing the observed cell counts. We sometimes speak of producing parsimonious models. This is done through the way in which we specify the λ^{OD} terms in the model.

Usually in log-linear models for mobility tables, the terms for the origin and destination effects (sometimes called the 'main effects') ensure that the marginal totals estimated under the model exactly match the observed totals. The association between origins and destinations is then captured in the λ_{ij}^{OD} terms which are functions of the odds ratios in the table. To fit the margins exactly we require the overall effect plus $I - 1$ origin effects and $J - 1$ destination effects. Given that it takes $I \times J$ parameters to fit the cell frequencies exactly we are left with $(I - 1) \times (J - 1)$ possible parameters through which to model the association between origins and destinations (or, equally, the odds ratios in the table). Log-linear modelling of a mobility table thus amounts to specifying a model that fits less than $(I - 1) \times (J - 1)$ association parameters but still does a good job of reproducing the cell counts.

Ideally, such a model would be based on hypotheses about what the pattern of association should look like. One such very simple model is called

quasi-perfect mobility. The assumption behind this model is that individuals are disproportionately likely to be found in the same class as the one they were brought up in, but that among those who are mobile there is perfect mobility (i.e. there is no association between origins and destinations). One way of displaying this model is as a matrix showing which of the association parameters of the model affects each cell of the table:

2	1	1	1	1	1	1
1	3	1	1	1	1	1
1	1	4	1	1	1	1
1	1	1	5	1	1	1
1	1	1	1	6	1	1
1	1	1	1	1	7	1
1	1	1	1	1	1	8.

A separate parameter is estimated for each distinct value in the matrix shown above. By convention (and in order to identify the model), cells with the value 1 have an association parameter equal to 0 (that is $\lambda_{ij}^{OD}=0$ for those cells of the matrix which have the value 1). The other seven parameters each apply to one of the cells on the main diagonal and they are free to take any value. In fact, because these cells each have a unique parameter, the model will fit the frequencies of these cells exactly. Because, under this model, perfect mobility prevails in the off-diagonal cells of the table, these parameter estimates tell us the extent to which people remain in their class of origin relative to what we would observe if perfect mobility applied to the diagonal cells too. This is sometimes expressed by saying that the origin–destination association parameters reflect the 'density' of cases in the parts of the table to which they apply. In this case, the model would fit the constant term, six effects for class origins, six for destinations, and the seven origin–destination association parameters shown in the matrix (parameter or level 1 is not counted because it is set to the value zero rather than estimated to have this value): twenty parameters in total.

As we will see later, much more complex models can be fitted to mobility data, but they can all be viewed as different ways of specifying the set of association parameters, λ_{ij}^{OD}. Before discussing these, however, we should deal with the question of how we judge the suitability of a particular model.

Measures of goodness-of-fit

Since any parsimonious model will not fit the data (the observed cell counts) exactly, we need two things: first, a measure of how well or how badly it reproduces the observed data, and, second, some yardstick that will tell us

whether we should accept the model as being a good representation of social fluidity in the population with which we are concerned, rather than in the sample per se, or whether we should prefer another. This is the question of model selection. Recall that, ideally, a statistical model embodies and tests some hypotheses about the pattern of social fluidity, and therefore model selection is a means by which we choose between alternative hypotheses.

There are several measures that we can use to address these problems. The index of dissimilarity that we earlier used to compare the origin and destination distributions can be applied to compare, across all the cells of the table, the fitted or expected distribution with the observed distribution. In this context it is often referred to as the percentage of cases misclassified. Once again the interpretation of the measure is the proportion or percentage of cases that would have to change cells in order for the two distributions to be identical. The formula for Δ (as a proportion) is

$$\Delta = \frac{1}{2N_{ij}} \sum_{i=1}^{I} \sum_{j=1}^{J} \left| \pi_{ij} - f_{ij} \right| .$$

That is, it is equal to half of the sum of the absolute difference between the fitted value (f) and the observed value (π) in every cell of the table, expressed as a proportion of the sum of the frequencies in the table (N_{ij}). This measure is useful for telling us how close our model is to fitting the data exactly.

Another measure that is widely used is the χ^2 measure of goodness-of-fit. The formula for this is:

$$\chi^2 = \sum_{i=1}^{I} \sum_{j=1}^{J} \frac{(\pi_{ij} - f_{ij})^2}{f_{ij}} .$$

In this case, the statistic is equal to the sum (over all cells in the table) of the squared difference between the observed and fitted values divided by the fitted value. A closely related measure, called the deviance or likelihood-ratio χ^2, and sometimes denoted G^2 or L^2, is

$$G^2 = 2 \sum_{i=1}^{I} \sum_{j=1}^{J} \pi_{ij} \log \frac{\pi_{ij}}{f_{ij}} .$$

Both G^2 and χ^2 are larger the bigger the discrepancies between the observed and the fitted values—that is, the poorer the fit of the model. However, both these statistics also allow us to carry out formal tests of hypotheses. This means that we can use them to decide how probable it is that a given model is true, not in the particular sample data that we have on hand, but in the population from which the sample is drawn. This is the process of statistical inference: that is, seeking to infer something which is true of a population given information about only a sample from it.

To carry out such a test, we need to compute either G^2 or χ^2 and also their degrees of freedom (which is the same for both measures) d.f. for short. The d.f. are equal to the number of independent observations in our data (in this case the $I \times J$ cells of the mobility table) minus the number of parameters that we have estimated from the data. Therefore in the case of the model of quasi-perfect mobility (QPM for short) applied to a 7×7 table we have $49 - 20 = 29$ d.f. Both the G^2 and χ^2 statistics computed according to equations (2.4) and (2.5) have a χ^2 distribution, and we can use this fact, together with their values and d.f., to compute the following probability. Suppose that in the population QPM held: what would then be the probability of observing the values that we do in the sample data? More generally, given any observed distribution of cell frequencies in the sample, we can calculate the probability of observing this distribution in a sample of this size, conditional on any specified distribution in the population from which the sample is drawn.[12]

This probability is referred to as the 'p value': thus in many of the tables in this volume, G^2, d.f., and p are often reported together. By convention we say that if this probability is less than 5 percent ($p < .05$) then the probability of getting such a sample distribution from a given population distribution is so small as to allow us to reject the hypothesis that the population has this particular distribution. In our example, this would mean that we reject the hypothesis that QPM holds in the population. On the other hand, if $p > .05$ we cannot do this and such a result is usually interpreted as saying that QPM holds, or is an adequate description of social fluidity, in the population.[13]

Comparing models

It is common to find that, among a set of models fitted to a mobility table, several of them meet the criterion that $p > .05$. But we can use the same goodness-of-fit test to compare such models. Suppose now that QPM fits our data, and suppose that the following model also fits:

$$\begin{array}{ccccccc} 2 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 2 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 2 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 2 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 2 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 2 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & 2. \end{array}$$

[12] Because this is a non-technical exposition we omit details of the basis on which we can calculate this probability. An accessible introduction to the technicalities of inferential statistics is Mohr (1990).

[13] The classic χ^2 test of independence that all students of statistics are taught follows exactly the same logic. A p value of less than .05 shows, in this case, that the probability of getting the observed distribution of cells counts under the hypothesis of independence is so small as to allow us to reject it.

This model, which we can call semi quasi-perfect mobility or SQPM, is very similar to QPM except that it fits the same association parameter to all the cells on the main diagonal (whereas QPM fits different parameters). So, under SQPM the 'density' of class inheritance is the same in all seven cells of the main diagonal, whereas in QPM it is not. SQPM fits just this one association parameter (since the parameter associated with the value of 1 in the matrix is, as usual, fixed to equal 0) compared with seven for QPM. Because QPM fits the main diagonal cells exactly and SQPM does not, the deviance or G^2 for QPM will be less than for SQPM, but because QPM fits more parameters its d.f. will be smaller. Thus, there is a trade-off: by including more parameters in QPM compared with SQPM (losing d.f.) we obtain a better fit to the data. We want a parsimonious model that gives us the best mixture of a small number of parameters and a well fitting model: how do we decide which of these models comes closer to providing this?

It is important to notice that SQPM is, in technical terms, 'nested' in QPM. This means that SQPM is a simpler version of QPM in the sense that by relaxing constraints on the parameters of SQPM we can arrive back at QPM. In this case the constraints are that all the cells on the main diagonal have the same association parameter. Given two models nested in this way, we can compare their goodness-of-fit by computing the χ^2 value given by the difference in their respective G^2s or χ^2s. This measure has d.f. equal to the difference in the number of parameters in each. That is, we calculate G^2(SQPM) minus G^2(QPM), and this quantity has a χ^2 distribution with d.f. equal to the number of parameters in QPM minus the number of parameters in SQPM (six in this case). If we find that this difference is statistically significant at the 5 percent level ($p < .05$) then we conclude that the loss of parameters in moving from QPM to SQPM worsens the fit of the model, and thus we would prefer QPM. If the difference is not statistically significant then we conclude that SQPM is not a significantly poorer fit than QPM and we therefore prefer SQPM on the grounds of its greater parsimony. This makes it clear that what we are testing here is whether or not the extra parameters fitted by the more complete model (QPM in this case) are really necessary or not. Throughout the chapters of this book, the χ^2 goodness-of-fit test (usually based on the deviance or G^2, rather than χ^2) will be used for both these purposes: to assess how well a particular model fits the data and to choose between nested models.

From equations (2.3) and (2.4) one can see that both G^2 and χ^2 are sensitive to sample size (whereas Δ is not). Suppose we apply a model to a table of frequencies and it returns a G^2 of 20. If we multiply all the frequencies in the table by 10, the G^2 will also increase by a factor of 10. One implication of this is that it is difficult to find models that fit tables which are based on very large samples; and another is that a model may fit one table and fail to fit another because they differ in their total N rather than in their patterns of association. One therefore sometimes sees a quantity called $G^2(S)$ which is the G^2 value for a table given a standardised (rather than actual) sample size. This can be

useful in making comparisons between tables that would otherwise have different *N*s. Another statistic sometimes reported is rG^2. This is the difference in the G^2s of the particular model and the model of independence (i.e. the model of perfect mobility) expressed as a percentage of the G^2 for the latter. Thus it tells us how far the model 'reduces' the total G^2 associated with the independence model: in other words, it gives a yardstick of how much of the origin–destination association is accounted for by the particular model.

A final measure for helping to choose between models is the Bayesian Information Criterion or bic (Raftery 1986). The formula for bic for a given model is:

$$\text{bic} = G^2 - \text{d.f.} \times \log (N_{ij}) \ .$$

This quantity is an approximation to minus twice the logarithm of the odds that, given the data, the model in question is true relative to the saturated model being true. Thus, if the model in question is more likely to be true than is the saturated model, bic will return a negative value. The preferred model according to this criterion is that with the largest negative bic statistic. As is widely appreciated, bic imposes a severe penalty on more complex models because each additional parameter fitted (when it reduces the d.f. by one) increases bic by a value equal to the logarithm of the sample size. In order not to worsen bic, each additional parameter included in the model must reduce the deviance (G^2) by at least the logarithm of the sample size. For any sample over the size of about fifty, some cases in which the model with the extra parameter would be preferred according to the deviance criterion alone would be rejected by bic in favour of the simpler model. Thus using bic generally leads to a preference for simple models that reflect the broad contours, rather than the details, of the social fluidity regime. Since its introduction into log-linear modelling in the 1980s, bic has become widely used but, in recent years, it has come under what is, in my view, severe and damaging criticism (Weakliem 1999). For that reason bic is not used in the analyses reported in Chapters 3 and 15 of this volume and we rely instead on G^2 and Δ.

The core model of social fluidity

We have so far seen two examples of models of social fluidity: QPM and SQPM. However, there are very many other possible models of social fluidity, and many of these are quite sophisticated attempts to specify what the pattern of association between origins and destinations might be and to translate this into a specification of the interaction parameters in a log-linear model. Examples include Hout's (1984) 'Status, Autonomy, and Training' (SAT) model; Breen and Whelan's (1992) 'Agriculture, Hierarchy, and Property' (AHP) model (used in Chapter 7 of this volume); and the model developed by Jonsson and Mills (1993), a version of which is employed in Chapter 9.

But the most widely used such model is the 'core model of social fluidity' developed by Erikson and Goldthorpe and applied in their analyses of social fluidity in *The Constant Flux* (1992). In the present volume, the core model has been applied by the authors of many of the chapters.

According to Erikson and Goldthorpe (1992: 117) the motivation for the core model lay in seeking to develop an operationalisation of the common pattern of social fluidity which the Featherman, Jones, and Hauser (FJH) hypothesis claims exists among advanced industrialised nations. To evaluate the FJH hypothesis

> What is obviously necessary is that a representation of the putative common or 'core' pattern of fluidity should in some way be produced, against which observed patterns within our sample of nations can be compared. (Erikson and Goldthorpe 1992: 117)

Erikson and Goldthorpe developed the core model as a theoretically informed account of the fluidity patterns of England and France (which were taken as the two nations whose fluidity most closely corresponded to some putative common pattern). While the model could be represented as a single matrix of integers (as with our QPM example), in fact Erikson and Goldthorpe build the model from specific components, each of which distinguishes two levels of (partial) association between origins and destinations. The result is that the model is usually expressed through a set of eight matrices, as follows.

The first component of social fluidity concerns hierarchical movement; and the first dimension of this (called HI1) distinguishes between movement among classes at the same hierarchical level (these cells are given the value 1 in the matrix) and those that involve a move (either upward or downward) from one hierarchical level to another. Thus we have the HI1 matrix:

$$\begin{matrix} 1 & 2 & 2 & 2 & 2 & 2 & 2 \\ 2 & 1 & 1 & 1 & 1 & 2 & 2 \\ 2 & 1 & 1 & 1 & 1 & 2 & 2 \\ 2 & 2 & 2 & 2 & 2 & 1 & 1 \\ 2 & 1 & 1 & 1 & 1 & 2 & 2 \\ 2 & 2 & 2 & 2 & 2 & 1 & 1 \\ 2 & 2 & 2 & 2 & 2 & 1 & 1. \end{matrix}$$

Movement between the groups of classes we earlier labelled (a), (b), and (c) are denoted by 2. But given these three hierarchical levels, another matrix, called HI2, is defined distinguishing movement across two levels:[14]

$$\begin{matrix} 1 & 1 & 1 & 1 & 1 & 2 & 2 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 2 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 2 & 1 & 1 & 1 & 1 & 1 & 1 \\ 2 & 1 & 1 & 1 & 1 & 1 & 1. \end{matrix}$$

[14] Erikson and Goldthorpe (1992: 46, 124) treat class IVc (farmers) as lying at the lowest hierarchical level (c) in class origins, but at the second level (b) in destinations.

The second component of the core model concerns the inheritance of class position: that is, the tendency for men to enter the same class as their father. The first inheritance matrix, IN1, distinguishes cells in which father and son are in the same class:

2 1 1 1 1 1 1
1 2 1 1 1 1 1
1 1 2 1 1 1 1
1 1 1 2 1 1 1
1 1 1 1 2 1 1
1 1 1 1 1 2 1
1 1 1 1 1 1 2.

This is, of course, identical to our SQPM matrix. The second inheritance matrix, IN2, then distinguishes three classes in which inheritance is more pronounced than elsewhere: these are classes I + II, IVa + b, and IVc:

2 1 1 1 1 1 1
1 1 1 1 1 1 1
1 1 2 1 1 1 1
1 1 1 2 1 1 1
1 1 1 1 1 1 1
1 1 1 1 1 1 1
1 1 1 1 1 1 1.

The final inheritance matrix, IN3, reserves a single parameter for farmers (IVc), among whom class inheritance is particularly strong:

1 1 1 1 1 1 1
1 1 1 1 1 1 1
1 1 1 1 1 1 1
1 1 1 2 1 1 1
1 1 1 1 1 1 1
1 1 1 1 1 1 1
1 1 1 1 1 1 1.

The third aspect of the core model is a single matrix, SE, that defines barriers to movement between the agricultural and non-agricultural sectors. Thus all

cells with agricultural origins (classes IVc and VIIb) and non-agricultural destinations, and vice versa, are assigned the value 2:

$$\begin{matrix} 1 & 1 & 1 & 2 & 1 & 1 & 2 \\ 1 & 1 & 1 & 2 & 1 & 1 & 2 \\ 1 & 1 & 1 & 2 & 1 & 1 & 2 \\ 2 & 2 & 2 & 1 & 2 & 2 & 1 \\ 1 & 1 & 1 & 2 & 1 & 1 & 2 \\ 1 & 1 & 1 & 2 & 1 & 1 & 2 \\ 2 & 2 & 2 & 1 & 2 & 2 & 1. \end{matrix}$$

The final component of the model is two affinity matrices. The first, AF1, identifies movement between classes I + II and VIIb:

$$\begin{matrix} 1 & 1 & 1 & 1 & 1 & 1 & 2 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 2 & 1 & 1 & 1 & 1 & 1 & 1, \end{matrix}$$

while AF2 identifies reciprocal movement between I + II and III; between IVa + b and IVc; and between V + VI and VIIa; and non-reciprocal movement from IVc to VIIa and from VIIb to VIIa:

$$\begin{matrix} 1 & 2 & 2 & 1 & 1 & 1 & 1 \\ 2 & 1 & 1 & 1 & 1 & 1 & 1 \\ 2 & 1 & 1 & 2 & 1 & 1 & 1 \\ 1 & 1 & 2 & 1 & 1 & 2 & 1 \\ 1 & 1 & 1 & 1 & 1 & 2 & 1 \\ 1 & 1 & 1 & 1 & 2 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 2 & 1. \end{matrix}$$

In the case of AF1, movement between I + II and VII is thought to be particularly unlikely (even over and above the hierarchy, inheritance, and sectoral effects already included), whereas the movements captured in AF2 are thought to be especially likely.

Since each matrix specifies one parameter (the cells scoring 1 having, as usual, a parameter value fixed at 0), the core model uses 8 d.f. to capture the origin–destination association: thus, together with the constant term and the main effects, the model has, when applied to a 7 × 7 table, 28 d.f. Because hierarchical movements are assumed to be more difficult than non-hierarchical ones, both HI1 and HI2 should have negative values. The inheritance effects,

by contrast, should all be positive, while the sector effect, since it captures the difficulty of moving between the two sectors, should be negative. Of the affinity effects, AF1 should be negative (it captures a 'disaffinity') and AF2 positive. Some of the parameters of the core model are to be interpreted incrementally. For instance, the relative likelihood of long distance mobility is captured by the sum of the coefficients for HI1 and HI2, rather than by HI2 alone. HI2, in fact, tells us the degree to which long-range mobility is more difficult than short range. In the same way, the propensity to inheritance of class IVc is given by IN1 plus IN2 plus IN3. So IN3 itself measures the 'extra' inheritance observed among farmers compared with classes I+II and IVab.

Erikson and Goldthorpe (1992: 142) report that, when fitted to their French data, the core model has a G^2 of 82.1 on 28 d.f. The *p* value for this is less than .0001, suggesting that, according to the classical goodness-of-fit criterion, the French population's fluidity is not well characterised by the core model. On the other hand, the index of dissimilarity is 2.4 percent (the model classifies 97.6 percent of cases to the correct cells in the table) and rG^2 (the extent to which the core model improves on the model of perfect mobility) is 99 percent. $G^2(S)$—that is, G^2 standardised to a table having 1991 cases (which is the smallest sample size in the CASMIN data)—is 34 which, if 1991 were the true sample size, would yield a *p* value of .2, which is well above the usual minimum threshold of .05. This suggests that the very large size of the French sample (18,671) accounts for the failure of the core model to fit using the normal χ^2 test. The bic statistic for the model (which Erikson and Goldthorpe do not report) is −193, though this is not of much interest because bic is useful only for making comparisons between models. The parameters of the core model applied to the French data have the expected signs and relative magnitudes (Erikson and Goldthorpe 1992: 147, Table 5.3).

Erikson and Goldthorpe find, however, that in all countries other than England and France, some adjustments have to be made to the core model in order to capture national variations in fluidity. These are sometimes called the national variants of the core model. The adjustments are of two kinds. In some cases the existing matrices are redefined: so, for example, when applied to the West German data, IN2 assigns immobility in class I+II to level 1, rather than 2. That is, there is no tendency for class inheritance to be higher here than in any other class. In other cases, additional affinity matrices were included. So, in Hungary, an additional matrix, AFX, captures the tendency for movement from the class of farmers, IVc, to the class of agricultural workers, VIIb.

RC(M) models

The core model uses dummy variables to capture what are believed to be the salient features of a mobility table. The approach here is explicitly categorical

and, indeed, Erikson and Goldthorpe (1993: 29–35) contrast their approach with those based on continuous measures of inequality, such as prestige scales or socio-economic indices. But there is a class of log-linear models which, while applying to categorized data, goes some way to bridging the gap between the use of dummy variables and the use of continuous measures. These are the RC(M) models, introduced by Goodman (1979*a*) and subsequently developed by Goodman (1986), Clogg (1982), and Becker (1990) among others. In these models, the categories of one or both of origins and destinations are scaled, and the association between them is captured by one or more linear association parameters. Furthermore, these scalings can be applied to the data or can be estimated from it. So, in the simplest case (the 'uniform association' model), origins and destinations are given exogenously derived scores, and the association between them is then captured by a single parameter. In this case the association in the logarithmic version of the model (see equation 2.2) is given by

$$\lambda_{ij}^{OD} = \beta x_i y_j$$

where x and y are the scores assigned to class origins and destinations respectively, and β is the association parameter. In the 'row effects' (and 'column effects') models, scores are assigned to the destination (origin) margin, and the β parameter then becomes specific to each row (column). Several substantive models combine these exogenous scalings of origins and/or destinations with dummy variables in order to model the fluidity regime: good examples are Hout's (1983) 'SAT' model and Breen and Whelan's (1992) 'AHP' model, referred to earlier.

The simplest model in which both sets of scalings are estimated from the data is Goodman's (1979*a*) 'RCII' model. This is a log-multiplicative, rather than log-linear, model in which

$$\lambda_{ij}^{OD} = \varphi \mu_i \nu_j$$

Here, μ and ν play equivalent roles to x and y in equation (2.7) except that they are now estimated, rather than given, and we now denote the association parameter by φ. If we define the logarithm of each odds ratio in the fitted values as follows:

$$\log \frac{f_{ij} / f_{ij'}}{f_{i'j} / f_{i'j'}} \equiv \log \left(\theta_{ii'jj'} \right)$$

then, under RCII we have

$$\log \left(\theta_{ii'jj'} \right) = \varphi \left[(\mu_i - \mu_{i'}) \left(\nu_j - \nu_{j'} \right) \right]$$

An analogous expression holds for the UA model. Thus the association between origins and destinations depends on the overall strength of the association (captured by ψ) and the scores estimated for (or, in the UA case, applied to) origins and destinations.

One immediately attractive thing about these models is their parsimony: the UA model uses only 1 d.f. since x and y are given and not estimated, and the RCII model uses $I + J - 2$ d.f. (see Goodman 1979a). Another is their ease of interpretation, with odds-ratios depending straightforwardly on the 'distances' between classes. For example, odds-ratios involving any pair of origin classes will be smaller if they have similar origin scores; larger if their scores differ a lot. The RCII model is often combined with QPM: that is to say, the cells on the main diagonal of the mobility table are fitted using dummy variables, and then the association in the off-diagonal cells is captured using the RCII specification. Ganzeboom, Luijkx, and Treiman (1989) used this model in their comparative analysis of 149 mobility tables from thirty-five nations.

Comparing mobility tables

The purpose of this book is the comparative analysis of social mobility, where comparisons are made over time and between countries. The application of log-linear models to this end involves no more, in principal, than the extension of the techniques and approaches already discussed, from tables of two dimensions to those of three (origins by destinations by time or by country) and four (origins by destinations by time by country) dimensions.[15] Here we will outline only the basic approach to comparative analysis taken in this volume.

Because comparisons of absolute mobility and of the marginal distributions of mobility tables are reasonably straightforward, we concentrate here on comparisons of social fluidity. Imagine that we have two mobility tables, from, say, different points in time, and we want to compare their fluidity. The baseline model from which we would begin is an elaboration of (2.2) as follows:

$$F_{ijk} = \lambda + \lambda_i^O + \lambda_j^D + \lambda_k^T + \lambda_{ik}^{OT} + \lambda_{jk}^{DT} + \lambda_{ij}^{OD},$$
$$\forall\ i = 1, \ldots, I;\ j = 1, \ldots, J;\ k = 1, \ldots, K$$

Now the log of the expected frequency has a third subscript, k, which indicates that we are dealing with a three-way table. This third dimension, which might be country or time, has K levels (we are assuming $K = 2$ but the equation is quite general) indexed by k. We fit main effects for all three variables, O, D, and T, and the terms λ_{ik}^{OT} and λ_{jk}^{DT}, which are two-way interactions between, respectively, origins and time, and destination and time, ensure that the origin and destination marginal distributions are fitted exactly at all levels

[15] The same logic applies to within-country analyses in which the third variable might be level of education or sex.

of K (i.e. at both time points). But the fact that our last term, λ_{ij}^{OD}, does not vary over K tells us that this model assumes a common pattern of origin–destination association at all levels of K (i.e. at both time points). As before, we could specify this pattern of association in any of many ways (e.g. using the core model); but a very common approach, and one followed in all the chapters of this book, is to fit the full set of $(I - 1) \times (J - 1)$ association parameters. If we were dealing with a single table, this would be the saturated model, fitting the cell counts exactly, but here, because we have two (or, generally, K) tables, this does not happen. Rather we have fitted a general model of social fluidity which is hypothesised to fit both tables. This is usually called the model of common or constant social fluidity.

When we turn to modelling differences in social fluidity we specify a model of social fluidity and allow some or all of its parameters to vary between tables. If one started with the saturated model of fluidity, then allowing all its parameters to vary over different tables would result in the cells of all the tables being fitted exactly. But if one used a more parsimonious model then this would not happen. The following chapters present numerous examples of this. So, in the French case (Chapter 5), for example, the core model of social fluidity is used and some, or all, of its eight component parameters are allowed to vary over the four French mobility tables from 1970, 1977, 1985, and 1993. In this way, one gains insight into exactly where and how the fluidity regime in France might have changed.

Unidiff

Given the unspecified association pattern of the common fluidity model, a widely used model, attributed to Erikson and Goldthorpe (1992) and Xie (1992), allows for a very parsimonious modelling of variation between tables in this association. The model was called 'Unidiff' (Uniform Difference) by Erikson and Goldthorpe and the 'log-multiplicative layer effect model' by Xie; so it is perhaps not difficult to see why the former has become the more widely used name. In this model, the association between origins and destinations takes the same pattern in all the tables being compared, but the strength of this association differs between tables. Under this model the log-odds ratio in the kth table is

$$\ln \theta_{ij/k} = \beta_k \ln \theta_{ij}$$

Here θ_{ij} is a set of baseline odds ratios, common to all tables, and β_k is a table-specific multiplier that raises or lowers the overall strength of all the log-odds ratios in a uniform manner. Conventionally, $\beta_1 = 1$: that is, this scale parameter is set to unity for one of the tables, and so in this case the fitted log-odds ratios are simply equal to the baseline set. Tables whose scale parameter is less

than unity thus show more social fluidity than the $k = 1$ table, and conversely if the parameter is greater than one.

Other comparisons

Comparisons using the RC(M) model are sometimes considered potentially problematic for the following reason. Given an RC(1) model—that is, a model with one set of estimated origin and destination scores and one parameter capturing the association between them—it is possible to allow all of these to differ between tables. But this then makes comparisons difficult because, for instance, one cannot interpret differences in φ (the parameter that captures the overall association between the scaled origins and destinations) as unambiguously reflecting differences in social fluidity when the various tables also have different scalings of their origin and destination classes. To simplify interpretation either the φ parameter is assumed fixed across tables or, more usually, the origin and destination scores are restricted to be the same across the tables (i.e. $\mu_{ik} = \mu_i$ and $\nu_{jk} = \nu_j$, for all k). In this case, then, the φ_k have an interpretation rather like that for the Unidiff β_ks. Conditional on the scorings estimated for origins and destinations, higher values indicate stronger origin– destination association (lower social fluidity).

Conclusion

This review of methods of mobility research is not, nor has it set out to be, exhaustive: rather it has sought to explain the methods used in this volume. For those seeking a more complete review, Hout's (1983) book remains valuable because it deals with log-linear methods applied specifically to the analysis of mobility tables. However, there are several more recent general introductions to log-linear modelling, such as Agresti (1990) and Powers and Xie (2000), which are highly readable and comprehensive and whose relevance to mobility research will be immediately evident. Methods for the analysis of categorical data continue to be developed: two areas of particular interest for the study of mobility are the extensions of Unidiff-type models by Goodman and Hout (1998) and the introduction of methods that allow the simultaneous modelling of marginal and joint distributions (Becker 1994; Lang and Agresti 1994; Lang and Eliason 1997).

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3 Social Mobility in Europe between 1970 and 2000

Richard Breen and Ruud Luijkx

This chapter, and the eleven that follow it, make up the empirical core of this book. In the present chapter we report the results of our comparative analyses of social mobility in all eleven countries. We begin with a discussion of the data that we use, then we deal in turn with social mobility among men and women, and we end by trying to draw together the most significant of our findings. At this stage we make no attempt to explain our results: rather, our aim is to provide an overview of differences and trends in mobility, leaving it to the separate country chapters to provide the details. We address the task of explanation in the concluding chapter, where we are in a position to draw on the results of this chapter and of the eleven country studies.

Data

We use the same data as in each of the eleven country chapters: in total, we use 117 mobility surveys covering the period 1970–2000. The sources of the data are shown in Table 3.1. The number of tables per country ranges from two in Israel and Italy to thirty-five in the Netherlands. In two countries we have, for some years, more than one mobility table. In the German case for each of 1978, 1979, 1982, and 1986 we have two mobility tables, and for 1980 we have three. A test of common social fluidity within each year (the test has 216 degrees of freedom (d.f.)), returns a deviance of 203.7 among men and 205.2 among women, neither of which is statistically significant, suggesting that we can analyse the German data as if it were annual (i.e. without having to include parameters that allow social fluidity to be different in the various German series). So the twenty-two German surveys are used to yield observations for sixteen years. In the case of the Netherlands, several datasets refer to the same years, and here the thirty-five surveys give us mobility tables

TABLE 3.1.*Sources of data*

Country	Number of tables	Sources of data	Years for which data are included
Germany	22	Zumabus	1976–7, 1979(2), 1980, 1982
		Allbus	1980, 1982, 1984, 1986, 1988, 1990–2, 1994, 1996, 1998
		Politik in der BRD	1978, 1980
		Wohlfahrtssurvey	1978
		German socio-economic panel	1986, 1999
France	4	Formation–qualification professionnelle Insee surveys	1970, 1977, 1985, 1993
Italy	2	National survey on social mobility	1985
		Italian household longitudinal survey	1997
Ireland	3	Survey of the determinants of occupational status and mobility	1973
		Survey of income distribution and poverty	1987
		Living in Ireland survey	1994
Great Britain	15	General household survey	1973, 1975–6, 1979–84, 1987–92
Sweden	24	Annual surveys of living conditions (ULF)	1976–99
Norway	3	Colbjørnsen et al. 1987	1982
		Moen et al. 1996	1994
		Level of Living Survey	1995
Poland	3	Zagorski 1976	1972
		Slomczyski 1989	1988
		Treiman/Szelenyi	1994
Hungary	4	Social mobility and life history survey	1973, 1983, 1992
		Way of Life and Time Use Survey (Hungarian Central Statistical Office)	2000
Israel	2	Matras and Weintraub 1977	1974
		Kraus and Toren 1992	1991
Netherlands	35	Parliamentiary Election Study	1970, 1971, 1977, 1981, 1982, 1986, 1994, 1998
		Political Action Survey I	1974, 1979
		Justice of Income Survey	1976
		CBS Life Situation Survey	1977, 1986
		National Labour Market Survey	1982
		National Prestige and Mobility Survey	1982
		Strategic Labour Market Survey	1985, 1988, 1990, 1992, 1994, 1996,1998
		Cultural Changes [ISSP]	1987
		Justice of Income Survey	1987
		Primary and Social Relationships	1987
		Social and Cultural Trends	1990
		Justice of Income Survey [ISJP]	1991
		Family Survey I, 1992–93	1992
		Households in the Netherlands pilot	1994
		Households in the Netherlands	1995
		Social Inequality in the Netherlands	1996
		National Crime Study	1996
		Social and Economic Attitudes	1998
		Netherlands Family Survey II	1998
		Use of Information Technology	1999

for twenty separate years. A test of whether, for all years in which there is more than one survey, social fluidity differed between tables in the same year, returned a deviance of 538.4 (men) and 427.3 (women) with 540 d.f. Again, this is not statistically significant and so we analyse the Dutch data as twenty annual surveys.

In general the age range of the respondents in our mobility tables is 25–64, though in the British case it is 25–49. This is because, in some years, respondents to the British General Household Survey who were older than forty-nine were not asked about their class origins (as explained in Chapter 8 by Goldthorpe and Mills). We have coded social class according to the seven-class 'CASMIN' (Comparative Analysis of Social Mobility in Industrial Nations) scheme. This identifies classes I + II (the service class); III (routine non-manual class); IVab (petty bourgeoisie with and without employees); IVc (farmers); V + VI (skilled manual workers, technicians, and supervisors of manual workers); VIIa (unskilled manual workers not in agriculture), and VIIb (farm workers). One consequence of choosing this categorisation is that it allows our results to be compared with those of *The Constant Flux,* where the same categories were used. However, some general and specific problems associated with the use of the CASMIN version of the Goldthorpe schema should be kept in mind. For one thing, putting classes I and II together means that we do not distinguish between the upper and lower service classes and, as several of the country chapters note, this distinction is an important one: access to the upper, rather than the lower, service class differentiates the mobility chances of those from

different class origins. Unfortunately, in some countries, such as Britain, I and II cannot be distinguished. For another, in the analysis of women's mobility, it is usual to place class IIIb together with class VIIa. This is because IIIb is made up of occupations, largely in personal services, that are overwhelmingly held by women and whose characteristics place them closer to unskilled manual work than to the kind of white-collar jobs found in class IIIa. But in Poland and Israel it is not possible to distinguish IIIb and IIIa and thus, in all countries, for men (where failing to separate these two parts of class III is of less consequence) and women we treat IIIa and IIIb as a single class.

The specific problems associated with the use of this version of the Goldthorpe schema are three: first, although the British data use a seven-class schema, it is not quite the same as the CASMIN schema. As Goldthorpe and Mills (Chapter 8, this volume) explain, it was not possible, using the General Household Survey, to distinguish between those large employers who would have been placed in class I and the small employers who belong in IVa. Thus, in Britain, the first class comprises I + II + IVa, while the third class is only the self-employed without employees (IVb). Second, in the Swedish data, class VII is not differentiated (because class VIIb has virtually ceased to exist). Finally, as Ringdal notes in Chapter 10, the Norwegian data from 1973 do not distinguish between the employed and the self-employed. Given that the distinction between owners and non-owners of the means of production is fundamental to any class scheme, we decided to omit this dataset from all the analyses reported in this chapter.

Methodological issues

As Table 3.1 showed, our eleven countries contribute rather different numbers of mobility tables to our cross-national analyses. Sweden, for example, has a table for every year from 1976 to 1999, whereas Poland and Ireland have only three tables each, covering the years between the early 1970s and 1994. The amount of information we possess regarding change over time, and the reliability of the conclusions based on this information, will vary between countries. If we have a small number of observations, any one of them may be very influential in determining whether or not the data display a trend (as we shall see) and this will inevitably lead to uncertainty in the conclusions we draw. All else equal we must, as a consequence, attach more credence to results about temporal trends drawn from countries with a larger number of observations (Sweden, the Netherlands, Great Britain, and Germany).

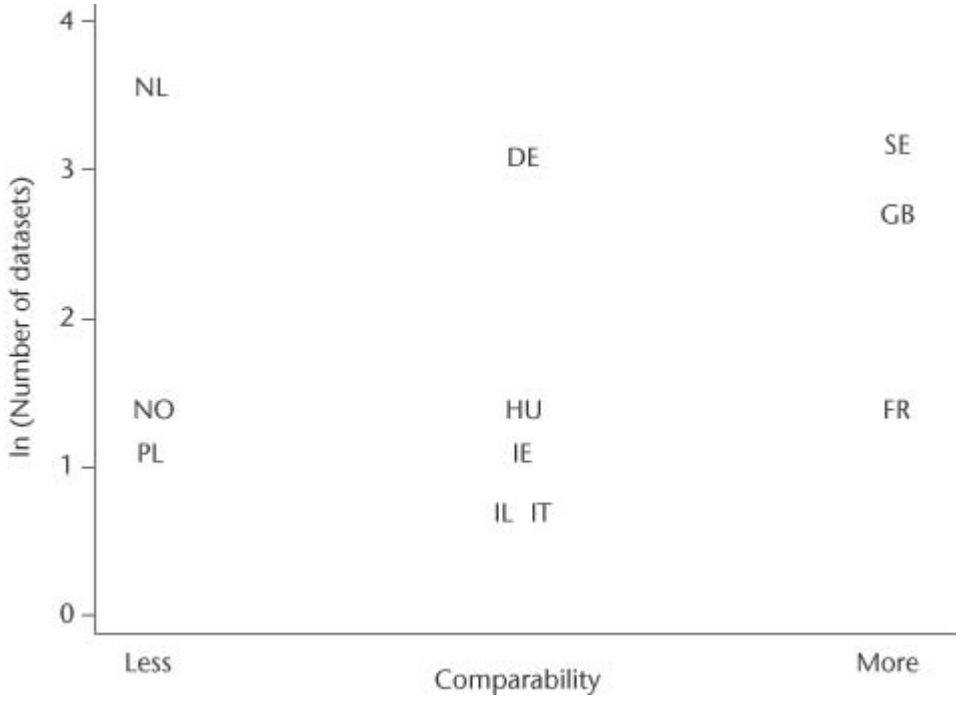
Furthermore, the data that we use are never free of error, and differences in data quality may easily be mistaken for substantive differences. We have used the best quality data available from each of our eleven countries, but we still need to be aware of the potential for differential reliability and validity to induce spurious cross-national variation and temporal change. As far as the differences

between countries are concerned, the fieldwork for the surveys we use was in all cases carried out according to internationally accepted procedures and the subsequent coding of the variables—notably class origins and destinations—followed a common and widely implemented procedure. Nevertheless while adherence to such norms is some reassurance that the data attain high standards of quality, the surveys in the various countries were carried out independently of each other, and so we should be cautious about what we infer from them concerning cross-national differences. As far as change within countries is concerned, we can have more faith in our findings when the various surveys have been administered in a consistent fashion. In three cases the data always come from the same survey series: these are France (the FQP—Formation Qualification Professionnelle—surveys), Britain (the General Household Survey, GHS), and Sweden (the ULF series). In a further five countries the datasets come from highly comparable sources: these are Ireland (where the three surveys were all carried out by the same fieldwork organization), Hungary (where the four surveys were all fielded by the Hungarian Central Statistical Office), Italy (where a number of the same academics were involved in the design and execution of the two surveys), Germany, and Israel. But in the remaining three cases—Norway, Poland, and the Netherlands—the data come from various sources within each country and thus the possibility that variations in data quality might be mistaken for temporal change is greatest here.[16] Figure 3.1 summarises the position of each country along the two dimensions of internal comparability of datasets and number of surveys. Following the arguments we have made, we would consider that the degree of confidence that can be placed in the results increases as one moves away from the south-west corner of the figure, with the greatest confidence attached to results that come from the datasets listed in the north-east corner.[17] Furthermore, we believe that more reliance can be placed on estimates of trends *within* countries than measures of differences *between* them: thus our discussion, later in this chapter, of which countries are more or less open in their mobility regime, should be interpreted with some caution. Finally, while the data that we have are probably adequate for presenting a picture of broad trends and differences, we would have less confidence in the extent to which they allow the specifics of the pattern of social fluidity to be compared across either time or countries. This consideration has then dictated our choice

[16] There are probably two major factors that will lead to change in the quality of mobility data within each country. First, response rates tend to decline over time and so the representativeness of mobility tables derived from survey data may worsen (though this is not an inevitable consequence of falling response rates and it is also quite plausible that when response rates are lower the quality of the data that are collected is higher). Second, it seems reasonable to suppose that there may be variation over time in the quality of treatment of the actual data collected: that is to say, in the collection, coding, and processing of questionnaires.

[17] Though even within the series that we claim to be of the highest quality we find changes in procedures that may introduce difficulties in interpreting trends. For example, as Goldthorpe and Mills point out in their chapter, the British GHS changed during the 1980s from a less to a more accurate sampling frame.

FIG. 3.1. *Number of datasets and their comparability within each country*



Note: NL: the Netherlands; DE: Germany; SE: Sweden; NO: Norway; PL: Poland; HU: Hungary; IE: Ireland; IL: Israel; IT: Italy; GB: Great Britain; FR: France.

of models. Rather than seeking to develop detailed models of the fluidity regime, we prefer instead to fit rather general models and to assess their adequacy using several measures (including the conventional χ^2 goodness-of-fit test and the index of dissimilarity, Δ).

The last methodological issue concerns sample size. As Table 3.2 shows, sample sizes vary greatly not only between countries but also, in some cases (most strikingly Poland), over time. And since the number of tables also differ between countries so does the number of cases in each table. For men in Germany, 14,895 observations are spread over sixteen tables, giving an average of 19 cases per cell of these tables, whereas for France, which has only four tables, there are around 246 cases per cell. The smaller the number of observations per cell the less power our statistical tests have. This is something that we shall try to take into account when we discuss our results.

Class structures and absolute mobility, men 1970–2000

We start our analyses with social mobility among men. For both sexes we follow a common analytical strategy: we begin with absolute mobility, then

TABLE 3.2. *Original sample size by country and decade*

Country	Decade			
	1970s	1980s	1990s	Total
Men				
Germany	3,339.0	7,373.0	4,183.0	14,895.0
France	26,516.5	14,255.6	7,549.7	48,321.8
Italy		1,823.0	2,947.0	4,770.0
Ireland	1,877.6	2,054.0	2,698.2	6,629.8
Great Britain	18,014.5	32,220.5	11,619.0	61,854.0
Sweden	7,727.0	15,856.7	14,473.2	38,056.9
Norway		962.0	2,108.4	3,070.4
Poland	27,892.0	2,086.0	901.0	30,879.0
Hungary	10,498.0	9,439.8	10,841.7	30,779.5
Israel	2,969.0		3,555.0	6,524.0
Netherlands	4,688.6	6,331.7	9,973.4	20,993.7
Total	103,522.2	92,402.3	70,849.6	266,774.1
Women				
Germany	1,674.0	3,868.0	2,245.0	7,787.0
France	14,784.5	9,442.2	5,310.6	29,537.3
Italy		727.0	1,705.0	2,432.0
Great Britain	11,575.0	22,580.5	9,120.0	43,275.5
Sweden	6,470.6	12,827.3	12,788.0	32,085.9
Norway		567.0	1,676.5	2,243.5
Poland	24,839.0	1,859.0	724.0	27,422.0
Hungary	7,442.0	7,526.7	8,302.4	23,271.1
Israel	959.0		2,976.0	3,935.0
Netherlands	1,058.6	2,335.3	5,628.9	9,022.8
Total	68,802.7	61,733.0	50,476.4	181,012.1

turn to temporal trends in social fluidity within countries, and finish by attempting to make comparisons of social fluidity between countries. Accordingly, the first issue we address is whether there has been any convergence between countries in their class destination distributions: in other words, have the class structures of different countries become more similar? To examine this we have simply divided the period into three decades, the 1970s (1970–9), 1980s (1980–9), and 1990s (1990–2000), and we have aggregated each country's mobility tables within each of these decades into a single table. For Italy and Norway we have no observations from the 1970s and we have no 1980s observations for Israel. In other cases the observations are reasonably well spread out over the period except in Britain where the 1990s observations are drawn from 1990, 1991, and 1992. We have one table for 2000 (from Hungary) which, for the present, we include as part of the 1990s data.

Table 3.3 shows the dissimilarity indices (Δ) between the class destination distributions of each pair of countries in each decade. A glance at this shows a general pattern of convergence evident in the declining average Δ: 24.2 in the 1970s, 20.2 in the 1980s, and 19.7 in the 1990s. This is brought about by differing trends in different countries. As one might have expected, the largest Δs are found in the 1970s in comparisons between countries which, like Ireland and Poland, had retained a large farming sector, and others, like Britain, Sweden, and the Netherlands, where this sector accounted for a very small share of the workforce. As the agricultural sector has declined in Ireland and Poland and elsewhere, the Δs involving these countries have also fallen. However, some particular pairs of countries show little or no convergence in their class structures. Most noticeable is the position of the Netherlands. The Dutch class structure has diverged from that of most others: the Δs for the 1990s are larger than those for the 1970s in a comparison of the Netherlands with Germany, France, Italy (the comparison here is between the 1980s and 1990s), Sweden, Norway, Poland, and Hungary.

Table 3.4 shows the overall class structures for the eleven countries in each decade. These figures show approximate constancy in the sizes of classes III and V + VI, decline in class VIIa, substantial declines in classes IVc and VIIb, and growth in I + II and IVab. Despite growing similarities between class structures, there still remain notable variations in the 1990s (see the appendix to Chapter 3). Classes I + II have increased markedly in Great Britain (from 31 to 42 percent) and the Netherlands (37 to 49 percent). In Germany, Britain, Sweden, Norway, and the Netherlands, class I + II accounts for around 35 percent or more of all positions, whereas in France, Italy, Ireland, Poland, and Hungary it accounts for around 25 percent or less.[18] Class IVab, although it shows overall growth, remained constant or even declined slightly in seven of our countries. All its growth is therefore found in Britain, Sweden, Poland (where it increased from 2 to 13 percent), and Hungary. But the self-employed and small proprietors are most numerous in Italy (19 percent) and Israel (17 percent) and least numerous in Hungary (6 percent) and the Netherlands (4 percent).[19]

In the majority of our countries, the farming sector (IVc and VIIb) was small even in the 1970s. In Germany, Britain, Sweden, Hungary, Israel, and the Netherlands, class IVc accounted for less than 6 percent of men in the class structure in the 1970s, and VIIb accounted for less than 3 percent everywhere except Ireland and Hungary. In contrast to all other countries, in Hungary the farm sector was predominantly made up of agricultural workers

[18] But we need to bear in mind that the British service class numbers are inflated by the inclusion of class IVa.

[19] Now the British figure of 10% is understated because of the inclusion of some members of class IVab in I + II.

TABLE 3.3. *Between-country class destination dissimilarity indices by decade (all men)*

	Decade	France	Italy	Ireland	Great Britain	Sweden	Norway	Poland	Hungary	Israel	Nether-lands
Germany	1970	22.2	—	41.3	4.9	19.5	—	33.6	30.6	32.7	13.4
	1980	16.7	30.4	26.7	7.4	18.8	15.6	24.2	26.9	—	14.9
	1990	14.5	24.4	26.9	12.0	17.7	14.4	28.8	22.9	19.5	16.3
France	1970	—	—	20.0	18.7	16.6	—	17.8	20.2	16.8	19.5
	1980	—	17.0	13.2	14.4	16.2	14.3	13.2	20.5	—	19.0
	1990	—	17.7	12.4	17.9	16.8	14.0	17.0	16.9	9.3	23.6
Italy	1970		—	—	—	—	—	—	—	—	—
	1980		—	20.3	26.7	21.0	17.7	28.0	32.9	—	24.0
	1990		—	17.9	22.8	20.6	21.2	24.6	30.4	10.8	26.1
Ireland	1970			—	38.0	24.7	—	20.2	29.1	22.6	31.8
	1980			—	23.3	16.7	21.7	16.9	20.3	—	24.2
	1990			—	22.7	18.3	18.2	10.9	20.5	16.0	28.8
Great Britain	1970				—	16.6	—	29.4	25.8	29.7	14.0
	1980				—	15.5	12.3	21.3	25.3	—	10.7
	1990				—	12.7	11.1	25.8	27.6	16.9	12.1
Sweden	1970					—	—	30.4	25.2	14.8	12.7
	1980					—	7.4	28.0	25.9	—	13.2
	1990					—	9.8	22.3	24.9	13.7	16.8
Norway	1970						—	—	—	—	—
	1980						—	26.5	32.8	—	9.5
	1990						—	27.0	29.4	16.6	11.1
Poland	1970							—	29.6	32.8	31.1
	1980							—	22.5	—	25.5
	1990							—	17.4	18.0	36.2
Hungary	1970								—	25.8	33.4
	1980								—	—	31.3
	1990								—	23.9	35.0
Israel	1970									—	24.3
	1980									—	—
	1990									—	23.8

Note: The mean and variance for 1970, 1980, and 1990 are 24.2 and 64.6, 20.2 and 44.2, and 19.7 and 41.5, respectively.

TABLE 3.4. *Aggregate class structures (all men) in the eleven countries by decade*

	1970s	1980s	1990s
I + II	23.1	28.6	30.8
III	8.7	9.0	10.1
IVa + b	7.9	8.6	10.4
IVc	8.6	5.7	4.0
V + VI	27.7	27.6	27.1
VIIa	20.6	18.3	15.7
VIIb	3.5	2.3	2.0

Note: Each country is weighted equally in computation of aggregate class structure.

(15 percent in the 1970s) rather than farmers (1 percent in the 1970s). In all the countries where IVc and/or VIIb were relatively large in the 1970s, their share has declined over the last quarter of the twentieth century; elsewhere, where they were small to begin with, they have either declined further or remained stable. So, the proportion in class IVc has fallen markedly in France (from 10 to 5 percent), Ireland (22 to 9), and Poland (26 to 12), and the percentage in VIIb has fallen from 6 to 2 in Ireland and from 15 to 7 in Hungary. In the 1990s class IVc accounted for 5 percent or less everywhere except in Ireland and Poland, and VIIb accounts for less than 3 percent everywhere except Hungary.

The class of unskilled non-agricultural workers, VIIa, has declined in relative size everywhere except Poland, where it accounts for a steady 19 percent of male workers. The skilled manual worker class, V + VI, has remained stable in most countries or has displayed very slight (1 or 2 percent) increases or decreases. Major changes have occurred only in Ireland, Israel, and Hungary, where this class has grown in size, and Britain, where it has declined. The working class as a whole (V + VI and VIIa) now constitutes between 40 and 50 percent of the class structure everywhere except Britain (39 percent), Norway (36 percent), Italy (34 percent), the Netherlands (33 percent), and Hungary (almost 60 percent). Finally, class III has been stable except in Britain and the Netherlands, where it has declined; and in Ireland where it has increased from 7 to 14 percent.

Table 3.5 shows the indices of dissimilarity between class origins and destinations in each country in each decade. In most countries these Δs are declining or stable, suggesting that long-term structural change is gradually diminishing. So, for example, in Hungary the index almost halved between the 1970s and the 1990s. Indeed, the most substantial declines in Δ are seen in Poland, Hungary, and Israel. In the first two, this is driven to a considerable

TABLE 3.5. *Origin–destination dissimilarity index by country and decade (all men)*

	1970s	1980s	1990s
Germany	18.1	18.0	16.9
France	24.3	21.9	20.1
Italy		24.5	24.7
Ireland	19.0	22.7	23.1
Great Britain	13.3	16.9	17.1
Sweden	25.3	22.4	20.5
Norway		28.7	20.6
Poland	32.2	21.1	22.2
Hungary	42.2	33.5	22.6
Israel	44.3		30.5
Netherlands	25.1	23.7	23.1
Mean	27.1	23.3	21.9
Variance	112.7	23.5	14.0

extent by the share of men in the farmer class, IVc. In both countries there are very many more men from farming origins than are found in farming destinations. In origins and destinations the share of men in IVc declines but, over the decades, it declines more rapidly as an origin than as a destination, so contributing to the falling Δs. In Hungary, class V + VI is much larger as a destination than an origin and here another factor driving the reduction in Δ is the growth, over the decades, in the proportion of fathers who come from this class. In Israel, the farmer role is taken by the petty bourgeoisie (IVab). A very large share of Israelis originated in this class, but rather fewer of them are found in it, and while the proportion in destination class IVab has declined a little, the proportion originating in IVab has fallen much more markedly.

In a few countries—notably Britain and Ireland—the Δs are increasing, suggesting more significant ongoing changes to the class structure. But what is perhaps most striking is the decline in the between-country variance in this particular measure, from 113 in the 1970s to 14 in the 1990s. In the 1970s the degree of dissimilarity between origins and destinations itself varied substantially between countries, whereas by the 1990s this variation had been reduced to about one eighth of its earlier value.

Table 3.6 reports four measures of mobility within each country. The first of these is the proportion of men who were intergenerationally mobile (i.e. whose destination and origin classes differ). Then we report the proportion who were vertically mobile: that is, whose destination class is at a higher or lower level than their origin.[20] Vertical mobility itself can be partitioned into upward and

[20] All the classes are assigned to one of three levels: classes I and II comprise the highest, VIIa and VIIb the lowest; and III, IVab, IVc, and V + VI are between these.

TABLE 3.6.*Percentage mobile by country in each decade (all men)*

	Germany	France	Italy	Ireland	Great Britain	Sweden	Norway	Poland	Hungary	Israel	Netherlands	Mean	Variance
Total mobility													
1970s	61.6	66.6	—	56.7	63.0	70.8	—	59.4	77.5	74.4	66.3	66.3	48.0
1980s	62.1	67.5	69.5	61.3	61.8	71.4	71.9	61.0	74.9	—	67.7	66.9	25.8
1990s	60.3	67.0	72.1	66.1	60.8	71.0	68.1	67.4	71.6	74.3	65.7	67.7	19.9
Vertical mobility													
1970s	44.1	43.8	—	39.9	50.7	54.0	—	40.9	53.0	43.7	50.6	46.7	28.5
1980s	45.8	45.9	40.8	42.6	50.8	54.7	55.2	42.9	55.8	—	54.1	48.9	34.6
1990s	46.3	46.3	46.3	45.5	50.7	55.2	52.1	45.9	53.7	50.4	54.0	49.7	13.9
Upward mobility													
1970s	31.7	25.9	—	21.6	32.8	35.1	—	22.1	26.9	20.1	36.1	28.0	37.1
1980s	33.6	29.1	29.0	27.9	33.1	35.3	39.3	24.8	34.7	—	38.9	32.6	22.9
1990s	33.3	29.9	35.9	31.4	31.7	36.6	34.2	26.3	35.9	35.0	37.7	33.4	11.4
Downward mobility													
1970s	12.4	17.9		18.4	17.9	19.0	—	18.8	26.2	23.5	14.5	18.7	17.3
1980s	12.2	16.8	11.8	14.7	17.7	19.4	15.9	18.0	21.1	—	15.2	16.3	8.7
1990s	13.0	16.4	10.4	14.1	19.0	18.6	17.9	19.6	17.8	15.4	16.3	16.2	8.0

downward mobility, and we report the rates of these in the final two panels of the table. The percentage of mobile men is fairly constant over time except in Ireland and Poland, where it increased substantially, and Hungary, which is the only country to show a large decline. On average, two-thirds of men occupy a class other than that in which they originated, and over the last part of the twentieth century the variance between countries in this figure has become quite small, in line with what we would have expected given the declining indices of dissimilarity between the origin and destination distributions. Nevertheless some differences remain: mobility rates are lowest in Germany and Britain, highest in Italy, Sweden, Hungary, and Israel.

Two-thirds of men are mobile and just under half of all men have experienced vertical mobility: thus about three-quarters of mobility is vertical (the remainder being movement between classes at the same hierarchical level). Temporal change has been modest, as is the degree of cross-national variation remaining in the 1990s. Two-thirds of vertical mobility is in an upward direction, reflecting the increased share of positions in classes I + II and the reduced share in VIIa and VIIb, as shown in Table 3.4. The percentage of men upwardly and downwardly mobile has remained substantially the same over the three decades, though there are three exceptions to this: Italy, where upward mobility has increased by seven percentage points between the 1980s and 1990s; and Ireland, Hungary, and Israel, where rates of upward mobility have increased markedly and rates of downward mobility have declined. But in all four panels of Table 3.6 probably the most striking finding is the high degree of similarity among countries that prevailed by the 1990s in all the measures of mobility.

Absolute mobility: convergence or divergence?

What can we conclude from this overview of absolute mobility among men in our eleven countries? The evidence seems to point to a gradual convergence, so that the class structures of the countries, and the intergenerational flows of men between classes, are becoming more similar. The former trend has two main components: the continued decline of farming occupations in those countries where agriculture has long persisted as an important sector of the economy, and the increase at the top of the class structure in the service classes, I + II. Most of the change occurred in the 1970s and 1980s, and convergence has been by no means complete: in the 1990s countries still differed, sometimes in quite marked ways, in their class structures.

The strength of convergence of intergenerational mobility flows is quite impressive. Of necessity, convergence requires that different countries display different trends and/or different rates of growth or decline within a common trend. So, the rate of mobility has clearly become more similar, and a closer

inspection of Table 3.6 shows that this is mainly due to change in three countries: rates of mobility increased to bring Ireland and Poland closer to the average, while those in Hungary declined with the same effect. In the other countries there is little change in this particular measure. On the other hand, the trend in the rate of vertical mobility is driven by a more widespread convergence, with several countries' rate of vertical mobility moving closer to the mean by a few percentage points. Much the same is true of the rates of upward and downward mobility.

National and temporal variation in social fluidity among men

We turn now from the analysis of absolute mobility to the study of social fluidity, in which we use data from eight of our eleven countries. We omit Italy and Israel because for these countries we only have two mobility surveys, and we also omit Norway because, once the 1973 data are excluded, this leaves us with, effectively, just two observations for this country as well (the remaining three Norwegian tables come from 1987, 1995, and 1996).

The CASMIN (Erikson and Goldthorpe 1992) project analysed cross-national mobility among men using a single table from each country, referring, for the most part, to the early 1970s. Since our analysis of men's mobility starts in the early 1970s we wanted to ensure that our results for this period were consistent with those of the CASMIN project. We therefore tested whether the initial mobility table in each of our countries showed the same pattern of social fluidity as reported in *The Constant Flux*. In several cases, of course, this comparison was made between the same datasets. The results are shown in Table 3.7 and we cannot reject the hypothesis of common social

TABLE 3.7. *Tests of common social fluidity between initial observation in each country and the CASMIN data (test has 36 d.f. except for Sweden where it has 25)*

Country	Deviance	Number of cases (weighted)
West Germany	27.53	6,530.3
France	38.23	33,310.5
Ireland	4.89	4,137.2
Sweden	19.82	4,663.5
Poland	0.95	64,108
Hungary	48.12	24,389

fluidity for any of the six countries listed there. It was not possible to carry out these tests for Britain because of the problem in the allocation of members of class IVa. However, Goldthorpe and Mills (Chapter 8, this volume) report that common social fluidity holds for men among the first table in the GHS series (for 1973) and the 1972 Oxford Mobility Survey (which was used in *The Constant Flux*) when the GHS class classification is applied to the latter. We can therefore be confident that, in the seven countries represented here and in CASMIN, our analyses do indeed begin where CASMIN left off.

Changes over time in social fluidity within countries: men

Perhaps the first questions that someone confronted with the data that we have would want answered are: how has social fluidity evolved within each country over the last part of the twentieth century, and which countries are the most and least open? Here we will try to provide some provisional answers to these two questions, though bearing in mind our reservations about how satisfactorily the latter can be addressed. To do this we turn first to our decade data so that we can make an approximate comparison of social fluidity in the 1970s, 1980s, and 1990s.

Table 3.8 shows the results of fitting three models to the data for each country considered separately.[21] The first model is constant social fluidity (CnSF), which we can write *OT DT OD,* and the second is the Unidiff model, or, as we term it, log-multiplicative social fluidity (LmSF), which we write $OT\ DT\ OD\beta_T$. Here we use *T* to mean decades, while *O* and *D* stand for origin and destination, respectively. In the LmSF model, $OD\beta_T$ indicates that the origin– destination association varies over *T* according to the parameter, β, which may take a different value in each decade. Whereas the CnSF model says that the association between origins and destinations is the same in each decade for a given country (i.e. $\beta_T = \beta$ for all *T*), the LmSF model says that, although the pattern of origin–destination odds ratios is always the same, the strength of the log-odds ratios is greater or less according to the value of β_T.[22] This model is particularly convenient because differences in social fluidity are captured by differences in the value of this parameter. Our third model is simpler yet: it is log-multiplicative social fluidity in which the β_T parameters are constrained to be linear over decades. We call this 'linear LmSF', written $OT\ DT\ OD(1 + \beta t)$ (for $t = 0, \ldots, T$).

[21] As in our earlier analyses, the decade data collapses all the data from a given decade into a single table.

[22] As we noted in Chapter 2, the log-odds ratios are scaled up or down according to b_k : thus the odds ratios themselves are scaled according to $\exp(\beta_k)$.

TABLE 3.8.*Deviance and Δfor CnSF, LmSF, and linear LmSF models fitted to decade data per country, all men (significant at 5% level in boldface)*

Model	Countries							
	Germany	France	Ireland	Great Britain	Sweden	Poland	Hungary	Netherlands
N	14,895.0	48,321.8	6,629.8	61,854.0	38,056.9	30,879.0	30,779.5	20,993.7
(1) CnSF	**96.89**	**181.00**	**102.76**	92.23	**80.41**	**162.34**	**262.68**	**158.78**
d.f.	72	72	72	72	50	72	72	72
(2) LmSF	**95.31**	**150.86**	**93.63**	87.54	**72.53**	**136.69**	**192.03**	**100.63**
d.f.	70	70	70	70	48	70	70	70
(3) Linear LmSF	**95.39**	**153.85**	**98.27**	**92.19**	**73.07**	**139.45**	**210.12**	**100.83**
d.f.	71	71	71	71	49	71	71	71
(2) − (1)	1.58	**30.14**	**9.13**	4.69	**7.88**	**25.65**	**70.65**	**58.15**
d.f.	2	2	2	2	2	2	2	2
(3) − (1)	1.50	**27.15**	**4.49**	0.04	**7.34**	**22.89**	**52.56**	**57.95**
d.f.	1	1	1	1	1	1	1	1
(3) − (2)	0.08	2.99	**4.64**	**4.65**	0.54	2.76	**18.09**	0.20
d.f.	1	1	1	1	1	1	1	1
Δ for CnSF	2.20	2.00	3.88	0.99	1.68	1.25	3.01	2.81
Δ for LmSF	2.15	1.76	3.77	0.93	1.59	0.99	2.56	2.01
Δ for Linear LmSF	2.14	1.78	3.84	1.00	1.57	0.99	2.69	2.01
β parameters LmSF								
1970s	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1980s	0.98	0.91	1.06	1.04	0.93	0.83	0.78	0.86
1990s	0.94	0.89	0.90	1.00	0.90	0.81	0.77	0.75
β parameters linear LmSF	−0.0289	−0.0604	−0.0541	0.0029	−0.0490	−0.1231	−0.1108	−0.1263

In the table we show the deviances and indices of dissimilarity, Δ, associated with each of these models and also the likelihood ratio tests of whether LmSF and linear LmSF are statistically significant improvements over CnSF.[23] We also show the difference in deviance between LmSF and its linear counterpart. According to the normal goodness-of-fit tests, whether or not CnSF fits the data tells us whether there is change over decades, and, if there is, the goodness-of-fit of LmSF and linear LmSF tell us whether it takes the rather simple form specified by these models. So, in the British case, CnSF fits the data (the critical value at $p < .05$ for a χ^2 test with 72 d.f. is approximately 92.7) and we can reject the hypothesis that there is change over time.[24] In Poland, on the other hand, we can reject CnSF (suggesting that Polish social fluidity has changed). LmSF and linear LmSF are both a significant improvement over CnSF in Poland, but neither fits the data (the critical value for 70 d.f. is roughly 90.4), indicating that temporal change is more complex than a simple scaling up or down of the log-odds ratios.

This pattern of temporal change that is not wholly captured by LmSF or linear LmSF but in which either or both fits the data better than CnSF is also found in France, Ireland, Sweden, Hungary, and the Netherlands. Nevertheless, although LmSF and linear LmSF fail to fit using conventional goodness-of-fit tests, the index of dissimilarity shows they correctly classify 97 percent or more of cases (the exception is Ireland where the fit is a little poorer). On this basis we are strongly inclined to accept these simple models of change as presenting a sufficiently accurate picture. In France, Sweden, Poland, and the Netherlands the linear LmSF model is as good a fit to the data as the LmSF model: in other words in these cases there is a linear trend in social fluidity.

This picture can be readily summarised. In Britain there is stability in social fluidity: CnSF fits the data and neither LmSF nor linear LmSF improves on it. In Germany there also seems to be stability in social fluidity, though this is not quite so clear cut. Here, CnSF comes very close to fitting, and, once again, neither LmSF nor linear LmSF improves on it. At the bottom of Table 3.8 the β parameters from the LmSF model show no differences between decades in

[23] When we say that something is or is not statistically significant and when we refer to whether or not a model fits the data, we use the $p < .05$ criterion unless otherwise specified. But, when interpreting the results of statistical tests based on the deviance, a point made in Chapter 2 should be kept in mind: it is difficult to find models that fit tables which are based on very large samples. Some of our samples are very large indeed: in six countries the male samples exceed 20,000 cases. We could compute $G^2(S)$—that is, the deviance standardised to a smaller sample size—and, given the appropriate choice of S, this would yield values showing that many of our models 'fit' the data; but this would not be any more informative about the adequacy of the models than would Δ, and so we rely heavily on Δ in choosing between alternative models.

[24] Strictly speaking, we can reject global change. Using the CnSF model is not a parsimonious way to test for temporal change because it uses many degrees of freedom and changes in some parts of the fluidity regime may thus be overlooked. It is possible to devise more specific tests of partial change but, if we apply such tests without some strong theory to guide us, we run the risk of modelling error rather than true variation. Furthermore, we believe that global tests of the full set of origin–destination odds ratios are more appropriate if, as is the case here, we want to address the question of whether there is any evidence of overall change towards more or less social fluidity.

Britain, and the trend shown by the linear LmSF β is effectively zero. The coefficients suggest some change in Germany but this is not statistically significant and the models of change bring little improvement to the index of dissimilarity. The difficulty in establishing a significant trend is probably due to the relative sparseness of the German data, to which we referred earlier.

There are six countries where social fluidity appears to have increased: France, Ireland, Sweden, Poland, Hungary, and the Netherlands. The βs from the linear LmSF model suggest a steady weakening of around 5 or 6 percent per decade in the origin–destination association in Ireland, Sweden, and France, and around 12 percent in Poland, Hungary, and the Netherlands. Closer inspection of the βs from the LmSF model, however, suggests that in France, Sweden, Poland, and Hungary almost all the change occurred between the 1970s and 1980s, with stability since then, and only in the Netherlands has fluidity declined over the entire three decades. In Ireland, LmSF is preferred to both CnSF and linear LmSF, and this is because the direction of change has itself varied. Between the 1970s and 1980s fluidity weakened, but then strengthened between the 1980s and 1990s.

We can check these conclusions by moving from a focus on decades to look at the original yearly data. The relevant goodness-of-fit statistics are reported in Table 3.9 and the β parameters are plotted in Fig. 3.2. Now the CnSF model fitted to each country posits a common pattern of fluidity in each year for which we have data for that country; LmSF says that fluidity is scaled up or down in each year according to a single parameter; and linear LmSF says that this scaling follows a linear trend over years.[25] Table 3.9 tells us that the CnSF model fits the data in Germany, Great Britain, and Sweden, but, in the last of these, the linear LmSF model is a significant improvement in fit. Figure 3.2 shows a downward trend in Sweden where the linear LmSF β is estimated as 20.0046. Change is also evident in France, the Netherlands, and Hungary (of course, the results for Ireland and Poland are the same as in the decade analysis because we have only one table per decade for these countries, though the linear LmSF parameter changes because its metric is now years rather than decades). In France, Poland, and the Netherlands, linear LmSF is the best fitting model, and the linear trends here can be seen in Fig. 3.2,[26] though the French case suggests a gradual slowing in the rate of change. In Hungary, however, the temporal trend seems to be U-shaped: fluidity strengthened between the 1970s and 1980s but weakened in the 1990s.

The indices of dissimilarity for these models are rather larger than in the decade analyses, but they suggest that, overall, these models reproduce the data quite well. The largest Δs for LmSF (over 5 percent) are found in the

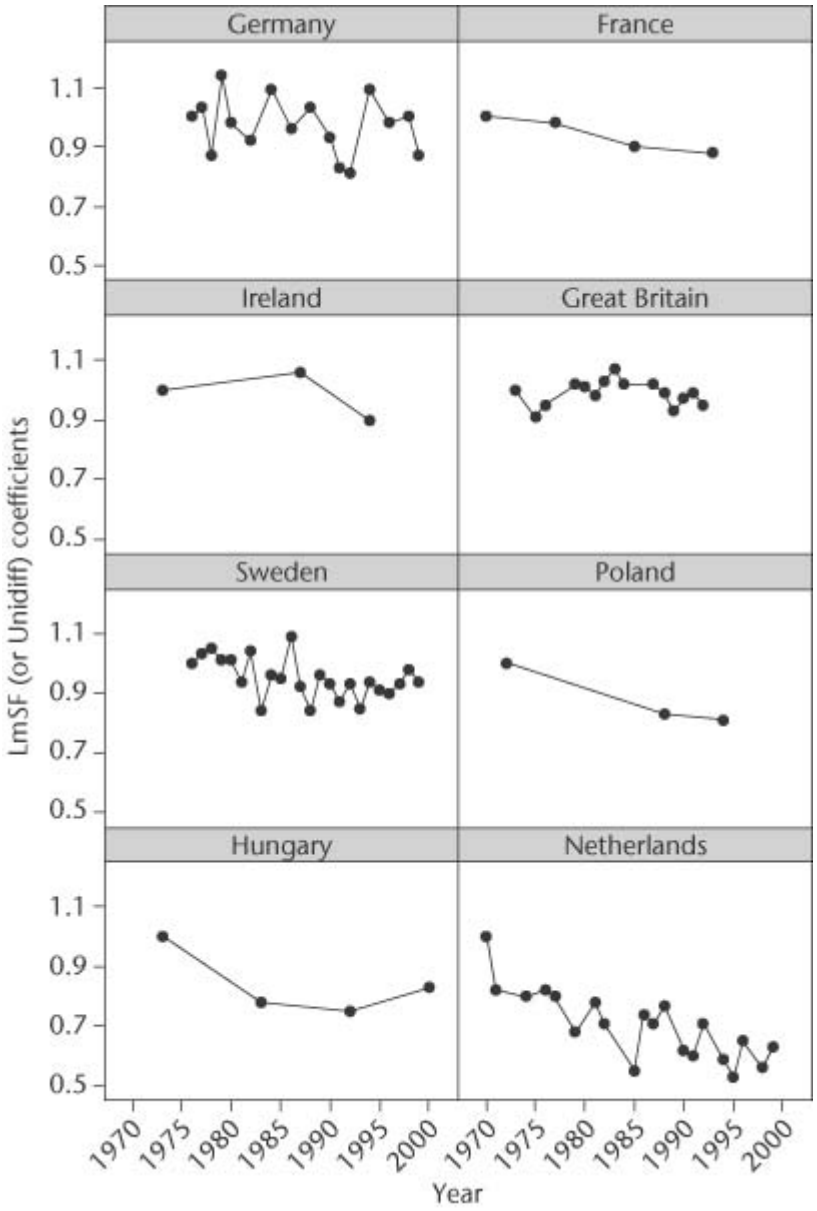
[25] The linear trend is measured with respect to time in years with 1970 taken as year 0.

[26] The Dutch trend is robust to the exclusion of either or both of the first and ninth observations (1970 and 1985), both of which might appear to be outliers.

TABLE 3.9.*Deviance and* D*for CnSF, LmSF, and linear LmSF models fitted to yearly data per country, all men (significant at 5% level in boldface)*

Model	Countries							
	Germany	France	Ireland	Great Britain	Sweden	Poland	Hungary	Netherlands
(1) CnSF	526.23	**243.77**	**102.76**	506.72	512.76	**162.34**	**330.66**	**812.33**
d.f.	540	108	72	504	575	72	108	684
(2) LmSF	503.61	**212.96**	**93.63**	487.41	490.96	**136.69**	**257.31**	717.20
d.f.	525	105	70	490	552	70	105	665
(3) Linear LmSF	525.79	**214.83**	**99.88**	506.71	506.97	**137.11**	**291.57**	**745.92**
d.f.	539	107	71	503	574	71	107	683
(2) − (1)	22.62	**30.81**	**9.13**	19.31	21.80	**25.65**	**73.35**	**95.13**
d.f.	15	3	2	14	23	2	3	19
(3) − (1)	0.44	**28.94**	2.88	0.01	**5.79**	**25.23**	**39.09**	**66.41**
d.f.	1	1	1	1	1	1	1	1
(3) − (2)	22.18	1.87	**6.25**	19.30	16.01	0.42	**34.26**	28.72
d.f.	14	2	1	13	22	1	2	18
Δ for CnSF	5.18	2.33	3.88	2.43	3.86	1.25	3.32	5.93
Δ for LmSF	5.03	2.16	3.77	2.37	3.72	0.99	2.81	5.26
Δ for Linear LmSF	5.19	2.17	3.86	2.43	3.80	0.98	3.04	5.48
β parameters Linear LmSF	−0.0018	−0.0057	−0.0042	−0.0001	−0.0046	−0.0099	−0.0088	−0.0120

FIG. 3.2.*Annual LmSF (or Unidiff) coefficients by country (all men)*



Netherlands and Germany—but in both cases the model fits the data using the conventional likelihood ratio χ^2 goodness-of-fit test. The index for the other countries is less than 3 percent except in Sweden (where LmSF also fits the data using the goodness-of-fit test) and Ireland.[27]

What can we conclude from these results about changes in men's social fluidity? In our view the eight countries can be grouped into three. First are

[27] The likelihood ratio χ^2 test tells us that the various models tend to fit most poorly in France, Poland, and Hungary. These are the countries in which a large sample is spread over a small number of tables. So, the average number of cases per mobility table is around 12,000 in France, 10,000 in Poland, and 7,500 in Hungary.

those in which there is no clear evidence of change over time: Germany and Britain. In Germany the annual βs vary a great deal but they show no consistent trend, while in Britain the parameters are generally close to one. Second are those in which there seems to be good evidence for increasing social fluidity: France, Sweden, and the Netherlands. Finally, in Hungary, Poland, and Ireland the picture is less clear. In Ireland we have only three observations and no linear trend. Nevertheless, the β parameter for 1994 is significantly lower than those for either 1973 or 1987 whereas there is no significant difference between the 1973 and 1987 βs, suggesting that any trend in Ireland is towards greater social fluidity. In Poland the argument for growing fluidity rests entirely on the 1972 observation: with this removed CnSF fits the data and models of change do not improve on it. Likewise in Hungary, the trend towards increasing fluidity owes everything to the 1973 observation: without it the trend is in the opposite direction (because of the 2000 observation). In any case, all our findings must be seen in the context of the very modest change in the goodness-of-fit of our models associated with variation in fluidity. This is evident in the small value of Δ returned by the CnSF model in every country (less than 4 percent in the decade data and less than 6 percent in the annual data) and the very small improvement in Δ that is brought about by models of change (less than one percentage point).

Comparisons between countries: men

Turning to a comparison between countries, Table 3.10 shows the fit statistics for the CnSF and LmSF models applied to the data for all the countries in each decade. We now write CnSF as *OC DC OD,* where *C* stands for country; and LmSF as *OC DC OD*β_C where the subscripted *C* indicates that the origin– destination log-odds vary according to a country-specific multiplier. The former model says that social fluidity is the same in all countries within a given decade, while LmSF says that the pattern is common to all countries but its strength may vary. Neither model fits the data for any of the three decades, implying that the hypothesis of a common pattern of fluidity has to be

TABLE 3.10.*Deviance and Δfor CnSF and LmSF models fitted to country decade data per decade, all men (significant at 5% level in boldface)*

Model	d.f.	1970s	1980s	1990s
CnSF	241	**1674.75**	**1177.75**	**1039.39**
LmSF	234	**1260.79**	**888.19**	**862.06**
CnSF–LmSF	7	**413.95**	**289.56**	**177.33**
Δ for CnSF		3.93	3.21	3.72
Δ for LmSF		3.15	2.85	3.36

TABLE 3.11. *Deviance and Δfor models fitted to country by decade data, all men (significant at 5% level in boldface)*

Model	Deviance	d.f.	*p*	Δ
0	**65,575.49**	831	.00	18.55
1 *OD*	**4,410.09**	795	.00	3.95
2 *COD*	**1,137.10**	554	.00	1.86
3 *TOD*	**3,891.89**	723	.00	3.62
4 *COD TOD*	**817.17**	482	.00	1.47
5 $OD\beta_C$	**3,612.39**	788	.00	3.48
6 $OD\beta_T$	**4,269.30**	793	.00	3.87
7 $OD\beta_C\beta_T$	**3,464.48**	786	.00	3.42
8 $OD\beta_{CT}$	**3,354.28**	772	.00	3.39

rejected. But if we look at the dissimilarity indexes for both models, we see that they lie between 3 and 4 percent, which might suggest that the consequences of deviations from commonality are rather slight.

Table 3.11 presents the results of a more systematic comparative analysis using the decade data. All the models reported there include the terms *OCT* and *DCT*: the entries in the table then tell us how, in each case, the origin–destination association is allowed to vary. In Model 0 the *OD* term is absent because this is a model of conditional independence of origins and destinations: in other words, within each country and decade, perfect mobility holds. This model is very far from fitting the data according to the χ^2 test, though it correctly classifies just over four-fifths of all cases. In model 1 the association between origins and destinations is held constant across all eight countries and in all three decades. Although this model—in common with all the models in Table 3.11—falls well short of fitting the data, it nevertheless misclassifies only 4 percent of all cases and its deviance constitutes a huge reduction over that for the model of conditional independence. Model 2 allows social fluidity to vary, in a completely unrestricted way, over countries but not between decades. Model 3 allows fluidity to vary over decades (recall that *T* stands for decades) but not countries and model 4 allows it to vary over both. Variation between countries reduces Δ to about half of its value for Model 1, but variation over decades makes less impact: Δ for Model 3 is only marginally less than for 1, and, comparing Model 4 with 2, the addition of temporal change to a model that already allows for differences between countries reduces Δ only slightly: from 1.9 to 1.5. But it should also be borne in mind that modelling temporal change uses very many fewer d.f. than does cross-national variation and so it would be unwise to attach too much importance to this comparison. The finding that Model 4 does not fit the data indicates that there are statistically significant differences between countries in

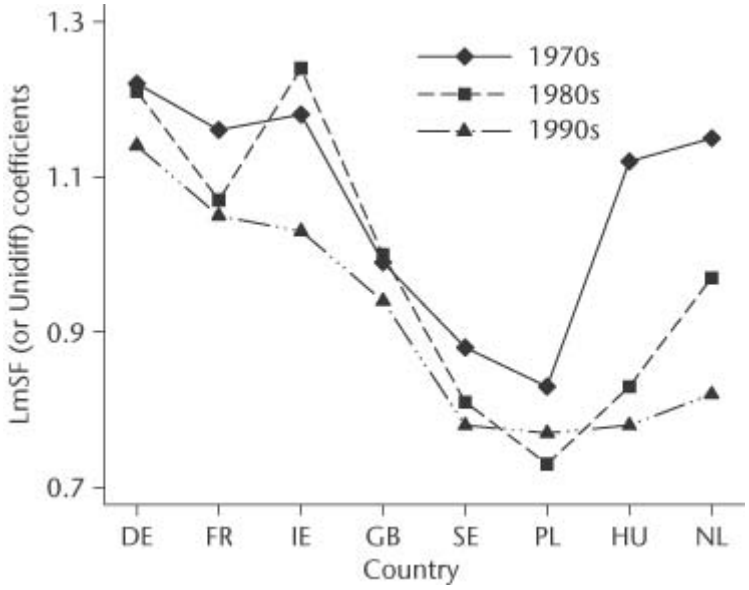
their temporal variation in fluidity. But this should not come as a surprise, given the results of our earlier analyses.

The last four models in Table 3.11 permit only log-multiplicative uniform change in social fluidity: in Model 5 over countries and in Model 6 over decades. Model 7 allows fluidity to change according to the product of two coefficients, one for decades, the other for country. Finally, Model 8 allows every table (i.e. each decade/country combination) to have its own β parameter. These models are a significant improvement on model 1. Model 7 is preferred to either of 5 and 6 but Model 8 is a better fitting model than 7 (the difference in deviance is 110.2 on 14 d.f.). Models 5 through 7 are direct counterparts to 2 through 4 in that they restrict change whereas the latter do not. But Model 8 has no counterpart in the earlier part of the table because it allows social fluidity to vary in different ways over decades depending on country. Its counterpart allowing for unrestricted, rather than uniform, change would be the saturated model.

The β parameters from Model 8 are shown in Fig. 3.3 and provide us with a rather tentative answer to the question of which countries are most and least open. We have seen that in Britain fluidity has not changed over this period and so Britain in the 1980s is taken as the reference point (and its β is set to one). Using this yardstick, Germany, France, and Ireland are always the least fluid countries, having βs greater than one. At the other extreme, Sweden, and Poland are always the most fluid.

In Fig. 3.3 the line joining the points for the 1970s is always (with the exception of Ireland) above that for the 1980s and the line for the 1990s is always (except in Poland) below that for the other decades. The simple

FIG. 3.3. *LmSF (or Unidiff) coefficients per decade per country (all men)*



unweighted average of the βs falls from 1.07 in the 1970s to 0.98 in the 1980s and to 0.91 in the 1990s, though, in those countries where the βs have fallen most (Hungary, the Netherlands, France, Poland, and Sweden) the change was greater between the 1970s and 1980s than between the 1980s and 1990s, and only in the Netherlands was there large change in the latter interval. This echoes what was seen in Table 3.8: the main change towards greater fluidity occurred in the 1970s to 1980s period and, for the most part, little has altered since then. However, we need to be cautious in drawing inferences about change in the light of our earlier findings where we saw that we could only be unequivocal about increasing fluidity in France, Sweden, and the Netherlands.[28]

We can extend our comparison between countries to include Italy, Norway, and Israel. For Italy and Norway we have one observation in the 1980s and another in the 1990s, for Israel we have data from 1974 and 1991. As Yaish observes in Chapter 13 (and as Ganzeboom and Luijkx note in theirs), Israel has long been considered a highly fluid society, and, indeed, our results bear this out. When we add Norway, Israel, and Italy to the analysis shown in Fig. 3.3 we find that the β value for Israel is 0.64 in the 1970s and in the 1990s.[29] Not only does this support the belief in high Israeli fluidity, it also bears out Yaish's conclusion of no change in fluidity over the period. For Italy the values are 1.15 in the 1980s and 1.07 in the 1990s which places Italian fluidity at the lower end of the range, alongside France. The small decline foreshadows Pisati and Schizzerotto's findings in Chapter 6 of this volume. For Norway the figures are 0.77 and 0.80. Ringdal (Chapter 10, this volume) also finds a small decline in fluidity between the 1980s and 1990s.

In the 1970s, levels of social fluidity were lowest in Germany, France, Italy, Ireland, Hungary, and the Netherlands and highest in Britain, Sweden, Norway, Poland, and Israel. Figure 3.2 (and the analyses reported in Table 3.8 and 3.9) showed that fluidity increased in France, Sweden, and the Netherlands, and possibly in Ireland, Hungary, and Poland too. The increases in the Netherlands and Hungary were particularly marked. These different trends have left several countries—Sweden, Norway, Poland, Hungary, and the Netherlands—with, as far as we can tell, rather similar rates of fluidity, followed by Britain (where the absence of change has led to a shift in its relative position), Ireland, France, Italy, and Germany, which remains the country with the strongest association between class origins and class destinations. At the other extreme,

[28] The fact that Models 5–7 (and also 8) fit much more poorly than their counterparts, 2–4 (at least using the criterion of deviance), shows that cross-national and temporal variation is not wholly captured by the log-multiplicative specification of a common pattern of origin–destination association that varies in strength according to a single parameter. Variation in fluidity over time and between countries is more complex than this: the pattern (and not just the level) of social fluidity differs over time in a different way for each country. There are, therefore, some countries for which small discrepancies are apparent between the trend over time shown in Fig. 3.3 and the decade β values reported in Table 3.8.

[29] When we add these three countries the βs for the others remain almost identical with the values reported in Fig. 3.3.

TABLE 3.12. *Deviance and Δfor models fitted to yearly data by country, all men (significant at 5% level in boldface)*

Model	Deviance	d.f.	*p*	Δ
0	**67,385.25**	2940	.00	18.80
1 *OD*	**6,442.21**	2904	.00	4.77
2 *COD*	**3,197.58**	2663	.00	3.08
3 *TOD*	**3,206.88**	1835	.00	2.69
4 *COD TOD*	**1,709.59**	1558	.00	1.85
5 $ODβ_C$	**5,653.26**	2897	.00	4.41
6 $ODβ_T$	**5,773.38**	2874	.00	4.46
7 $ODβ_Cβ_T$	**5,436.28**	2867	.00	4.33
8 $ODβ_{CT}$	**5,302.43**	2816	.00	4.26

Israel is consistently more open than any other country. Overall, however, we can find no convincing evidence of convergence in fluidity regimes: for example, the within decade variance of the βs shown in Fig. 3.3 is largest for the 1980s and the Δ for CnSF across countries in each decade (Table 3.10) is larger for the 1990s than for the 1980s.

Finally, in Table 3.12 we repeat the analysis using yearly data (and, once again, without Norway, Israel, and Italy).[30] Reassuringly, a similar picture emerges, and the only important contrast with Table 3.11 is that now temporal variation (see especially Model 3) appears more important. But this is due to our having thirty-one annual time points, rather than three. Once again, among the log-multiplicative models (5 through 8), model 8, allowing a β value for each year/country combination, proves to fit best, though in terms of Δ there is rather little to choose between these four models.

Class structures and absolute mobility, women 1970–2000

When we turn to differences between countries and temporal change in women's mobility we incur a set of difficulties that are, by and large, absent from the analyses of men's mobility. One particular problem has already been discussed in Chapter 1: namely that many women do not have, and have not had for many years, an occupation and thus cannot reasonably be assigned to a social class position in the usual way. We circumvent this by focusing here only on women who are currently in the labour force—that is, either working

[30] All the models in Table 3.12 include the terms *OCT* and *DCT,* where *T* now stands for years.

TABLE 3.13. *Women's labour force participation rates by decade and country*

	Germany	France	Italy	Great Britain	Sweden	Norway	Poland	Hungary	Netherlands
1970s	0.41	0.54	—	0.62	0.70	—	1.00	0.65	0.27
1980s	0.48	0.64	0.38	0.67	0.80	0.58	0.69	0.72	0.38
1990s	0.53	0.69	0.52	0.74	0.83	0.80	0.66	0.69	0.57

outside the home or unemployed. But this then introduces a further problem when our object is comparison: female rates of labour force participation change over time and differ between countries, and so any differences in social mobility that we find may be reflecting, to some degree, these variations. Table 3.13 shows the female labour force participation rates, computed from our mobility data, for each decade.[31] As we might have expected, rates of women's labour force participation have generally increased. The exceptions are Poland and Hungary, where they declined after the 1980s.[32]

The distinction between full-time and part-time work is more significant among women than men, but it is one that we cannot always make in our data. In those cases where we can, the distinction is nationally specific: that is to say, part-time and full-time work are defined according to what counts as part-time and full-time in the country concerned. It seemed to us more reasonable to follow the national convention in this way rather than seek to impose some necessarily arbitrary criterion. But of the seven countries[33] where we analyse changes in women's social fluidity, we can consistently distinguish part-time from full-time only in Germany, Sweden, and the Netherlands. As a result we ignore this distinction and assign the same weight in our analyses to all women currently in the labour force.

Table 3.14 shows the dissimilarity indices between the destination distributions of women in all pairs of countries in each decade. For this part of the analysis we use data from all our countries except Ireland. As with men, there is a clear trend towards convergence, with a decline in the mean intercountry Δ from 28 to 22 to 17 and in its variance from 136 to 73 to 51 over the three decades. The greatest change occurred in Poland and Hungary. In the former this was caused by the decline in the relative size of class IVc from 45 to 13 percent of the female workforce (compared with less than 4 percent everywhere

[31] We were unable to compute this measure for Israeli women and so Israel is omitted from the table.

[32] The Polish figure of 1 for the 1970s arises because the 1972 survey included only men and women who had a job (see Mach, Chapter 11, this volume).

[33] As was the case for men, we drop Norway, Italy, and Israel from our analyses of social fluidity, and we also lose the Irish case from all our analyses of women's mobility because of the absence, from some of the Irish datasets, of information on women.

TABLE 3.14. *Between-country class destination dissimilarity indices by decade (women in the labour force)*

	Decade	France	Italy	Great Britain	Sweden	Norway	Poland	Hungary	Israel	Netherlands
Germany	1970	19.1	—	14.8	22.9	—	43.9	30.0	13.1	7.9
	1980	14.7	18.5	7.1	21.8	5.4	24.8	26.5	—	9.8
	1990	12.9	13.1	5.2	23.6	6.7	19.0	19.5	7.8	9.4
France	1970	—	—	20.8	29.0	—	34.3	36.0	15.5	15.6
	1980	—	23.0	12.9	29.8	17.9	34.2	34.9	—	13.6
	1990	—	14.7	15.2	31.1	11.5	18.7	24.2	8.4	17.5
Italy	1980	—	—	23.1	28.6	18.5	28.3	31.5	—	21.5
	1990	—	—	16.3	29.4	16.7	18.9	20.7	12.7	19.5
G.Britain	1970	—	—	—	25.6	—	46.2	29.2	23.1	18.2
	1980	—	—	—	24.5	7.7	27.5	27.3	—	9.4
	1990	—	—	—	22.8	7.6	21.4	17.7	11.5	8.8
Sweden	1970	—	—	—	—	—	42.6	24.3	25.2	30.3
	1980	—	—	—	—	22.1	27.5	15.5	—	31.3
	1990	—	—	—	—	29.5	23.8	10.3	23.3	31.3
Norway	1970	—	—	—	—	—	—	—	—	—
	1980	—	—	—	—	—	27.8	24.5	—	12.2
	1990	—	—	—	—	—	24.7	24.6	9.1	7.2
Poland	1970	—	—	—	—	—	—	50.8	41.6	46.2
	1980	—	—	—	—	—	—	28.4	—	34.2
	1990	—	—	—	—	—	—	15.6	16.4	27.7
Hungary	1970	—	—	—	—	—	—	—	34.0	37.5
	1980	—	—	—	—	—	—	—	—	35.1
	1990	—	—	—	—	—	—	—	16.5	26.1
Israel	1970	—	—	—	—	—	—	—	—	14.7
	1980	—	—	—	—	—	—	—	—	—
	1990	—	—	—	—	—	—	—	—	14.1

Note: The means and the variances for 1970, 1980, and 1990 are 28.3, 22.3, and 17.4, and 135.7, 73.0, and 51.0, respectively.

else in the 1970s except in France and less than 4 percent everywhere else in the 1990s: see Table 3.A1). In the case of Hungary, 18 percent of women were in class VIIb in the 1970s compared with less than 1 percent everywhere else except in Poland, where the figure was 1.3 percent. By the 1990s only just over 3 percent of Hungarian women were found in VIIb. But it would not be correct to say that all the change that we observe is due to these two countries: with the exception of Sweden, whose Δs with other countries (except Poland and Hungary) have not changed much, all the others share in a general tendency towards increasing similarity in their class structures.

Table 3.15 shows the overall class structures for the ten countries (each given equal weight) in each decade. They show a decline in the proportions in VIIa and IVc and a growth in I + II. A comparison with Table 3.4 shows the much greater concentration of women in a few classes: in the 1990s almost 70 percent

TABLE 3.15. *Aggregate class structures (women in the labour force) in the ten countries by decade*

	1970s	1980s	1990s
I + II	22.1	30.5	34.6
III	32.8	32.3	35.1
IVa + b	6.5	6.0	6.1
IVc	8.6	4.4	2.3
V + VI	6.1	6.3	7.1
VIIa	21.1	18.6	13.7
VIIb	2.8	1.7	1.2

Note: Each country is weighted equally in computation of aggregate class structure.

were in I + II and III. The percentages of men and women in classes I + II are quite similar, but the relative size of class III is three times as big for women as for men. This balances the under-representation of women, relative to men, in class V + VI. The trend towards a concentration of women in the white-collar classes has been generally evident, but its results are particularly pronounced in the 1990s in Norway and the Netherlands, where 80 percent or more of women are found in these classes. By contrast, the concentration is least in Sweden and Hungary (where classes V + VI and VIIa are particularly large) and in Poland (where classes IVc and V + VI are large: see Table 3.A1).

The dissimilarity indexes between origins and destinations are reported in Table 3.16. These are much larger than the figures for men (shown in Table 3.5), reflecting the gender difference in class distributions as well as temporal changes in the class structures. The exceptions to this occur in the 1970s in Poland, Hungary, and Israel where the women's Δ differs little from men's. In these three cases, the Δ for men is unusually high in the 1970s and declines steeply (for reasons discussed earlier). But among women in Hungary, Δ does not change very much and in Israel and Poland it increases. In Poland this is because, in the 1970s, while 60 percent of women were from farm origins, 45 percent of women were themselves in this class. Since then, the share of farmers has fallen faster in destinations than in origins, so contributing to the growing Δ. The large Δ in the 1970s was substantially caused by the high proportions of women in classes I + II and III, compared with their fathers, and this gap has also widened over the decades. In Hungary, the 1970s' Δ was driven by the large size of the farmer class as an origin and its smallness as a destination (though this difference declined over decades), and the much greater size of I + II and III in the destination distribution compared with the origin (and this gap has increased). Finally, the Israeli Δ can be attributed to classes I + II and III (large in destinations but small in origins) and IVab (small in destinations but large in origins).

TABLE 3.16. *Origin–destination dissimilarity indices by country and decade (women in the labour force)*

	1970s	1980s	1990s
Germany	40.8	41.5	43.2
France	38.9	50.2	50.6
Italy	—	36.3	37.8
Great Britain	42.0	40.5	39.0
Sweden	37.4	36.2	27.3
Norway	—	42.7	49.5
Poland	25.6	33.2	40.3
Hungary	43.3	35.5	39.0
Israel	42.8	—	50.1
Netherlands	36.5	42.6	42.1
Mean	38.4	39.9	41.9
Variance	33.0	26.9	50.2

The average Δ has remained much the same over the three decades: indeed, in seven of the ten countries it has increased, which is probably due to increased female labour force participation and increasing concentration of women in a few classes. In contrast to men, there is no sign of any convergence, the variance having declined in the 1980s (from 33 to 27) but then increased to 50.

Rates of absolute, vertical, upward, and downward mobility are shown in Table 3.17. The percentage of women who are mobile is higher than for men, as would have been anticipated, though there is little difference between men and women in Sweden and in Poland in the 1970s. There has been little change over the decades in the average rate of mobility, though this masks divergent trends: almost no change in Germany, Italy, Sweden, Norway, and the Netherlands, increases in France, Poland, (where it has been pronounced) and Israel, and small declines in Britain and Hungary. But because the declines have occurred in countries that displayed a high rate in the 1970s and the increases have occurred where the rate was low, the outcome is a very clear reduction in the variation between countries. The variance of the mobility rate has fallen from 86 in the 1970s, to 14 in the 1980s and 9 in the 1990s.

A decline, still substantial but of a smaller size, is evident in the variance of rates of vertical mobility. This is due once again to Poland and Israel, where rates of vertical mobility were very low in the 1970s and have grown substantially. Elsewhere there has been almost no change, and a comparison with Table 3.6 shows that male and female vertical mobility rates are identical, implying that the greater rate of overall mobility among women is not associated with movement that is either more or less advantageous than that found among

TABLE 3.17.*Percentage mobile by country in each decade (women in the labour force)*

	Germany	France	Italy	Great Britain	Sweden	Norway	Poland	Hungary	Israel	Nether-lands	Mean	Variance
Total mobility												
1970s	74.0	71.4		78.8	73.1		50.8	81.0	76.5	74.0	72.5	86.4
1980s	75.6	77.6	74.3	76.3	73.6	76.2	66.3	79.5		73.9	74.8	13.7
1990s	72.6	77.2	75.0	73.9	73.2	77.4	76.2	76.5	82.2	72.3	75.7	8.8
Vertical mobility												
1970s	48.6	41.7		52.1	55.4		34.0	54.1	44.9	51.4	47.8	52.2
1980s	48.8	45.7	51.0	52.6	56.4	54.1	48.5	58.2		51.4	51.9	15.7
1990s	47.3	46.0	47.9	53.2	57.9	53.0	50.3	55.7	53.5	53.6	51.8	14.8
Upward mobility												
1970s	25.8	27.8		27.5	23.9		19.5	23.3	26.0	30.9	25.6	11.7
1980s	29.6	32.9	38.5	29.0	27.5	34.4	31.7	38.8		33.6	32.9	15.7
1990s	32.2	33.2	36.7	30.6	33.5	37.1	34.1	42.0	39.0	34.8	35.3	11.6
Downward mobility												
1970s	22.8	13.9		24.6	31.5		14.4	30.8	19.0	20.5	22.2	44.2
1980s	19.2	12.8	12.5	23.7	28.9	19.8	16.8	19.4		17.8	19.0	26.0
1990s	15.2	12.8	11.3	22.5	24.4	15.9	16.2	13.7	14.5	18.8	16.5	17.6

men because their additional mobility takes place between classes that, on balance, would be ranked quite similarly.

Rates of upward mobility show a general increase, while downward mobility rates have fallen. In the 1970s the mean rates of both were equal but by the 1990s there was, on average, twice as much upward as downward movement. The increase in the rate of upward mobility has been pronounced in Sweden, Hungary, Poland, and Israel. In the first two cases, vertical mobility rates have remained unchanged, so the increase in upward mobility has been met by a corresponding decline in downward mobility (the same occurs in several other countries, such as Germany and Britain, but is less marked). In Poland and Israel rates of vertical mobility increased, and, in the former, the growth of upward mobility has not been matched by any change in downward movement. But in Israel, the large increase in upward mobility has been accommodated by growth in vertical mobility and a reduction in downward mobility.

The convergent trend in class structures and mobility flows is clearer among women than men. To some extent this is because they displayed greater differences between countries in the 1970s. There has been a trend towards a common class distribution in which women are heavily concentrated in classes I + II and III, and movement towards this has been more rapid in those countries (such as Hungary and Poland) where the class distribution in the 1970s differed most from this pattern. The very substantial convergence that we see in mobility flows is largely due to changes in Poland, Hungary, Israel, and, to a lesser extent, France. In France, Poland, and Hungary, the decline in the farming sector (classes IVc and VIIb) is the driving force behind change, while in Israel the decline in the percentage of women in the petty bourgeoisie (IVab) plays a similar role.

National and temporal variation in social fluidity among women

Table 3.18 and 3.19 report the goodness-of-fit of models for the analysis of women's social fluidity, using both decade and year data.[34] In Table 3.18 (which refers to the decade data) none of the models fits the British or German data (using the likelihood-ratio χ^2 test): this suggests that there is change over time in the pattern of social fluidity which makes it impossible to speak of a clear trend towards more or less fluidity. The β coefficients from the LmSF model increase over time in Britain and follow a U-shape in Germany. In the remaining five countries, LmSF is always an improvement on the common social fluidity model and the linear LmSF model fits as well as the

[34] At this point we drop the Norwegian, Italian, and Israeli cases.

TABLE 3.18. *Deviance and Δfor CnSF, LmSF, and linear LmSF models fitted to decade data per country, women in the labour force (significant at 5% level in boldface)*

Model	Countries						
	Germany	France	Great Britain	Sweden	Poland	Hungary	Netherlands
N	7,787.0	29,537.3	43,275.5	32,085.9	27,422.0	23,271.1	9,022.8
(1) CnSF	**99.15**	**145.87**	**105.88**	**84.33**	**104.94**	**143.12**	77.03
d.f.	72	72	72	50	72	72	72
(2) LmSF	**93.39**	**124.99**	**104.18**	**67.36**	74.40	**117.99**	66.38
d.f.	70	70	70	48	70	70	70
(3) Linear LmSF	**97.48**	**124.99**	**105.34**	**69.36**	75.52	**120.53**	66.67
d.f.	71	71	71	49	71	71	71
(2) − (1)	5.76	**20.88**	1.70	**16.97**	**30.54**	**25.13**	**10.65**
d.f.	2	2	2	2	2	2	2
(3) − (1)	1.67	**20.88**	0.54	**14.97**	**29.42**	**22.59**	**10.36**
d.f.	1	1	1	1	1	1	1
(3) − (2)	**4.09**	0.00	1.16	2.00	1.12	2.54	0.29
d.f.	1	1	1	1	1	1	1
Δ for CnSF	3.07	1.79	1.12	1.72	1.18	2.42	2.20
Δ for LmSF	2.92	1.56	1.08	1.55	0.75	2.36	1.97
Δ for Linear LmSF	3.03	1.55	1.16	1.54	0.78	2.35	1.95
β parameters LmSF							
1970s	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1980s	0.84	0.93	1.05	0.97	0.80	0.86	0.92
1990s	0.89	0.85	1.04	0.84	0.72	0.82	0.76
β parameters Linear LmSF	−0.0562	−0.0807	0.0179	−0.0913	−0.1966	−0.1003	−0.1244

unconstrained version (though these models fit the data only in the Netherlands and Poland). In these five countries, fluidity has increased: the rate of change is between 8 percent per decade in France and 20 percent in Poland.

The yearly data confirm these results. Constant fluidity is the best fitting model for Britain, LmSF is best for Germany, and linear LmSF is the preferred model for Poland, Sweden, and the Netherlands. In France and Hungary none of the three models fits the data but LmSF always improves on CnSF and linear LmSF is as good a fit and more parsimonious than LmSF. Figure 3.4 gives a clear picture of the conclusions that we can draw. There has been no change in Britain, and, while there has been change in Germany, it has not been of any systematic kind: as Fig. 3.4 shows, the LmSF βs fluctuate in what looks like a random fashion. In the remaining countries—France, Sweden, Poland, Hungary, and the Netherlands—there is a clear downward linear trend in the coefficients of around 1 percent per annum.[35]

[35] The Dutch trend is robust to the removal of two apparent outliers—the large value for 1976 and the very small one for 1991.

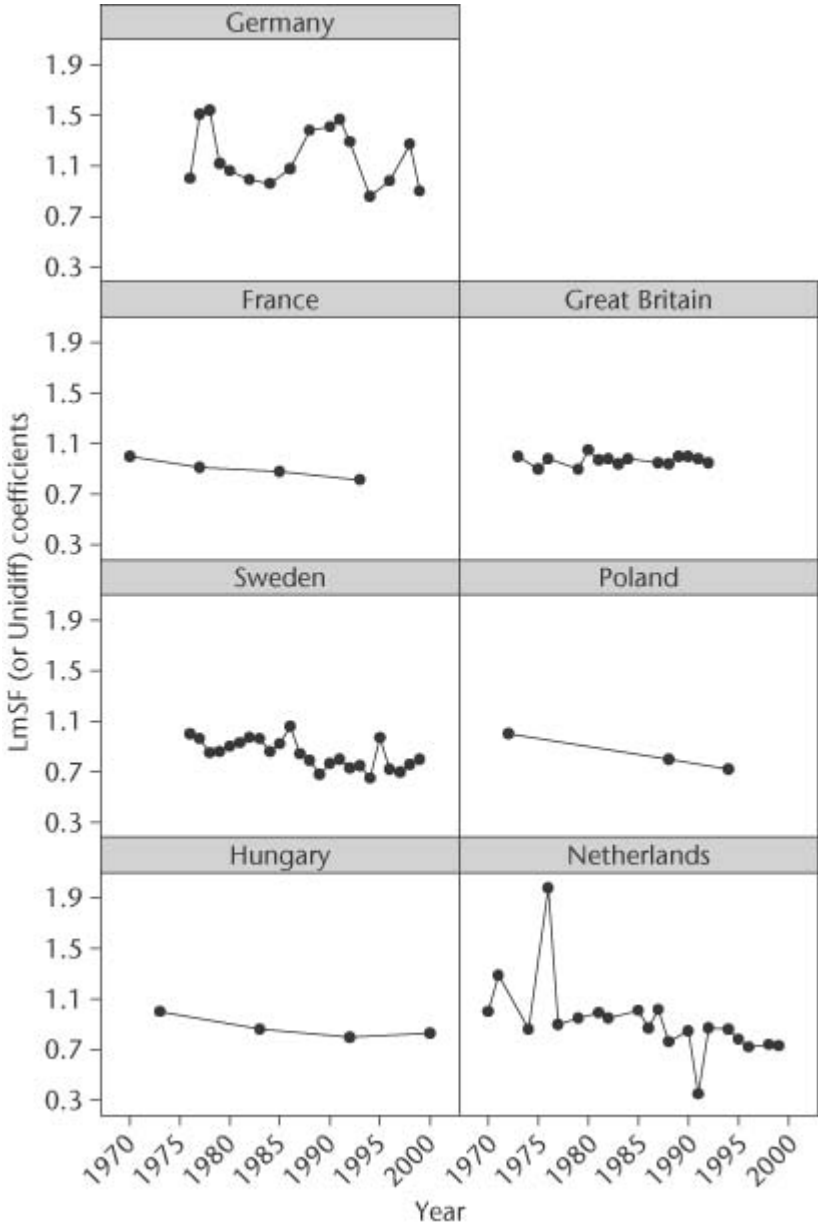
TABLE 3.19.*Deviance and for CnSF, LmSF, and linear LmSF models fitted to yearly data per country, women in the labour force (significant at 5% level in boldface)*

Model	Countries						
	Germany	France	Great Britain	Sweden	Poland	Hungary	Netherlands
1. CnSF	514.56	**204.45**	497.98	578.14	**104.94**	**184.59**	575.90
d.f.	540	108	504	828	72	108	684
2. LmSF	483.84	175.42	492.13	532.78	74.40	157.14	547.54
d.f.	525	105	490	805	70	105	665
3. Linear LmSF	513.84	177.23	497.92	557.88	74.40	162.73	563.67
d.f.	539	107	503	827	71	107	683
2(2) − (1)	**30.72**	**29.03**	5.85	**45.36**	**30.54**	**27.45**	28.36
d.f.	15	3	14	23	2	3	19
(3) − (1)	0.72	27.22	0.06	20.26	30.54	21.86	12.24
d.f.	1	1	1	1	1	1	1
(3) − (2)	**30.00**	1.81	5.79	25.10	0.00	5.59	16.12
d.f.	14	2	13	22	1	2	18
Δ for CnSF	6.74	2.38	2.56	4.54	1.18	2.81	6.47
Δ for LmSF	6.55	2.16	2.54	4.26	0.75	2.72	6.54
Δ for Linear LmSF	6.73	2.20	2.56	4.44	0.75	2.71	6.25
β parameters Linear LmSF	−0.0040	−0.0077	0.0007	−0.0101	−0.0125	−0.0084	−0.0117

The Δs for the decade data are all around 3 percent or less, and the differences between the CnSF model and those that allow for changing fluidity are very small. As was the case among men, the Δs for the annual data are larger, especially for the Netherlands, but, once again, models of change only improve this statistic by a small amount. There is a good deal of consistency in the results for the two sexes: most notably, in all of those countries where we found increasing fluidity among one sex we also found it among the other, and, within every country, the women's results accord closely with those we reported for men, with the possible exception of Hungary where among women, we see a levelling off of the trend towards increasing fluidity between the 1992 and 2000 surveys, whereas among men the trend was reversed.[36] The caveats that we expressed regarding men apply to women too. In Hungary and Poland, the evidence for a downward trend in the βs depends wholly on the first observation (1972 for Poland, 1973 for Hungary).

[36] But this is consistent with the results of Luijkx et al. (2002) who, comparing data from 1973, 1983, 1992, and 1993, also find declining fluidity in the post-Communist period among Hungarian men (but not women) in the association between father's occupation and first occupation.

FIG. 3.4. *Annual LmSF (or Unidiff) coefficients by country for women in the labour force*



Comparisons between countries: women

Table 3.20 reports the goodness-of-fit of the common social fluidity and log-multiplicative social fluidity models applied to the data for each decade. As with men, neither fits the data, but LmSF, which allows fluidity to differ between countries, always improves on CnSF. The Δs for both models are around 3 percent, and they show some evidence of growing smaller over time.

TABLE 3.20.*Deviance and Δfor CnSF and LmSF models fitted to country decade data per decade, women in the labour force (significant at 5% level in boldface)*

Model	d.f.	1970s	1980s	1990s
CnSF	205	**1,107.30**	**832.72**	**530.61**
LmSF	199	**788.84**	**699.59**	**427.57**
CnSF–LmSF	6	**318.46**	**133.13**	**103.04**
Δ for CnSF		3.73	3.48	3.09
Δ for LmSF		3.04	3.13	2.53

TABLE 3.21.*Deviance and Δfor models fitted to country by decade data, women in the labour force (significant at 5% level in boldface)*

Model	Deviance	d.f.	*p*	Δ
0	**34,515.30**	723	.00	16.35
1 *OD*	**2,789.02**	687	.00	3.81
2 *COD*	**760.32**	482	.00	1.68
3 *TOD*	**2,470.63**	615	.00	3.48
4 *COD TOD*	**587.01**	410	.00	1.36
5 $OD\beta_C$	**2,256.25**	681	.00	3.35
6 $OD\beta_T$	**2,704.29**	685	.00	3.75
7 $OD\beta_C\beta_T$	**2,174.27**	679	.00	3.25
8 $OD\beta_{CT}$	**2,134.10**	667	.00	3.21

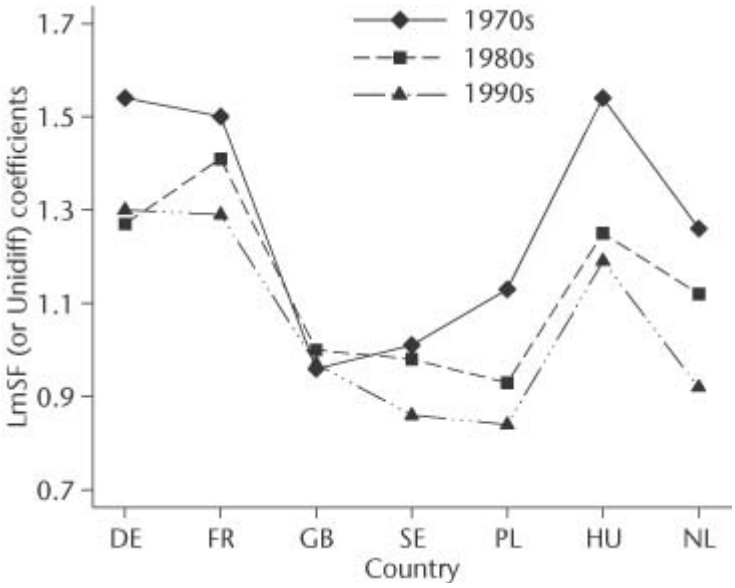
Tables 3.21 and 3.22 then show a series of models fitted to the decade (3.21) and annual (3.22) data, which allow the origin–destination association to vary in different ways.[37] Model 0 is conditional independence: perfect mobility holds in each country- and time-specific table. This is always far from fitting the data but it correctly classifies around 84 percent of cases. This can then be set against the 95 or 96 percent of cases correctly classified by the model of common fluidity (Model 1) and the 98 percent of cases correctly classified by model 4 which allows for variation in social fluidity according to country and time. In Table 3.22, two models fit the data using the χ^2 criterion: these are Model 2, which allows fluidity to vary in a completely free way over countries, and Model 4 which extends this variation over years. Model 4 is a better fitting model than 2, but the fact that it fits the data suggests that a model of common change over time may be a reasonable approximation to

[37] As with these models fitted to the men's data, we always include the terms *OCT* and *DCT,* where *T* is decades in Table 3.21 and years in 3.22.

TABLE 3.22.*Deviance and Δfor models fitted to yearly data by country, women in the labour force (significant at 5% in boldface)*

Model	Deviance	d.f.	*p*	Δ
0	**36,197.52**	2832	.00	16.74
1 *OD*	**4,707.47**	2796	.00	4.86
2 *COD*	2,660.56	2591	.17	3.10
3 *TOD*	**2,417.23**	1727	.00	2.55
4 *COD TOD*	1,381.70	1450	>.50	1.71
5 $OD\beta_C$	**4,167.08**	2790	.00	4.42
6 $OD\beta_T$	**4,234.14**	2786	.00	4.42
7 $OD\beta_C\beta_T$	**4,037.43**	2760	.00	4.28
8 $OD\beta_{CT}$	**3,967.10**	2711	.00	4.25

FIG. 3.5.*LmSF (or Unidiff) coefficients per decade per country for women in the labour force*



trends in women's fluidity. However, this result is not evident in Table 3.21 and of the log-multiplicative models (5–8) in Tables 3.21 and 3.22, model 8, which allows the β values to be country and time specific, is the best fitting (as was the case among men). Figure 3.5 shows the β values from this model applied to the decade data, with the value for Britain in the 1980s set to unity.

In interpreting this figure its limitations should be kept in mind. The model used to derive Fig. 3.5 assumes a common overall pattern of fluidity,

which is then raised or lowered across all countries and decades by the bs. This differs from the model reported in Tables 3.18 in which each country is allowed to have its own pattern of fluidity which is then raised or lowered by the LmSF βs. Overall, however, the discrepancies between the two models are minor and Fig. 3.5 gives a reasonable picture of the relative openness of the different countries. This picture is similar to that for men. Once again, the points for the 1970s are above those for the 1980s which are above those for the 1990s, indicating a general tendency for fluidity to increase, with Britain being an exception. The average β falls from 1.28 in the 1970s to 1.14 in the 1980s and 1.05 in the 1990s. France and Germany are the least fluid societies, Britain, Sweden, Poland, and, by the 1990s, the Netherlands are the most fluid. Hungary presents a different picture for women than men, the former showing much lower fluidity, compared with other countries, than the latter. If, as we did with men, we add Italy, Norway, and Israel to the analysis, we find that Italy is one of the least fluid countries: its β values are 1.40 in the 1980s and 1.45 in the 1990s. In Norway the parameter falls sharply from 1.03 in the 1980s to 0.87 in the 1990s. In Israel the values are 0.84 in the 1970s and 0.71 in the 1990s. Taken together with the results for men this is evidence of the exceptionally fluid nature of Israeli society.

Conclusions

Here we provide a rather stark summary of the chapter's findings. As we pointed out earlier, we shall assess their implications in the final chapter of the volume when we will also be in a position to draw on the results of the eleven country chapters which now follow.

First, we have found that there is a convergent trend among countries in their absolute mobility rates and in their class structures. Second, countries differ in their level of social fluidity and they do so in much the same way for both sexes. Germany, France, Italy, and Ireland seem to be the least fluid countries; Israel, Sweden, Norway, Hungary, Poland, and, by the 1990s, the Netherlands, the most fluid. And third, trends in social fluidity are very similar among men and women, showing a widespread tendency towards greater fluidity. Britain is the sole clear exception to this. In other cases—notably Germany—there is no statistically significant change, though the trend, at least for men, is towards a weaker association between origins and destinations. Elsewhere—in France, Ireland, Sweden, Poland, Hungary, and the Netherlands—there is a statistically significant increase in fluidity, though, as we noted, the small number of observations for Ireland, Poland, and Hungary and the lack of a consistent pattern of change in these countries must leave some room for uncertainty. But in contrast to absolute mobility we see no evidence of convergence among countries in their social fluidity.

Appendix

TABLE 3.A1. *Destination distributions for men and women in three decades*

	DE	FR	IT	IE	GB	SE	NO	PL	HU	IL	NL	Mean	Variance
Men													
1970s													
I + II	33.2	17.4	—	12.9	30.6	28.5	—	18.6	14.5	15.4	36.8	23.1	82.9
III	9.5	9.6	—	7.4	9.5	9.0	—	2.7	9.3	11.2	9.7	8.7	5.9
IVab	6.0	9.9	—	9.1	5.2	9.5	—	1.9	1.8	20.0	7.8	7.9	29.9
IVc	2.1	9.6	—	22.4	1.5	4.1	—	26.0	0.6	5.4	5.4	8.6	86.4
V + VI	36.9	30.5	—	17.9	36.0	23.2	—	28.7	30.8	21.9	23.5	27.7	42.5
VIIa	11.7	20.2	—	23.9	16.1	25.7	—	19.1	28.3	25.3	14.7	20.6	32.1
VIIb	0.7	2.8	—	6.4	1.1	0.0	—	3.0	14.6	0.7	2.2	3.5	21.1
1980s													
I + II	35.4	22.6	19.9	18.3	37.1	31.7	35.2	23.1	20.8	—	41.6	28.6	72.1
III	8.6	10.7	14.6	9.0	7.4	10.4	12.0	3.2	4.7	—	9.9	9.0	11.3
IVab	7.0	9.4	20.9	7.9	8.2	9.8	9.7	5.1	2.3	—	5.4	8.6	24.4
IVc	2.1	6.6	5.4	11.4	1.4	2.8	4.7	18.5	1.0	—	3.3	5.7	29.3
V + VI	36.0	32.1	21.1	26.4	30.6	21.4	20.7	31.5	33.5	—	22.8	27.6	33.6
VIIa	10.3	17.2	15.0	24.1	14.4	23.9	17.4	16.4	28.3	—	15.7	18.3	29.7
VIIb	0.6	1.5	3.1	3.0	1.0	0.0	0.4	2.3	9.5	—	1.5	2.3	7.5
1990s													
I + II	38.1	25.3	24.6	20.2	42.3	34.6	38.4	19.4	20.8	26.3	49.0	30.8	101.8
III	8.4	11.2	17.8	14.2	7.0	10.0	12.0	4.0	4.5	11.0	10.6	10.1	16.2
IVab	6.6	9.0	18.8	9.3	9.9	11.5	7.9	13.2	6.2	17.4	4.1	10.4	21.0
IVc	2.2	4.5	2.3	9.3	0.9	1.8	4.3	12.0	1.6	2.4	2.4	4.0	12.4
V + VI	34.9	33.2	23.9	25.9	25.6	21.7	20.5	29.2	34.2	27.7	21.0	27.1	27.6
VIIa	9.1	15.4	9.8	18.8	13.2	20.4	15.3	19.3	25.3	15.1	11.6	15.7	23.8
VIIb	0.7	1.5	2.8	2.4	1.0	0.0	1.6	2.9	7.4	0.2	1.3	2.0	4.1
Women													
1970s													
I + II	30.2	17.4	—	—	21.3	19.1	—	17.7	12.6	25.3	32.8	22.1	47.4
III	36.2	38.5	—	—	48.6	25.9	—	13.1	29.8	32.0	38.7	32.8	110.3
IVab	5.7	11.2	—	—	2.6	4.8	—	2.4	0.9	16.3	7.9	6.5	26.5
IVc	1.6	12.6	—	—	0.4	3.3	—	44.6	0.4	4.1	1.8	8.6	227.2
V + VI	6.5	5.0	—	—	4.9	6.2	—	6.3	8.6	6.7	4.9	6.1	1.6
VIIa	19.4	14.6	—	—	21.5	40.6	—	14.6	29.6	15.4	13.2	21.1	90.9
VIIb	0.4	0.7	—	—	0.8	0.0	—	1.3	18.1	0.2	0.8	2.8	38.5
1980s													
I + II	32.2	24.1	33.7	—	31.0	25.9	32.1	31.6	26.3	—	37.7	30.5	18.6
III	36.9	45.3	25.6	—	42.6	23.9	36.2	17.0	22.6	—	41.2	32.3	104.3
IVab	6.2	7.6	17.6	—	3.8	4.1	6.0	1.9	1.5	—	5.8	6.0	23.0
IVc	1.7	6.1	5.1	—	0.4	2.0	0.7	22.8	0.1	—	1.0	4.4	51.9
V + VI	6.4	4.7	2.5	—	4.3	8.3	3.0	8.7	14.6	—	4.4	6.3	14.3
VIIa	16.3	11.4	13.1	—	17.4	35.9	20.5	17.4	26.1	—	9.6	18.6	65.9
VIIb	0.3	0.7	2.5	—	0.6	0.0	1.6	0.6	8.9	—	0.4	1.7	7.7
1990s													
I + II	38.8	28.5	30.2	—	38.7	33.7	39.5	28.3	31.3	31.7	45.8	34.6	33.4
III	36.5	46.6	34.5	—	37.2	19.9	41.5	28.0	26.9	41.1	38.3	35.1	63.8
IVab	5.7	5.4	16.5	—	4.1	4.6	4.8	6.4	4.1	5.8	3.2	6.1	14.3

IVc	1.3	3.6	1.2	—	0.3	0.7	1.5	12.7	0.5	0.8	0.6	2.3	14.3
V + VI	6.9	5.4	5.5	—	4.3	12.5	2.1	9.7	11.8	9.4	3.0	7.1	13.0
VIIa	10.7	9.9	9.8	—	14.9	28.7	9.5	13.0	22.1	10.5	8.3	13.7	43.6
VIIb	0.2	0.6	2.5	—	0.5	0.0	1.0	1.9	3.4	0.9	0.8	1.2	1.2

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4 Social Mobility in West Germany: The Long Arms of History Discovered?

Walter Müller and Reinhard Pollak

According to *The Constant Flux,* Germany is the nation 'that shows perhaps the greatest deviation from core social fluidity' (Erikson and Goldthorpe 1987*b*: 150). To obtain a satisfactory fit to the German data, Erikson and Goldthorpe had to make more modifications to the 'core model of social fluidity in industrial nations' than for any other nation. In general, the modifications, as well as the estimates for the parameters, indicate 'a generally greater inequality in class mobility chances' (p. 153) in Germany: with the exception of the service classes, inheritance of class positions is higher in Germany than in other nations; mobility barriers between the hierarchical levels of the class structure tend to be higher as well; in particular unskilled workers encounter distinctively strong barriers to upward moves into any other class. Against this predominant general pattern of less fluidity there are, however, two instances in which Germany shows more mobility than the core model of industrial nations. First, there is slightly more exchange between the service classes and the non-manual intermediate classes, that is, the routine non-manual class and the petty bourgeoisie. Second, the barrier between agriculture and the other sectors is less pronounced than in any other country.

These findings are consistent with a broad literature on the particular characteristics of the German class structure. Historically several factors have contributed to a relatively high degree of socio-cultural homogeneity among the non-manual classes and a marked gap between them and the working classes. From the early stage of industrialisation up to its culmination in the first decades of the twentieth century, continued efforts were made by the bourgeoisie, supported by Bismarckian politics, to win as combatants the petty bourgeoisie as well as the emerging new middle classes of non-manual employees and 'Privatbeamte' in the fight against the claims of the growing working classes.

Traces of this early stage of class formation remain evident in the separate institutions of social welfare for the three major groups of Arbeiter, Beamte, and Angestellte. While the Angestellte receive privileges resembling those of the Beamte, the regulations for manual workers in terms of pension, health insurance, job security, and unemployment benefits are or were much less generous (Kocka 1981).

The institutionalised character of the class structure in Germany is enhanced by the system of vocational training which makes the boundary between unskilled and skilled work more impermeable than in other countries. Finally, to account for the weaker sectoral barriers observed in Germany, Erikson and Goldthorpe refer to the particular arrangements in Germany to build bridges between the agricultural and the industrial world through widely spread commuting and part-time farming, notably by 'worker–peasants'.

The various elements of these structural conditions have been observed again and again. Research did not confirm counter-hypotheses sometimes advanced, according to which Germany should have more mobility than other countries and not less. These hypotheses refer to the extraordinary turmoil caused by the Second World War, the loss of millions of lives, economic collapse after the war, and the huge migration in consequence of the lost war. These circumstances may have fostered increased mobility, but—according to the evidence provided so far—their effects seem not to have been strong enough to counterbalance the institutions and forces operating in the reverse direction. However, we will reconsider this issue in some detail below.

The chapter is organised in the following way: we begin with a description of those macro-structural and institutional developments in Germany that may influence the amount and pattern of social mobility. In the following section we briefly describe the data used in the chapter, present descriptive results, and discuss the development of absolute rates of mobility. We then analyse the development of social fluidity in a period- and cohort-perspective and we test the mechanisms which we suspect influence the development of social mobility in Germany. A final section summarises the main results of the chapter.

Macro-structural and institutional development in Germany

There is little empirical evidence for general trends in patterns of social mobility. The evidence so far is rather in favour of the 'trendless fluctuation hypothesis'. The limited extent of variation that seems to exist between countries at a similar level of development is best explained by specific historical conditions, political intervention, or institutional arrangements and reforms. We will therefore begin with a brief review of the general *macro-level conditions*

and *institutional reforms* from which one might expect stability or change of respective conditions and developments in Germany. Are there any conditions for specific deviations of the mobility pattern for the period covered by the CASMIN (Comparative Analysis of Social Mobility in Industrial Nations) data, and are there any significant developments since then which might have affected the opportunities and constraints for individual choices and their outcomes for patterns of social mobility?

General social, economic, and political developments

Among western capitalist countries, Germany is probably the nation in which the effects on patterns of social mobility of the various changes at the macro-societal level are most difficult to assess. These changes have been more profound and more heterogeneous in nature in Germany than in other countries. Two events had major impacts on Germany's social structure in the second half of the last century: the Second World War, followed by economic collapse and the enormous immigration into the western part of the country by the expellees and refugees from the eastern territories; and the developments tied to the collapse of Communism in Eastern Europe, and German reunification from 1989 onwards.

Even though many countries suffered from the Second World War, it affected the development of social structures in Germany in several particular ways. And while, in Germany, most people have been hit by the war and its grievous consequences on conditions of life, several circumstances have been identified which have unequally affected the opportunities of particular groups. We briefly discuss two of these:[38] first, the social integration of more than eight million *war expellees and refugees* into the West German population (constituting about a sixth of the West German population) was only achieved by leaving the immigrants, in particular the expellees, with restricted opportunities compared to those of the native West Germans. Among the expellees, most of those who had been farmers or members of the self-employed petty bourgeoisie lost their possessions and often worked as unskilled workers when they finally found a new job in West Germany. Immigrants also had higher risks of unemployment. Even providing for their educational qualifications they obtained less favourable class positions and their children fared less well in schools than those of natives (Lüttinger 1986, 1989; Handl and Herrmann 1994). With the improving economic conditions in the years of the Wirtschaftswunder, the immigrants were absorbed in the labour market and many of them made successful careers, but the group at

[38] A third group, for which disadvantages have been found in particular in school performance, includes the children who had lost a father or mother during the war (Mayer 1991; Grundmann 1992).

large did not completely catch up. Second, particularly towards the end of the war and in the first post-war years, those *cohorts* who were in school or entered the labour market had poorer educational opportunities and work prospects. School instruction was irregular, many schools were closed, examinations could not be taken, and places for apprenticeship training for the school leavers were lacking in the ruined economy. Detailed birth cohort studies have shown that the cohorts born at the end of the 1920s and in the early 1930s—who were in school or made the transition into the labour market during the war or in the early post-war years—attained lower educational qualifications and more often started working life in unskilled working class positions than the cohorts preceding or following them (Mayer 1977; Müller 1978).

The consequences of these two particular conditions for class reproduction and social fluidity will probably differ. The mobility opportunities for the immigrant war expellees and refugees were less favourable than those of the natives. In particular, direct inheritance of farm and non-agricultural petty bourgeoisie positions occurred at strongly reduced rates: as a consequence of forced migration the children of these classes lost the opportunity to follow directly in their fathers' footsteps. For these classes we should expect a particular gap in the pattern and amount of social fluidity between the cohorts born before and after 1930, since origin social class is usually measured at about age fifteen of the respondent. The bulk of expellee migration took place in 1945 and shortly after, so social class measured for respondents born before 1930 should mostly refer to the origin class as it existed before migration, while for respondents born after 1930 origin social class should mostly refer to the position in West Germany after migration. Cohorts born before 1930 thus represent an aggregate of individuals, a part of which will have lost, through the forced migration, assets that usually lead to inheritance of class position. Because class is measured as if these assets existed, the immigrants will show more mobility (in particular less inheritance of farm and other petty bourgeoisie class positions) than the natives. Therefore cohorts born before 1930 should show higher rates of mobility and lower rates of immobility than cohorts born in 1930 or later, since in the latter case no (or less) migration-induced fluidity should be present in the data. Furthermore, in so far as migration also led to downward mobility among the non-possessing classes and the reduced resources then constrained the opportunities of their children, one should also expect somewhat higher fluidity for these classes among the cohorts born before 1930.

As to the second set of particular conditions—the especially unfavourable opportunities in education and in early labour market integration encountered by the cohorts born around 1930—it seems plausible to assume that, in harder times, social disparities between more and less advantaged social groups increase. Social fluidity in these times should be smaller rather than larger. If this hypothesis holds we should expect less fluidity for the cohort born in 1930

and shortly after. In sum the particular conditions of refugees and expellees should lead to higher fluidity for cohorts born before 1930, while the particular conditions at the end of the war and in the early post-war years should rather lead to less fluidity for the cohorts born in 1930 or later. Together, both factors should lead to a decline in fluidity from the 1920s to the 1930s.

Beside these particular circumstances resulting from the Second World War, the period covered by the CASMIN analysis was evidently also marked by the enormous economic growth during the Wirtschaftswunder up to the mid-1970s. For more recent times that will be compared below with the CASMIN results the following are probably the most important developments:

1. Reduced rate of economic growth and more pronounced cyclical economic down-turns since the mid-1970s compared to the period of the Wirtschaftswunder and the high growth period up to the mid-seventies;
2. Increased labour force participation of women connected with a strong increase in educational participation of women;
3. Increased unemployment.
4. Continued occupational upgrading, but probably at reduced rates;
5. Very limited success of political attempts to increase labour market flexibility;
6. Almost no change in distributive inequality, income distribution, and general rates of poverty. The proportions of children who grow up in poverty, however, have probably increased, mainly due to increased numbers of children living with single parents or in families hit by unemployment (Hauser and Becker 2001);
7. A continued substantial net immigration which was particularly high in the first half of the 1990s, with four main groups of migrants to West Germany:
   (i) migrants from East Germany to West Germany related to German reunification;
   (ii) immigrants from Eastern Europe, mainly due to an active immigration policy providing highly privileged treatment to citizens from Eastern European states with ethnic German background, but also due to the geographical proximity of Germany to these countries;
   (iii) seekers of political asylum and war refugees;
   (iv) a continued net immigration from the countries of the earlier worker-immigration period, mainly due to family reunification.

With the exception of migration, none of these developments can be expected to lead to increased social fluidity compared to the preceding period of high economic growth and relatively rapid sectoral and occupational change. The general scenario is rather one of reduced opportunities and therefore probably more fierce competition in which individuals from less advantageous starting points will find it rather more difficult to succeed. From these general conditions more

fluidity could probably only be expected in terms of higher risks of downward mobility, in particular for less competitive men of advantaged social origins due to the larger number of working women from these origins who also aspire to good jobs. The implications for patterns of social fluidity of the new waves of immigration are difficult to assess. The earlier waves of 'guest-worker' immigration, from the 1960s to the 1970s, to a very high extent included unskilled and semi-skilled manual workers for jobs in industry and low skilled service work. They facilitated upward social moves for native Germans in times of high labour demand. On an average, the more recent immigrants to West Germany have lower qualifications than the natives, but they are much more heterogeneous in their social composition and qualification levels than earlier immigrants. Overall, therefore, the new immigration waves may also have increased competition for more advantageous jobs.

A recent analysis by Hartmann (1998) supports the expectation that social fluidity has increased due to increased competition. In a study of trends in mobility between the end of the 1970s and the early 1990s, Hartmann finds that inheritance of upper service class positions has declined and that the risks of downward mobility from the intermediate classes to the unskilled working class seem to have increased. But he also finds that immobility in unskilled working class positions declined and that the chances of unskilled workers reaching a position in the lower service class seem to improve. While the first set of findings would be consistent with increased competition, the finding of improved mobility chances of the unskilled workers is not. Hall (1997) also finds declining social immobility. In particular, she observes less social closure in the upper service class and provides evidence that this is related to declining social selectivity in education. This leads us to the discussion of respective institutional change and reform.

Institutional change

Two sets of institutions have been held responsible for the particularly high levels of immobility in German society: the institutions of the educational system and the distinctions in status and other advantages between the broad categories of manual and non-manual workers, combined with the status-conserving regulations of the system of labour legislation and of social security. Do they still continue to operate in similar ways?

Concerning the latter, to a large extent the three groups of wage workers, non-manual employees, and civil servants are still affiliated with different institutions providing separate systems of health and pension insurance as well as different rules of labour regulation. However, in terms of the services provided, the financial provision guaranteed and the stipulations in labour legislation and labour protection, the gaps between them have become smaller. This is particularly true for wage workers and employees. In long battles up until the

mid-1970s the less advantageous regulations for wage workers were continually reformed in the direction of those existing for employees. Some large private employers have even given up the distinction among the two different categories of wage workers and employees. If the differences in labour market and social security regulations for the three categories of workers have been a crucial determinant of the particular German mobility pattern, then the German deviations from the core pattern should become smaller. In particular, the parameters for class inheritance should decline. The particular affinity between the routine non-manual class on the one side and the service class and the petty bourgeoisie on the other should decline as well.

As to educational institutions, there has been less reform in Germany than in many other countries. It has conserved early and rigid tracking in general education, leading to strong vertical stratification. It has also conserved its system of vocational training characterised by strong education–labour-market linkages and by marked horizontal differentiation in training specialisation. Probably due to the strong and widely used system of vocational training, tertiary education has expanded less in Germany than in other countries. Two institutional reforms, however, are of relevance for our concerns even though they have not altered the institutional structure of the German educational system.

The first is tied to the gradual raising of the years of compulsory education. Compulsory schooling was extended from seven years in the pre-Second World War period to nine years in the 1970s. This probably has contributed to the decline in class inequalities in educational choices by reducing the differences in costs of the different educational tracks (Müller and Haun 1994). Second, with the establishment of the Fachhochschule, Germany has enhanced and stabilised vertical stratification within tertiary education. As class selectivity in access to the Fachhochschule is lower than in access to the traditional universities, the Fachhochschule may also contribute to the decline of class differences in educational participation. Empirical evidence concerning the development of class inequalities in educational participation, however, is not unequivocal in Germany (Mayer et al. 1991; Blossfeld 1993; Müller and Haun 1994; Henz and Maas 1995). But the studies we consider most convincing indicate that inequalities declined. Even though the decline is substantial, inequalities in Germany are still larger than in the United Kingdom or Sweden (Jonsson et al. 1996).

At the same time there is little evidence that the strong role played by education in Germany in allocating individuals to class positions has markedly changed.[39] The declining class inequality in education together with the

[39] As detailed studies show, there has been some change in the labour market value of some of the credentials available in the German educational system. While returns to credentials on the secondary level somewhat declined (in particular returns to tracks of general education), returns to tertiary qualification in the long run even increased (Brauns et al. 1997; Müller et al. 1998; Müller 1999). Another study by Handl (1996) reports declining returns to education for subgroups of labour market entrants since the 1980s.

continuing relevance of education in labour allocation might contribute to increased social fluidity. The educational route thus should have lowered class barriers in intergenerational social mobility. As education is the mechanism mainly responsible for mobility between classes at different hierarchical levels we can formulate this expectation even more precisely: from the earlier to the later cohorts, we expect the effects of hierarchy in the pattern of social fluidity to decline.

A decline of class barriers in intergenerational social mobility as a consequence of reduced class inequality in education will materialise if the changes in education are not compensated by increased extra-educational effects of class origin on class destination. Do we get any hints for such a development from the changes in the macro-level settings and in the institutional conditions? This is hard to tell because the developments point in different directions. The declining distinctions between the Arbeiter, Angestellte, and Beamte should have caused the barriers to social mobility between classes to become less rigid. The conditions of increased competition described above probably should lead to less class inheritance among the privileged classes, but it should make access to advantageous class positions from below more difficult. Beyond that, we see no obvious manifestations in Germany that 'non-credentialist' cues and influences of class background (like 'soft skills') matter clearly more in recruitment decisions in recent compared to earlier years.[40]

Concluding this section we formulate a set of hypotheses which summarise the deliberations from which we expect the most compelling implications for the development of social mobility.

1. We expect an increase in social fluidity due to declining class inequality in educational participation. This should become particularly visible in declining effects of hierarchy.
2. The usually very strong inheritance among farmers and the petty bourgeoisie is expected to be markedly lower than average for the cohorts born before 1930 due to the particular circumstances of the war expellees and refugees.
3. Assuming that in hard times parental class has a particularly strong impact, social fluidity is expected to be especially low for the cohorts born in the early 1930s because of the extremely difficult conditions these cohorts encountered in the educational system and on labour market entry during the Second World War and in the early post-war years.

[40] Evidently, as long as we do not have systematic observations of such extra-educational processes, such a statement is largely a subjective judgement. Also other hidden and subtle mechanisms—such as acquiring double qualifications—may play a role.

4. From the declining institutional distinctions between workers, non-manual employees, and civil servants we expect lower barriers for social mobility between these groups. One way this can become evident is through a reduced affinity in the mobility pattern among the various 'non-manual' classes and among the various manual classes.

While the first three of these hypotheses all lead us to expect effects for the mobility experience of specific birth-cohorts, the last hypothesis depicts developments that could also become evident in the period-dimension of time. In general, the hypotheses call for great care with the design of the analysis. This will lead us to complement the analysis of period change with an analysis of change over age cohorts.

Data and analyses

The data for the present study come from two sources; the first is a series of cross-sectional random samples of the native German population, carried out under the auspices of ZUMA (Zentrum für Umfragen, Methoden und Analysen—Centre for Survey Research and Methodology) by selected data collection firms that carry out most of the academic social research in Germany. These surveys include several replications of the ZUMABUS, the survey on well-being (Wohlfahrtssurvey) and the German General Social Survey (ALLBUS). While the main substantive topics of these surveys differ, they all use similar questionnaires and procedures to collect the data for the variables used in this chapter. The precise procedures to achieve random samples unfortunately vary, but this variation is not correlated with the period in which the surveys are carried out. The second source is the German Socio-Economic Panel (GSOEP). In its main sample the GSOEP asked for information about social characteristics of parents only in its third wave in 1986. In 1999 corresponding information was asked from a new GSOEP sample: thus we include GSOEP for 1986 and 1999. Questionnaires and coding procedures used for the variables are very similar in the GSOEP and in the other surveys. We thus can be rather confident that cumulating these databases does not introduce systematic inconsistencies.[41] Table 4.A1 in the appendix shows details on the surveys included in the analyses. We only use data for German citizens having their residence in West Germany. The data used was collectd in the years 1976 to 1999 with partly annual, partly biannual data points. The samples we use include all men aged 20–64, whether currently in the labour force or not, and women aged 20–64 who are currently in the labour force.

[41] Several tests have shown that there are no systematic influences of the different data sources.

In the following analyses we proceed in three steps. We first aggregate the surveys for three periods (1976–80, 1982–90, 1991–9) and present descriptive information on various aspects of absolute mobility. For the study of relative rates we then replicate the analyses of Erikson and Goldthorpe for the same three periods in order to see whether the particular characteristics of the German mobility regime they have found are confirmed by new observations for more recent periods or whether they have rather been a feature of the CASMIN database for Germany. In a third round of analyses we attempt to identify the historical conditions that may have generated the variation over time according to the expectations derived above. For that we will turn from a period-based to a cohort-based analysis.

Descriptive results and absolute rates of mobility

The distributions for origin and destination class and the indices of dissimilarity for the three periods contained in Table 4.1 show results that one would expect from the general trends in the transformation of class structures in advanced economies.[42] From origin to destination the service classes strongly increase, the routine non-manual class remains stable for men and strongly increases for women in the labour force, and all other classes decline to a larger or smaller extent. Origin and destination differ much more for women than for men because of the typical differences between female and male labour markets and class positions. Among men the proportion in the skilled working class is much higher than among women, while women are more often routine non-manual employees. Comparing the trends between the periods we see that for origins the share of the working classes (still) slightly increases from the first to the last period while, with the growing service economy, working class destinations decline for both men and women.

The changes between periods in class destinations which reflect the general opportunity structures are rather small. They tend to be larger for women than for men, and are more advantageous for women than for men. In particular, opportunities for service class positions hardly grew for men, but they clearly increased for women. While in the first period more men than women had a service class position, the reverse is the case in the last period. According to the indices of dissimilarity at the bottom of the table, the differences in the class distribution of origin and destination slightly decline for men, while for women they are not only much larger than for men, but also increase slightly.

[42] Class of origin is father's class when the respondent was fifteen years old. Class destination is current class position or most recent class position if the respondent does not currently have a job.

TABLE 4.1. *Marginal distributions of Origin and Destination and index of dissimilarity by observation period, for men and for women in labour force, age 20–64 in West Germany*

	Men			Women		
	1976–80	1982–90	1991–9	1976–80	1982–90	1991–9
	N= 5567	*N*= 7061	*N*= 3573	*N*= 3032	*N*= 3929	*N*= 1989
Destination marginal distribution in %[a]						
I/II	33	33	36	31	32	38
IIIab	9	9	9	36	40	37
IVab	6	7	6	6	5	6
IVc	2	2	2	2	1	1
V/VI	38	37	36	7	7	8
VIIa	11	11	10	18	15	11
VIIb	1	1	1	0	0	0
V – VIIa	49	48	46	25	22	19
combined						
Origin marginal distribution in %[b]						
I/II	18	18	21	21	20	22
IIIab	9	9	10	10	10	9
IVab	10	10	7	10	10	8
IVc	10	9	8	10	8	8
V/VI	35	38	39	34	36	39
VIIa	15	15	14	14	15	12
VIIb	3	2	2	2	2	2
V – VIIa	50	53	53	48	51	51
combined						

[a] Index of dissimilarity:

1976–80 versus 1991–1999 Δ_{men} = 3.0 Δ_{women} = 8.5

1976–80; men versus women in Δ = 34.0

1991–9; men versus women in Δ = 30.5

[b] Index of dissimilarity:

1976–80; Origin versus Destination Δ_{men}= 18.0 Δ_{women}= 40.5

1982–90; Origin versus Destination Δ_{men}= 15.5 Δ_{women}= 42.5

1991–9; Origin versus Destination Δ_{men}= 15.5 Δ_{women}= 43.5

As the class distributions and their change constrain the opportunities for absolute rates of mobility we should expect, from the limited change in class distributions, only a limited change in mobility rates. Mobility rates among women generally should not only be larger than those among men but their changes should also be somewhat more advantageous (Tables 4.2 and 4.3).

The outflow and inflow rates in the three periods are indeed remarkably similar. For *men,* class inheritance most clearly declines in the unskilled working

TABLE 4.2. *Percentage outflow into class of origin (class inheritance) and into classes V–VIIab by observation period,[a] for men and for women in labour force, age 20–64 in West Gemany*

	Men			Women in LF		
	1976–80	1982–90	1991–9	1976–80	1982–90	1991–9
	N= 5567	*N= 7061*	*N= 3573*	*N= 3032*	*N= 3929*	*N= 1989*
Class inheritance						
I/II	64	63	63	53	54	59
IIIab	14	14	13	45	48	48
IVab	20	25	18	12	9	15
IVc	19	19	27	12	11	10
V/VI	50	49	50	9	9	10
VIIa	25	22	20	33	31	24
VIIb	8	5	1	0	1	0
Into classes V–VIIab						
I–IVabc	33	33	28	17	14	12
V/VI	60	60	61	29	26	22
VIIa	75	69	69	44	38	33
VIIb	75	78	66	55	41	29

Note: [a]Unemployed are coded according to their last class position, if possible.

TABLE 4.3. *Percentage outflow into classes V – VIIab and into unemployment by observation period, with unemployment as additional destination,[a] for men and for women in labour force, age 20–64 in West Germany*

	Men			Women in LF		
	1976–80	1982–90	1991–9	1976–80	1982–90	1991–9
	N = 5596	*N = 7085*	*N = 3584*	*N = 3114*	*N = 3962*	*N = 1996*
Into classes V–VIIab						
I–IVabc	31	31	26	14	13	11
V/VI	58	56	57	24	23	20
VIIa	73	65	63	37	33	28
VIIb	75	75	62	48	41	26
Into unemployment						
I–IVabc	2	3	3	14	5	4
V/VI	1	3	5	13	8	6
VIIa	1	4	6	13	10	10
VIIb	0	3	6	10	1	3

Note: [a]Sample size changes due to additional observations (mostly due to respondents who are looking for their first job).

classes, while it seems to increase for farmers. When we consider outflows into all three working classes combined the rates decline for all origin classes except for the skilled working class, which in Germany constitutes the core of the working class.

Thus, the declining size of the working class has resulted in relatively fewer men from all origins, except the very core of the working class, becoming workers. Germany, like many other countries, experienced large scale unemployment in the last quarter of the twentieth century. Therefore, we consider *unemployment* (at the time of the survey) as a separate destination in the lower sections of Table 4.3 (otherwise the unemployed are classified by the occupation held before unemployment and are in this way included in the analysis). Corresponding to the general over-proportionate risks of unemployment in the working classes, we find that the sons of working class origin have the highest risk of unemployment (at least in the last period in which unemployment was high). Including unemployment as a distinct destination leads to a decline in working class destinations that largely corresponds to the proportions unemployed. For each origin class, the unemployed are largely recruited from those who otherwise have working class destinations (since the proportion of unemployed closely equals a corresponding decline in working class destinations).

Women show lower intergenerational class stability than men except in the routine non-manual class which constitutes (beside the service class) one of the core areas of female employment. In particular, working class women are much less likely to inherit their class position, and the decline in this respect is considerably larger for daughters than for sons. In contrast, women's chances of following their fathers into service class positions have increased in more recent years. In the last period, women have become rather similar in this respect to men who, in earlier years, had better chances than women to 'inherit' their father's position in the service class.[43] One further difference concerns unemployment. Among women, the risks of unemployment are less concentrated in the working classes and rather evenly distributed among all classes. Also, in contrast to men, the risks of unemployment were highest in the first period.

As to class specific inflow or recruitment patterns (Table 4.4) we find that for *men* class composition, in terms of the origins from which class members are recruited, becomes slightly more homogenous, except for the non-agricultural petty bourgeoisie. Homogeneity has particularly increased for the working classes whose members have increasingly grown up in a working class family. Indeed, in the 1990s, three out of four workers had a working

[43] More detailed analysis, however, shows that men continue to occupy more positions in the upper service class while women are constrained more frequently to the lower service class.

TABLE 4.4. *Inflow rates by observation period, for men and for women in labour force, age 20–64 in West Germany*

	Men			Women in LF		
	1976–80	1982–90	1991–9	1976–80	1982–90	1991–9
	N= 5567	*N= 7061*	*N= 3573*	*N= 3032*	*N= 3929*	*N= 1989*
% Self-recruitment						
I/II	34	33	36	36	33	34
IIIab	14	14	15	12	12	12
IVab	36	35	21	21	18	23
IVc	90	92	93	77	65	63
V/VI	46	49	53	42	44	49
VIIa	34	30	28	25	31	28
VIIb	29	16	4	0	7	0
% inflow from classes V –VIIab into						
V/VI	69	70	74	64	68	56
VIIa	67	71	73	59	75	53
VIIb	73	63	60	65	74	67

class background. More detailed inspection of the inflow rates shows that with the continued decline of farmers in the parental generation, the inflow to the working classes from farm backgrounds declines. In the skilled working class this is compensated by increased self-recruitment while the unskilled working-class recruits more of its members from the skilled working class. Intergenerational self-recruitment in the service class is also growing, though it is still rather low. The only class in which self-recruitment declines is the petty bourgeoisie. Even though the proportion of self-employed workers in the active male labour force has remained relatively stable since the 1980s or even increased, the composition of self-employment in terms of economic sectors has substantially changed. The proportion of the self-employed in crafts, manufacturing, and in small shops declined, while it increased in other service branches. This transformation, as well as some decline of self-employment in the parental generation, may have contributed to the petty bourgeoisie becoming more heterogeneous in the composition of their members' social origin. With that exception we find absolutely no indication of declining class formation, in the sense of class members having a common class background. It has rather increased and will continue to increase, particularly in the service class.

For similar reasons as in the case of class inheritance, class self-recruitment for *women* tends to be slightly lower than for men.

With the broad measure of the *total mobility rate* in Table 4.5, we find high stability, but if we accept the small change in the percentage of men and

TABLE 4.5. *Decomposition of total mobility rates (TMR) into total vertical (TV) and total non-vertical (TNV) mobility and of total vertical mobility into total upward (TU) and total downward (TD) mobility, for men and for women in labour force, age 20–64 in West Germany*

Labour force	1976–99	1976–80	1982–90	1991–9
Men	(*N= 16201*)	(*N= 5567*)	(*N= 7061*)	(*N= 3573*)
TMR	61.5	62.0	61.8	60.2
TV	45.3	45.0	45.3	46.0
TNV	16.2	17.0	16.5	14.2
TV/TNV	2.8	2.6	2.7	3.2
TU	32.1	32.3	32.1	32.0
TD	13.2	12.7	13.2	14.0
TU/TD	2.4	2.6	2.4	2.3
Women	(*N= 8950*)	(*N= 3032*)	(*N= 3929*)	(*N= 1989*)
TMR	74.6	74.5	75.1	73.9
TV	48.1	48.8	47.5	48.4
TNV	26.5	25.8	27.6	25.4
TV/TNV	1.8	1.9	1.7	1.9
TU	29.3	27.3	29.2	32.5
TD	18.9	21.5	18.3	15.9
TU/TD	1.6	1.3	1.6	2.0

women who are in the same or a different class position as their fathers as indicating real change, then this change is in different directions for men and for women. For men downward mobility slightly increased while the rates of upward mobility have remained very much the same. Among women, for whom the changes are more marked, we find increasing upward mobility and declining downward mobility. The female pattern in the rates of upward and downward mobility becomes increasingly similar to the pattern for men, and in the last period it hardly differs from it. Women, however, experience more non-vertical mobility than men, and in consequence their total mobility is larger than men's. Both are most likely due to gender segregation in labour markets, which leads women more often than men into a class position different from their fathers', even though it tends to be at the same hierarchical level.

In sum, in our data we cannot find any major changes in (absolute) mobility experiences in the last quarter of the twentieth century. The most serious change in a negative direction is the return of unemployment. When we consider the (long-term) unemployed as an excluded class of its own at the bottom of the class structure, then we evidently find somewhat more downward mobility, particularly among men in the working class. But even though the situation for those affected is grave, the conclusions about the general pattern

of mobility experiences do not fundamentally change. What otherwise comes out most systematically from the figures on absolute rates is a slight tendency among men towards increasing self-recruitment and increasing homogeneity in terms of class origins in most classes. For women in the labour force we find somewhat lower intergenerational stability, in practically all respects compared to men. But in the decades observed, women's pattern of mobility becomes more similar to men's, mostly through increasing upward and decreasing downward mobility. The most marked difference between men and women is due to the gender segregation in labour markets and interestingly leads (less and less) not to more vertical mobility for women, but to more mobility between classes located at similar hierarchical levels. Even though class destinations of sons and daughters vary substantially, the varying resources of class origin affect sons and daughters in increasingly similar ways: the foremost remaining difference consists in women's higher rates of non-vertical mobility. Overall, however, the figures give a picture of astonishingly high stability and little change over time. Partly this is due to the rather short observation period of roughly twenty years and the need to aggregate surveys within periods. But the findings of only limited change in the class structures in these years is consistent with data from other sources (notably Labour Force Surveys), which also show that in the 1980s and in the first half of the 1990s the rate of occupational change in Germany was relatively low.

Social fluidity in Germany—the period perspective

Given this remarkable overall stability in absolute rates of mobility, is this stability produced by similarly stable relative rates or have macro-structural and institutional changes induced a transformation in the underlying patterns of social fluidity? For a preliminary answer to this question, we apply log-linear models to mobility tables for men aged 20–64; women in the labour force aged 20–64; and to so-called 'complete tables'. The latter consider the family as the basic unit of stratification. The family's class position is selected according to the 'dominance-1 rule' (Erikson and Goldthorpe 1992).[44] The results in Table 4.6 show that for all three populations the constant social fluidity model fits the data. When we consider either uniform change or linear uniform change between the periods we generally find no significant improvement in fit. (We use the symbol ψ_{OD} to indicate the Unidiff multiplier for all odds-ratios of

[44] In order to determine class positions of households, we follow Erikson and Goldthorpe's 'dominance 1' principle as closely as possible (Erikson and Goldthorpe 1992: 265). We only assign class positions to households if the respondent of the survey was between twenty and sixty-four years old. In our application of the principle, full-time employment dominates part-time employment. If no partner has a full-time position, we do not—for various reasons—use any other current employment status for determining dominance. The 'dominance 1' principle orders classes in the following way: I/II, IVab, IVc, IIIa, V/VI, IIIb/VIIa, VIIb.

TABLE 4.6. *Development of social fluidity in a period perspective 1976–99, for men, for women in labour force, and for complete tables, age 20–64 in West Germany; Data matrix: Origin× Destination×Period*

Type of model	*N*	d.f.	G^2	*p*	% red. in G^2	Δ	bic
Men in labour force							
Conditional independence	16,201	108	4496.7	.000	—	19.44	3449.9
Constant Social Fluidity	16,201	72	82.5	.187	98.2	2.00	−615.4
Unidiff	16,201	70	80.9	.175	98.2	1.96	−597.6
Linear-trend Unidiff	1,6201	71	81.0	.196	98.2	1.96	−607.2
Time periods	1976–80		1982–90		1991–9		Linear
Unidiff parameters	1.0		0.97		0.94		−0.036
Women in labour force							
Conditional independence	8,950	108	1556.9	.000	—	14.55	574.2
Constant Social Fluidity	8,950	72	82.7	.184	94.7	2.35	−572.5
Unidiff	8,950	70	81.7	.160	94.8	2.33	−555.3
Linear-trend Unidiff	8,950	71	82.2	.170	94.7	2.32	−563.8
Time periods	1976–80		1982–90		1991–9		Linear
Unidiff parameter	1.0		0.93		0.92		−0.051
Complete Tables							
Conditional independence	34,494	108	7300.4	.000	—	17.50	6172.0
Constant Social Fluidity	34,494	72	86.6	.116	98.8	1.57	−665.7
Unidiff	34,494	70	81.0	.174	98.9	1.50	−650.4
Linear-trend Unidiff	34,494	71	81.6	.183	98.9	1.51	−660.2
Time periods	1976–80		1982–90		1991–9		Linear
Unidiff parameter	1.0		0.96		0.92		−0.049

the *OD* matrix). The only exception is the linear trend Unidiff model for complete tables. In this model the linear Unidiff parameter improves G^2 significantly (by 5.0 with 1 d.f.). The implied value of the parameter is negative (−0.049) and indicates that the level of association between origin and destination declines by about 5 percent per decade. The fact that this decline is significant in a statistical sense may be due to the large sample size for the complete tables, but substantially all other tables also produce change parameters in the same direction of increasing social fluidity.[45]

The results on changing social fluidity so far are thus somewhat mixed. For all three populations the model of common social fluidity fits the data, but there is some indication of increasing social fluidity since all Unidiff parameters point in the same direction. In addition, the most comprehensive set of data—the

[45] We also have computed analyses for trends when each survey is included separately into the analyses (and not aggregated into periods). The variation of the Unidiff parameters between surveys is quite large, but the trend shown is also in the direction of higher fluidity.

complete tables—shows a statistically significant improvement compared to the Constant Social Fluidity Model (CnSF) if we assume a linear trend.

In order to be able to build on the already existing assessment of Germany's mobility pattern in a comparative context and in order to cumulatively contribute to this assessment, we follow in the next step as closely as possible the procedures used in the CASMIN project and replicate the models of core social fluidity developed by Erikson and Goldthorpe for men. We want to know whether the additional and more recent data show Germany deviating in similar ways from core social fluidity or whether Erikson and Goldthorpe's findings for Germany reflect somewhat idiosyncratic characteristics of the data they used. Table 4.7 shows fit statistics of these models calculated for the new database and compares these statistics to the 'Constant Flux' results.

The Models 1 and 1a show Erikson and Goldthorpe's results for the separate estimation of the core model for Germany (Erikson and Goldthorpe, 1992: 142). Model 1 corresponds to the core model without nation-specific modifications; model 1a is the core model with adaptations of the design matrices to fit better the German observations. The matrices of the German variant of the core model are reported in Table 4.A2 in the appendix. (For Table 4.7, all model numbers supplemented with 'a' will refer to this adapted German variant of the core model (termed CoreG in the table), while model numbers without 'a' represent the core specifications without modifications.) The inclusion of the modifications considerably improves the model fit for

TABLE 4.7. *Fit statistics for models of core social fluidity for different time periods between 1976–99, for men, age 20–64 in West Germany; Data matrix: Origin×Destination*

Model	Type of model	N	d.f.	G^2	p	Δ	bic	$G^2(S)$ for N= *3573*
1	1976–80; Erikson/Goldthorpe (1992: 142); core social fluidity (for German data only)	3,890	28	101.6	.00	5.3	−129.9	95.6
1a	1976–80; Erikson/Goldthorpe (1992: 142); CoreG (German variant of core social fluidity)	3,890	28	45.4	.02	2.8	−186.1	44.0
2	1976–99; core social fluidity	16,201	28	253.3	.00	4.21	−18.1	77.7
2a	1976–99; CoreG variant	16,201	28	111.3	.00	2.42	−157.1	46.4
3	1976–80; core social fluidity	5,567	28	126.7	.00	5.08	−114.7	91.3
4	1982–90; core social fluidity	7,061	28	125.2	.00	4.34	−122.9	77.2
5	1991–9; core social fluidity	3,573	28	56.2	.00	3.10	−172.9	56.2
3a	1976–80; CoreG variant	5,567	28	48.8	.00	2.21	−192.7	41.3
4a	1982–90; CoreG variant	7,061	28	83.7	.00	3.41	−164.4	56.2
5a	1991–9; CoreG variant	3,573	28	37.8	.10	2.30	−191.3	37.8

the CASMIN database Erikson and Goldthorpe used. The G^2 value and the index of dissimilarity are reduced by about half. But how do the new data compare to these findings? Rather well indeed, as models 2 and 2a of the table reveal for the cumulated data from all years of observation from 1976 to 1999. The models return G^2 values which are about 2.5 times as large as those found by Erikson and Goldthorpe, even though the number of cases is almost five times as large as theirs and the observations are spread over a much longer period of time. The German variant of the core model continues to fit the data considerably better. Perhaps one should stop the analysis here and conclude that Erikson and Goldthorpe have said all that can be said and that their description of Germany is also valid for the post-CASMIN period in Germany.

The analysis can be pushed further, however. The first observation to be made is that, according to the more recent data, Germany does not appear to deviate as much from the core as she did in the period covered by the CASMIN data. The index of dissimilarity and $G^2(S)$ (the goodness-of-fit measure for a table given a fixed hypothetical number of observations—in this case 3,573) calculated for the unmodified core model (model 2) indicate a better fit for the extended period than for the CASMIN data referring only to the years 1976–80. While in Erikson and Goldthorpe's analysis, Germany was among the countries in which the core model fitted the data worst, it would now be closer to the countries in which the core model fits relatively well. This finding can result from at least two different circumstances. First, the considerable deviation of Germany according to the CASMIN results was rather due to some bias in the old data. Second, social reality in Germany has changed in such a way that social fluidity in more recent years becomes less different from the core model. In this case G^2 should decline from the earlier to the latter periods.

For a test of these two possibilities we replicate the analyses for the three separate periods. Models 3–5 and 3a–5a show fit statistics for the core model and the German variant of the core model. The pattern of results in models 3–5 is quite consistent with what one would expect if Germany's mobility pattern developed in the direction of a closer correspondence to the core pattern of industrial societies. From the first to the third period all parameters systematically show an increasingly better fit of the core model. But even though Germany moved towards the core, the German variant of the core model fits the data better in all periods. For the last period, this model finally fits the data also in a statistical sense. The systematic improvement of fit using the German variant of core social fluidity and its fit to the data in the most recent period indicate that Erikson and Goldthorpe seem to have captured German peculiarities that were not merely idiosyncrasies of the data these authors used. Rather, they can be understood as continued—even though declining—deviations of the German mobility regime from core social fluidity.

The models considered so far suggest that Germany developed in the direction of core social fluidity. When we consider the parameters (not shown, but available from the authors), the overwhelming tendency is consistent with the previous findings pointing in the direction of increased social fluidity: the majority of parameters, in particular those indicating little long distance mobility, change in the direction of increasing social fluidity. But not all parameters change in this direction. There is no evidence that the strong affinity and intergenerational exchange between classes of the manual and non-manual space of the class structure declines. We take this as a first indication that the declining distinctions between the social categories of Arbeiter, Angestellte, and Beamte have so far not materialised in increased social fluidity between these groups.

Social fluidity in a cohort perspective

The study of variation of social fluidity in the course of historical periods has strengths and weaknesses. The main strength is the broad cross-sectional coverage of the (ideally complete) active population, whatever the age and career stage of the members of this population may be. This allows the assessment of the level and pattern of social fluidity for the active members of society at large, and of changes thereof in time, always assessing the state of mobility in the society at large. Variation of social fluidity by age groups or career stages is assumed to be similar across periods; disturbances resulting from this variation are usually neglected. However, these assumptions can be and have been questioned. Further, serious criticism can be raised concerning the difficulty of identifying the impact of specific historical conditions within such broad cross-sectional samples. These conditions may affect only limited segments of the population. For example, educational reforms, educational expansion, or changing competition in the labour market among groups with different qualification levels will affect mainly cohorts which are in school, pursuing higher education, or making the transition from school to work when the respective changes take place. In contrast, these effects may remain largely without consequences for cohorts which had already settled in the labour market. Similarly, dramatic historical events, like the Second World War or the economic collapse after the war, may have different impacts on the social opportunities of different cohorts and particularly affect members of cohorts who are in a susceptible stage of their life course. If not properly controlled for, the comparative cross-sectional approach runs the risk of remaining highly inconclusive concerning the conditions and factors generating a given pattern of fluidity. Concerns of this kind lead us to choose cohorts rather than historical periods as units for comparison.

A cohort perspective based on cross-sectional surveys evidently encounters the crucial problem that cohort members are surveyed at different ages.

Cohorts born in earlier times will be surveyed at older ages than cohorts born more recently. To the extent that social position attained is age dependent, differences in patterns of social mobility can result from the differences of age at which the social positions of the members of the various cohorts are observed. Within the cohort approach age dependence of social position is not 'automatically' compensated as it is in the period approach, where by design all age groups tend to be represented similarly in the periods compared. Any cohort analysis must therefore be highly concerned with bias possibly introduced by comparing cohorts at different stages of the life course of their members.

Table 4.8 describes the cohort-design that we have implemented. The design allows us to compare five cohorts born between the 1920s and the 1960s. Except for the oldest and the youngest of these cohorts, each of them can be studied at least at two different ages. Each age group of a given cohort can be compared with the same age group of at least two other cohorts. Even though the distribution of the exact age within the selected age groups somewhat varies, this variation is limited and should not seriously affect the results. The age groups selected for analysis range from age twenty-seven to fifty-nine. With the exception of some members of the youngest age group, most cohort members will have reached occupational maturity at the age for which their class position is observed. Even for the youngest age group this will probably be true for a large majority of cases. We therefore do not expect substantial differences in social fluidity between the age groups. If cohort

TABLE 4.8. *Observed cell frequencies for Age–Cohort–Period (A–C–P) design: ten-year birth-cohorts by ten-year age groups, for men (upper lines) and for women in labour force (lower lines), age 27–64 in West Germany, 1976–99*

Cohort	Age Group at which surveyed			Total
	27–39	40–49	50–59	
1920–9	—	—	1,654	1,654
	—	—	729	729
1930–9	—	1,939	1,157	3,096
	—	946	490	1,436
1940–9	2,012	1,411	483	3,906
	1,152	803	263	2,218
1950–9	2,400	515	—	2,915
	1,600	375	—	1,975
1960–9	994	—	—	994
	594	—	—	594
Total	5,406	3,865	3,294	12,565
	3,346	2,124	1,482	6,952

TABLE 4.9. *Fit statistics for uniform change models with cohort and age according to A–C–P design, for men in West Germany, age 27–64, born between 1920 and 1969; Data matrix: Origin×Destination×T9(= nine mobility tables), N= 12565*

Model	Type of model	d.f.	G^2	p	Δ	bic	diff. G^2	p (diff.)	diff. G^2	p (diff.)
1	Independence model, B1 (5ACO,ACD)	324	3873.9	.000	20.9	815.8				
2	Constant Social Fluidity, B1 + *OD*	288	332.6	.036	4.53	−2385.8	—	—		
3	Uniform change (by cohort * age), B1 + *OD* + $\varphi_{OD,CA}$	280	312.0	.091	4.20	−2330.8	20.68	.008	—	—
4	Uniform change (by age), B1 + *OD* + $\varphi_{OD,A}$	286	323.4	.063	4.20	−2376.1	9.22	.010	11.46	.077
5	Uniform change (by cohort), B1 + *OD* + $\varphi_{OD,C}$	284	316.8	.088	4.37	−2363.8	15.84	.003	4.84	.308

Note: *O*= class origin: *D*= class destination; *A*= age group; *C*= cohort.

Uniform change parameters:

Model 3: see Fig. 4.1

Model 4: from oldest (50–9 years) to youngest (27–39 years) age group: 1.00; 1.00; 0.88

Model 5: from oldest (1920–9) to youngest (1960–9) quasi-birth cohort: 1.00; 1.16; 1.06; 0.97; 0.91.

differences exist, the variation between the age groups should be small enough to allow us to capture the cohort effects. Period differences will be neglected for now because we assume that most of the variation in the data results from changing historical circumstances and changing institutional conditions which mainly affect experiences of particular cohorts.

Table 4.9 provides summary statistics for a series of log-linear models assessing the degree of stability of social fluidity between cohorts and age groups. All models are calculated for those cases of our surveys which fall into one of the cells in Table 4.8. The analysis thus includes nine mobility matrices (one for each observed combination of age group by cohort). Model 1 can be considered as an adequate independence model for the analysis. It includes all two-way interactions except the *OD* term and the three-way interaction terms for AOC and ADC. The CnSF model (Model 2)—assuming constant *OD* interactions for all cohorts in all age groups—comes close to fitting the data.[46] The

[46] Given the large number of d.f., the index of dissimilarity is larger than in the models to test period trends.

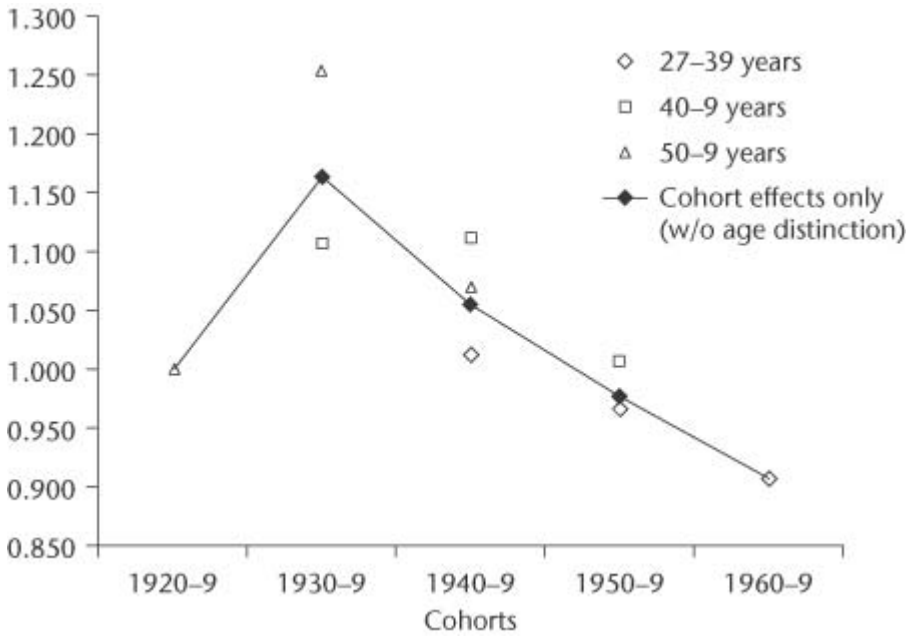
next model assumes uniform difference between the five cohorts and the three age groups (model 3), that is, between the nine mobility matrices of our cohort by age design. The G^2 value declines significantly and the model fits the data. In the next two models we drop cohort and age respectively from model 3. We thus obtain a pure age-difference model, which only allows for uniform differences among the age groups (model 4) and a pure cohort difference model which only allows for uniform differences between cohorts (model 5).[47] Both these models again fit the data, and in both cases the fit of the models is not significantly worse than the less parsimonious parent model (model 3). We are thus left with a difficult decision problem. All three models 3–5 fit the data and significantly improve the fit compared to the CnSF model (model 2). Since the more parsimonious age-difference and cohort-difference models are not significantly worse than the combined age * cohort model, we will opt for one of the simpler models. The decision among the latter two cannot be made on the basis of fit statistics.[48] However, our theoretical reasoning in the first section of the chapter and the pattern of the Unidiff parameters (see below) leads us to adopt a cohort perspective. But we are aware that part of the cohort effects may be confounded with age effects.

The results from this series of models thus lead to the conclusion that there is a large degree of similarity in the *pattern* of social fluidity in all cohorts and age groups. A constant *OD* term comes close to fitting the data, and the Unidiff models do fit the data. However, there is variation in the *extent* of social fluidity between cohorts and age groups that is large and consistent enough to be examined more closely. In order to take into account all information generated by the models, Fig. 4.1 shows the estimates for the uniform change parameters of model 3 and model 5. The symbols connected with the line reflect the uniform variation across cohorts (estimated from the pure cohort-difference model 5), while the symbols around the line correspond to the estimates from the cohort * age model and show the uniform differences between the ages at which the cohorts have been observed. The pattern of results is clearly dominated by cohort differences. Age group variation within cohorts tends to be smaller and is partly unsystematic. The cohort differences, on the other hand, reflect a clear pattern. The association between origin class and destination class strongly increases from the first to the second cohort. Starting from the second cohort, we then observe a clear linear trend towards a weakening association between origin and destination. This declining trend is also evident within each of the age groups with one exception. The middle age group does not differ between cohort 1930–9 and cohort 1940–9. But the

[47] In an additional model in which the cohort differences are constrained to follow a linear trend, we find that this model fits as well (G^2 = 326.9 with 287 d.f., trend parameter: −0.036), but the fit is significantly worse than the fit of model 5. We therefore prefer model 5.

[48] The bic statistics for the two models would prefer the pure age-difference model, but if we were to decide according to bic, we would have to use the most parsimonious CnSF model, which however does not fit the data.

FIG. 4.1. *Development of social fluidity in a cohort perspective: uniform change parameters for models 3 and 5 of Table4.9, for men in West Germany, age 27–64, born between 1920 and 1969 (according to A–C–P design)*



trend observed for the other two age groups is evident and consistent so it provides additional strong support for the cohort interpretation of the changes of social fluidity. If we take a closer look at the observed age differences, they appear to be systematic between the youngest and the middle age group. The association between origin and destination is smaller in the former than in the latter. Differences between the middle and oldest group, however, are highly unsystematic, which is mainly due to the strong variation of the oldest age group between cohorts. For the cohort interpretation, we have to be cautious because the first and the last cohort can only be observed in one age segment, and therefore the cohort effects might be confounded with age effects. The single measure for the youngest cohort receives additional credibility from its location on a clear trend line consistent with all other observations.[49] The measure for the oldest cohort, however, stands alone. Additional confirmation can only be obtained from other data.

The results found for the oldest cohort are consistent with our expectation derived as a consequence of the circumstances encountered by this cohort during and after the Second World War. Since we cannot test these assumptions with the present data, we rely on supplementary analyses of data from

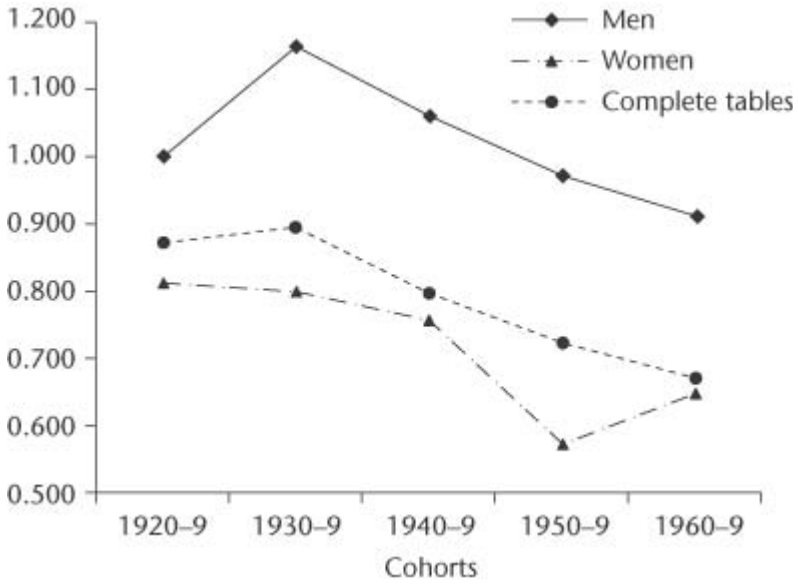
[49] We suspect that we somewhat overestimate the fluidity of the youngest cohort because it is only represented by the youngest age group. However, in comparison to the two preceding cohorts, we believe that this overestimation is indeed rather small.

the German Microcensus 1971 which allows a distinction between West German natives, war expellees, and refugees (see Pollak 2001: ch. 6). The analyses show that, first of all, there is an external support for our results concerning the oldest cohort, because the overall cohort pattern of social fluidity in the German Microcensus resembles the development of social fluidity resulting from the data used in this chapter. Second, the results for different population groups confirm our hypotheses about the historical effects of the Second World War. Replicating a similar analysis with the Microcensus data shows, for people born in West Germany between 1920–9, a level of association between class origin and class destination slightly higher than the level of the following cohort 1930–9, which itself is higher than in the 1940–9 cohort. For West German natives we thus find a systematically declining slope that starts with the 1920–9 cohort. The war expellees and refugees, on the other hand, show considerably higher social fluidity than the natives. The difference from West German natives is especially large in the 1920–9 cohort. With each following cohort the level of fluidity comes closer to that of the West German natives. As the proportion of expellees and refugees is by far larger in the oldest than in the younger cohorts, their higher level of social fluidity and forced mobility will strongly contribute to the deviating position of the 1920–9 cohort in Fig. 4.1 which refers to the undifferentiated average of war expellees and natives. Could we thus limit our analysis to West German natives, we would expect to find a line with a declining slope starting with the 1920–9 cohort. There is thus clear support from outside evidence for the war expellee interpretation of the outlying position of the 1920–9 cohort and for otherwise declining social immobility.

Related analyses for women in the labour force and for complete tables produce results that lead to similar conclusions of declining association between origin and destination across cohorts. From the Unidiff parameters for cohorts (Fig. 4.2), we see, however, that the results for women in the labour force differ in some aspects from those for men.[50] First, for all cohorts, the association between origin and destination is lower for women than for men. Second, the oldest cohort for women does not show *more* mobility than women's second oldest cohort. Most likely this pattern emerges because, for

[50] All the lines in Fig. 4.2 mirror the development of social fluidity for each group separately (Unidiff parameters according to model 5 in Table 4.9 for men; parameters for women in the labour force and for complete tables are not shown). The differences between the lines show the 'average' distance between these groups across five cohorts. More precisely, in order to make the groups comparable, we estimate Unidiff models in which we compare social fluidity for men versus women in the labour force for each cohort. We receive five Unidiff parameters and took the median from these parameters as a weighting factor (0.81). Then we applied this weighting factor to women's first cohort and calculated the following parameters for women in relation to this baseline factor. In doing so, we were able to conserve women's specific development of social fluidity and we are able to compare it to men. For complete tables, we used the same technique. The weighting factor compared to men is 0.87. Tables on model fits for each group and for the comparisons are available upon request from the authors.

FIG. 4.2. *Comparison of different developments of social fluidity in a cohort perspective: uniform change parameters for cohorts for men, for women in the labour force, and for complete tables in West Germany, respondents aged 27–64, born between 1920 and 1969 (according to A–C–P design)*



women, inheritance in the farm and non-farm petty bourgeoisie class is generally lower than among men, and thus the related war-induced forced mobility in the first cohort will manifest itself mostly among men. Third, for the 1950–9 cohort we find a particular dip in the curve for women for which we do not have a specific explanation (except that sample sizes for women in the two youngest cohorts are quite small and estimates thus have large standard errors). More detailed analysis based on the core model (not reported here) shows that among women inheritance of father's class position (in particular among the petty bourgeoisie and the farm class) is indeed considerably lower than for men, while hierarchy effects appear to be slightly stronger. Replicating the analysis for complete tables provides the results shown with the broken line in Fig. 4.2. All these results provide evidence for increasing social fluidity, starting at the latest with the cohorts born 1930–9 to 1940–9.

Does education explain the change in intergenerational social fluidity?

This section serves to explore the social processes and mechanisms that may explain the pattern of changing social fluidity in Germany. For various

reasons, we focus on men only.[51] First we want to provide additional evidence for the explanation of the particular finding for the 1920–9 cohort. Second, we want to test whether changing social selectivity in educational attainment or a changing role of acquired educational credentials for class allocation may at least partly explain the finding of increasing social fluidity. For that we will return to Erikson and Goldthorpe's core model of social fluidity (German variant) and estimate the various topological factors which they assume to generate the observed association between origin and destination, namely hierarchy, inheritance, sector, and affinity.

According to the war expellee interpretation for the deviating position of the 1920–9 cohort, this pattern should appear most clearly for the IN2 term, the term which accounts for the inheritance of farm and petty bourgeoisie capital. It might also affect the sector parameter between agricultural and non-agricultural employment because many expellees came from traditionally agricultural areas and had to search for non-agricultural employment after migration. The declining slope from the 1930–9 cohort onwards, in contrast, should be accountable in terms of declining hierarchy effects, which, in their turn, should result from declining class inequality in education—in line with earlier findings by Ishida et al. (1995), which show that educational inequality manifests itself in the hierarchy parameters of the core model of social fluidity.

In order to test these hypotheses, we break down each of the cohort-specific origin by destination (*OD*) mobility matrices by educational credential obtained. The educational distinctions used are the five CASMIN categories 1ab/1c/2ab/2c/3ab (see Table 4.A3 in the appendix). Our data is now the four-dimensional table Origin (*O*) by Destination (*D*) by Cohort (*C*) by Education (*E*). As previously, we first present fit statistics for a number of log-linear models calculated to analyse the direct and education-mediated paths through which class origin influences class destination. Then we present parameter estimates for the chosen model. Table 4.10 shows the fit statistics of the models.

Model 1 in Table 4.10 is the independence model adequate for the design of the data matrix. It allows the marginal distributions of class origin, education, and class destination to differ by cohort, but it does not take into account any association between these variables. In order to accommodate the origin–destination association we add, in model 2, the terms of the German variant of the core model and assume their effects to be constant in all cohorts. The reduction in G^2 achieved measures the total effect of origin class on destination class

[51] Our male-centred approach in this section should by no means be mistaken for a lack of interest in the fluidity pattern of women. Rather, we would like to come up with the most decisive and most robust analysis of mobility mechanisms for West Germany as a whole. Therefore, it is more convincing to analyse men because men are still much more dominant in terms of class positions than women (see the shape of the lines in Fig. 4.2). The results for women (available on request) are similar to the following results for men in terms of educational effects, but differ in terms of the effects of historical peculiarities.

TABLE 4.10. *Fit statistics for various cohort models of social fluidity, with and without controlling for education, for men in West Germany, age 27–64, born between 1920 and 1969; Data matrix: Origin (O) × Destination (D) × Cohort (C) × Education (E), N 5 12,410*

Model	Type of model	d.f.	G^2	% red. in G^2	Δ	bic	*p*	diff. G^2 d.f.	*p* (diff.)	diff. G^2 d.f.	*p* (diff.)
1	Independence model B3(= *O, D, E, C, OC, DC, EC*)	1,140	12695.6	—	37.9	1949.6	.000				
2	CoreG, Core model, German variant B3 + **CoreG**	1,132	9279.4	26.9	33.7	−1391-.2	.000	—	—		
2a	CoreG, 'historical peculiarities' B3 + **CoreG (IN2 + SE varying)**	1,124	9260.1	27.1	33.7	−1335-.0	.000	19.3	.013	—	—
2b	CoreG, 'educational effects' B3 + **CoreG (HI1 + HI2 varying)**	1,124	9251.9	27.1	33.7	−1343-.5	.000	27.8	.001		
2c	CoreG, combining both influences B3 + **CoreG (HI1 + HI2 + IN2 + SE var.)**	1,116	9233.3	27.3	33.6	−1286-.4	.000	46.1	.000	26.8	.001
3	Incorporating education associations to independence model *B3 + OE + ED*	1,092	2684.7	78.9	13.0	−7608-.8	.000	—	—		
3a	Origin-Education varies $B3 + \varphi_{OE,\,C} + ED \mid OEC$[a]	1,088	2662.6	79.0	13.0	−7593-.3	.000	22.1	.000		
4	CoreG, including CoreG B3 + $\varphi_{OE,\,C} + ED \mid OEC$ +**CoreG**	1,080	1045.0	91.8	7.57	−9135-.4	.773	—	—		
4a	CoreG, model 4 1 historical peculiarities B3 + CoreG + $\varphi_{OE,\,C} + ED \mid OEC + IN2 * C + SE * C$	1,072	1026.5	91.9	7.47	−9078-.5	.837	18.5	.018		
4b	CoreG, model 4 1 educational effects B3 + CoreG + $\varphi_{OE,\,C} + ED \mid OEC + HI1 * C + HI2 * C$	1,072	1029.8	91.9	7.46	−9075-.1	.818	15.2	.055		
4c	CoreG, model 4 1 combined influences B3 + CoreG + $\varphi_{OE,\,C} + ED \mid OEC + HI1 * C$ 1 $HI2 * C$ 1 $IN2 * C + SE * C$	1,064	1012.4	92.0	7.37	29017.1	.869	32.6	.008	14.1	.079

Note: [a]*ED | OEC* means the *ED* association given the saturated OEC model.

specified with the CoreG model. Next we test for variation between cohorts among the two types of effects that we consider responsible for the pattern of change indicated by the parameters of the Unidiff model in Fig. 4.1. First we allow for variation of the IN2- and sector effects to account for the historical peculiarities (model 2a); second, we allow for variation in the hierarchy effects assumed to mirror the changing class inequality in educational participation (model 2b). Both additions alone and combined (in model 2c) significantly improve the fit of the model.[52] The parameters of model 2c—that we will discuss later—show the size of the core model effects without considering their potential generation or mediation through education.[53]

For the following models we now take into account education by including terms for the *OE* and *DE* associations. Model 3 includes the main effects for *OE* and *DE*. Compared to the independence model, the inclusion of the main effects produces a massive reduction of G^2. Model 3a additionally allows for uniform variation of the association between class of origin and obtained educational credentials across cohorts. We find a markedly decreasing association between class of origin and education. Finally, we add again the terms of the core model (German variant) in model 4; in models 4a–4c we successively let hierarchy effects and our effects for 'historical peculiarities' vary across cohorts as in models 2a–2c.

Because these terms are added to a model that already takes into account the 'channelling' through education of effects of class origin on class destination, the inclusion of the core model terms evidently produces a much lower decline in G^2 compared to when these terms are added to the independence model. Most interesting perhaps are the results concerning changes between cohorts. While compared to model 2a the effects for 'historical peculiarities' remain practically unchanged, the measure for changing hierarchy effects substantially declines and becomes statistically insignificant. In fact, further analysis shows that even the main effects for the hierarchy terms can be dropped from the model without risking a significant increase in G^2 once we control for education.

Besides the findings indicating change across cohorts, it is also interesting to consider which elements could change, but in fact do not. Allowing for change across cohorts in the parameters of the core model not discussed so far (the two remaining inheritance effects and the affinity effects) does not improve the fit. These effects can thus be considered constant across cohorts. This finding is of particular interest with respect to the AF2 term, that is, the term that,

[52] We have also tested the other terms of the core model for variation between cohorts and did not find any significant change for any of them.

[53] It might appear hazardous to estimate parameters from a model which so badly fits the data. However, when we fit corresponding models to a three-dimensional table of origin * destination * cohort (without controlling for education) we obtain practically identical values for fit improvement when moving from model 2 to models 2a–2c and practically identical estimates for the terms of the core model and their change across cohorts.

in the German variant of the core model, indicates high intergenerational exchange within the manual (between the skilled and unskilled working classes) and the non-manual (the service classes, the petty bourgeoisie, and the routine non-manual class) space of the class structure and in consequence reduced exchange between these spaces. As we already found in the period analysis, the expectation of declining significance of the distinctions between the social categories of Arbeiter, Angestellte, and Beamte is not confirmed with the cohort design either.[54] Further, the variation of the *ED* association across cohorts also does not improve the model fit. Thus, results of earlier analyses documenting little (if any) change in the credentialist link between obtained qualification and class destination are confirmed by the present analysis.

In sum, thus, the models show that in Germany a large part of the effects of origin class on class destination is mediated through education. In particular the hierarchical component in class mobility results from class inequalities in educational participation and education-based class allocation. Also, changes in class inequalities in educational participation seem to be responsible for the

TABLE 4.11. *CoreG parameters for model 2c and model 4c of Table4.10, for men in West Germany, age 27–64 and born between 1920 and 1969 (A–C–P-Design), N = 12,410*

	$\varphi_{OE,C}$	Cohort variation for different CoreG parameters							
		HI1	HI2	IN1	IN2	IN3	SE	AF1	AF2
Model 2c of Table4.10									
1920–9		−0.37	−0.67		0.90		−0.05		
1930–9	Not	−0.41	−0.81		1.43		−0.33		
1940–9	controlling	−0.33	−0.66		1.07		−0.72		
1950–0	for	−0.20	−0.52		1.02		−0.48		
1960–9	education	−0.19	−0.25		0.88		−0.33		
Not varying				0.59		1.97		−0.39	0.42
Model 4c of Table4.10									
1920–9	1.0	*−0.04*	*0.01*		0.95		−0.09		
1930–9	0.97	*−0.14*	*−0.25*		1.39		20.43		
1940–9	0.87	*−0.05*	*−0.18*		1.10		−0.83		
1950–0	0.80	*0.08*	*−0.07*		1.04		−0.61		
1960–9	0.71	*0.00*	*−0.21*		0.94		−0.41		
Not varying				0.46		1.97		−0.39	0.23

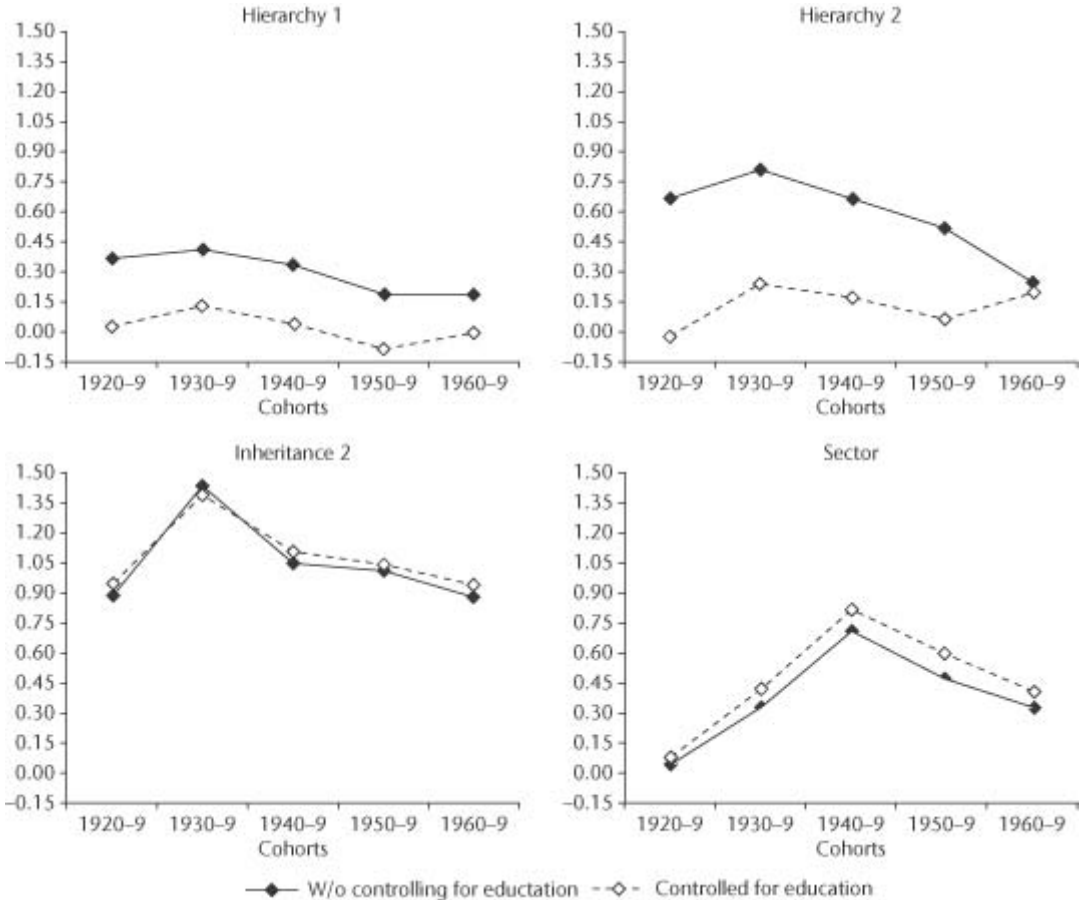
Note: Numerals in italics are not significant at 5% level.

[54] The fact that the AF1 parameter (negative affinity) neither changes across cohorts nor after controlling for education supports our interpretation of persistently different mobility spaces between Arbeiter, Angestellte, and Beamte.

observed changes across cohorts in the hierarchy component in the class mobility pattern.[55] However, not all variation in the association of origin and destination is captured by education (or effects of hierarchy). The changes across cohorts in inheritance and sector effects remain practically unaffected.

The estimates for the most relevant parameters from Model 2c and 4c are given in Table 4.11 and are shown in the graphs of Fig. 4.3. The upper part of Table 4.11 shows the parameters for the core model matrices estimated before taking education into account; the lower part shows the Unidiff multipliers for the changing class inequality in educational participation and the core

FIG. 4.3.*Comparison of effects of educational influence (HI1 and HI2) and of historical peculiarities (IN2 and SE) across cohorts prior to and after controlling for education, according to Table4.11, for men in West Germany, age 27–64 and born between 1920 and 1969 (according to A–C–P design)*



[55] Further analyses indeed show that the difference in the additional size of G^2 by allowing variation in the hierarchy terms between Model 2b and 4b is mainly due to the $\phi_{OE,C}$ -term that accounts for changing class inequality in educational participation.

model parameters, controlling for education. The Unidiff multipliers for the *OE* association confirm earlier findings of declining class inequalities in education (obtained with other methodologies and partly other data). The *OD* association is captured by the core model. Here the effects of hierarchy strongly decline when education is controlled. The values for both hierarchy parameters are on the edge of statistical significance and might as well be considered zero. In contrast, all other terms are less affected after controlling for education. Only the AF2 parameter (measuring the positive affinity within the non-manual classes and within the working classes) is reduced by half. Thus this affinity is at least partly generated through different educational paths which children of non-manual versus working class backgrounds enter and which lead them into neighbouring classes in the non-manual and in the working class segments of the class structure. The graphs for the core parameters included in Fig. 4.3 show that for the hierarchy effects our hypotheses are well confirmed. Before controlling for education, hierarchy effects decline (in particular the effects for hierarchy 2). After controlling for education, the effects of hierarchy come close to zero and their variation across cohorts is reduced. If we look at the effects of inheritance 2 and sector barriers, however, their values remain almost completely unchanged after controlling for education.

So, in sum, the results from our model building exercise support our hypotheses about social fluidity in Germany. We find a consistent trend of declining hierarchy effects due to declining educational inequality, and we find some historical peculiarities manifested through inheritance and sector effects which remain robust even after controlling for education. The only exception is that we would have expected a flatter slope for the IN2 and SE effects after the 1930–9 cohort.[56]

Conclusions

This study of the development of social mobility in West Germany is based on data that were collected in the last quarter of the twentieth century. In a narrow sense these data depict changes in the observed cross-sectional mobility

[56] While we were expecting two more or less flat lines for each of the two effects, with an outlier for the oldest cohort, one can find for IN2 a somewhat declining trend from the cohort of the 1930s onwards. This might be due to two reasons: as described above, the sector or branch composition of the self-employed changed substantially. More self-employed people work in the service sector while the number of older enterprises in crafts is declining. So the inheritance of enterprises might decrease as well. The second argument is a statistical one: since the IN2 and the SE matrix are correlated, we may have a problem of multicollinearity aggravated by small numbers in the farm labourer class. When we ignore changes across cohorts in the sector effect, the decline of the line for IN2 is less pronounced. For the SE effect itself, we observe a time lag of forced migration, because many expellees with an agricultural background worked as farm labourers before they also got absorbed by the prospering industrial sector in the late 1950s (see Lüttinger 1986).

rates in that period of historical time. But in terms of individual life experiences, it covers a much longer span of time. It includes cohorts who were in school in the 1930s and whose lives and opportunities were strongly affected by the Second World War and its consequences for the demographic (re-)composition of West Germany's population and its mobility experiences. This is why we have given so much emphasis to the reconstruction of the long arms of history that may be manifest in the deep structure of data collected many decades after the events took place.

When limiting the time window to the second quarter of the last century, the conditions in the macro-structural context in West Germany should have contributed to restricted opportunities for the improvement of one's class position compared to that of one's parents. Moving on in time, compared to the 1950s and 1960s, economic growth is much lower from the 1970s onwards; growing unemployment hits the country; with increasing educational and labour-force participation women start to compete with men; the substantial immigration after the fall of the Berlin Wall and the Iron Curtain probably also contribute to increased competition for advantageous positions. We have expected these conditions in the period studied to impede opportunities for upward moves in particular. A period factor from which one could expect increased exchange between classes is the declining difference in economic and social advantage associated with the traditional categories of Arbeiter, Angestellte, and Beamte. Besides these period conditions that cannot be clearly identified with good measures in the data, we have stressed the longer-term impacts of conditions whose effects should be chiefly cohort-specific and be observable through cohort rather than period comparisons.

The transformation of the class structure between generations and across periods, as well as the absolute rates of mobility among men and women, mirror some of the accentuated macro-structural conditions. For men the growth of service class destinations is rather limited, while for women the number of jobs in these classes expanded. For men the dissimilarity between the class distribution of their fathers and their own declines, while for women it increases. In turn, for men absolute rates of mobility hardly change, and, if change occurs, it is rather in the direction of increased downward mobility, especially if one considers long-term unemployment as a separate position at the bottom of the class structure. For women, in contrast, downward mobility declines while upward mobility increases. Overall, women's rates of total upward and downward mobility approximate those of men; in the 1990s both are quite similar. The one major remaining difference between men and women is due to gender segregation in the labour market which makes daughters more mobile than sons (when compared to their fathers) among classes at similar hierarchical levels. Another finding is the tendency among men towards increasing homogeneity of class origin in the membership of most classes.

As to relative rates, Germany was found in *The Constant Flux* to have a generally greater inequality in relative class mobility chances than other industrialised societies and to deviate in several respects from the pattern of core social fluidity. It is striking indeed how well the German variant of Erikson and Goldthorpe's core model—as originally defined and assessed on data from the 1970s—performs on new data. But some reassessment is also needed. Because in some respects social fluidity has increased, West Germany appears to be less different from the core pattern of industrial countries than was observed with data from the 1970s. This is especially due to the decline in hierarchy barriers in intergenerational class mobility. While with data for the 1970s these effects were found to be higher in Germany than in France and the United Kingdom, for the younger cohorts they are now rather similar to those observed for the core countries in the 1970s. But other peculiarities underlined in *The Constant Flux* did not really change. Germany continues to have strong inheritance effects and particularly weak sector barriers, as well as particularly marked distinctions between a manual and a non-manual space of social mobility.

Regarding our hypotheses formulated at the beginning of the chapter, we find most but not all of them confirmed. We are not able to find evidence for a development towards increasing fluidity between the institutionally defined social categories of Arbeiter, Angestellte, and Beamte. In contrast, the cohort perspective adopted in the last section lets us see the traces of the turbulent German political and economic history in the last century and helps us to identify the idiosyncratic consequences of the war and of the huge forced population migration at its end. These events have particularly affected the oldest cohort and resulted in the lower level of inheritance of farm and petty bourgeoisie parental class among the sons in expellee and refugee families. The cohort perspective also supports the hypothesis of the prominent role of declining class inequality in education for increasing social fluidity in Germany.

Although no impact of the Second World War was found among the relatively few working women of the earlier cohorts, the other main findings of the present analysis hold for both men and women. For both, social fluidity has increased in the cohorts born after the 1930s. Independently of that, social fluidity for women in the labour force seems to be somewhat larger than for men. We tried to show that the main mechanisms responsible for increasing social fluidity in Germany work through cohorts, be it education or specific historical conditions. Educational participation and class inequality in education is a cohort phenomenon. If such cohort-specific impacts of class origin on education are not properly assessed with a cohort approach, we will be unlikely to obtain adequate measures of the role of education in intergenerational class mobility. It is mainly the constellation of our results that made us prefer a cohort interpretation against an age-group interpretation in Table 4.9.

As education is not age-but cohort-dependent in our data, and at the same time is able to account for the variation of hierarchy effects across cohorts, theoretical consistency speaks for the cohort interpretation. In a similar way, theoretical plausibility and support from outside evidence also speaks for a cohort rather than an age-group interpretation of the particular findings obtained for our oldest cohort.

Our findings of increased intergenerational social fluidity in West Germany are consistent within quite an extended literature on specific characteristics of the German social structure and its institutional infrastructure. We know that in Germany class inequality in education has been particularly high but decreasing. At the same time, Germany is one of the countries with the strongest links between educational attainment and class allocation, mostly due to the strong presence of occupational labour markets and their institutional linkages with credentials provided through the system of general education and vocational training. These strong credentialist job allocation principles have not changed markedly so far. In such a context, it is particularly likely that a decline in class inequality in education will lead to higher social fluidity. But since other elements of class immobility have also been high in Germany and have not been reduced, it would not surprise us if West Germany still came out as a society which, compared to others, is characterised by quite strong immobility.

At various points the account given here had to refer to Germany's turbulent history, and yet we were only able to focus on the history of one part of present Germany. However, one decade after reunification, it is evidently less and less adequate to leave East Germany aside. A further important limitation of the present study is the lack of inclusion of people living in Germany without German citizenship who constitute a large and growing part of its population (presently 9 percent). Both could not be included here because of the lack of comparable data for earlier decades. Integration of these missing parts into a more complete study of Germany is a challenging task for the future.

Appendix

TABLE 4.A1. *List of datasets included in the pooled mobility dataset, N = 61824*

Year of data collection	Name of survey	Total number of observations	West German men, age 20–64, valid cases for origin by destination	West German women in labour force, age 20–64, valid cases for origin by destination	According to A–C–P design, excluding missings in education, for men	According to A–C–P design, without regarding education, for women
1976	ZUMABUS 1	2,036	716	303	523	208
1977	ZUMABUS 2	2,002	606	321	434	241
	Politik in der BRD	2,030	618	344	454	274
1978	Wohlfahrtssurvey 1978	2,012	559	331	425	261
1979	ZUMABUS 3	2,012	600	311	441	248
	ZUMABUS 4	2,001	529	313	413	234
	Politik in der BRD	1,939	583	331	433	272
1980	ZUMABUS 5	1,997	522	337	431	263
	ALLBUS 1980	2,955	834	441	672	341
1982	ZUMABUS 6	1,993	567	309	437	233
	ALLBUS 1982	2,991	795	420	619	315
1984	ALLBUS 1984	3,004	831	400	648	293
1986	ALLBUS 1986	3,095	391	488	663	365
	GSOEP	7,897	2,220	1,349	1,709	1,008
	(Sample A+B)					
1988	ALLBUS 1988	3,052	823	488	611	363
1990	ALLBUS 1990	3,051	934	475	715	380
1991	ALLBUS 1991	3,017	442	237	320	187
1992	ALLBUS 1992	3,464	695	411	536	343
1994	ALLBUS 1994	3,294	774	386	623	312
1996	ALLBUS 1996	3,306	740	397	604	340
1998	ALLBUS 1998	3,082	584	331	440	275
1999	GSOEP	1,594	338	227	259	196
	(Sample E)					
	Total N	61,824	16,201	8,950	12,410	6,952

TABLE 4.A2.*Design matrices for the German variant of the core model, according to Erikson and Goldthorpe* (1992)

1 2 2 2 2 2 2 * HI1	1 1 1 1 1 2 2 * HI2	2 1 1 1 1 1 1 * IN1
2 1 1 1 1 2 2	1 1 1 1 1 1 1	1 2 1 1 1 1 1
2 1 1 1 1 2 2	1 1 1 1 1 1 1	1 1 2 1 1 1 1
2 2 2 2 2 1 1	2 1 1 1 1 1 1	1 1 1 2 1 1 1
2 1 1 1 1 2 2	1 1 1 1 1 1 1	1 1 1 1 2 1 1
2 2 2 2 2 1 1	2 1 1 1 1 1 1	1 1 1 1 1 2 1
2 2 2 2 2 1 1	2 1 1 1 1 1 1	1 1 1 1 1 1 2
1 1 1 1 1 1 1 * IN2	1 1 1 1 1 1 1 * IN3	1 1 1 2 1 1 2 * SE
1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 2 1 1 2
1 1 2 1 1 1 1	1 1 1 1 1 1 1	1 1 1 2 1 1 2
1 1 1 2 1 1 1	1 1 1 2 1 1 1	2 2 2 1 2 2 1
1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 2 1 1 2
1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 2 1 1 2
1 1 1 1 1 1 1	1 1 1 1 1 1 1	2 2 2 1 2 2 1
1 1 1 1 1 1 2 * AF1	1 2 2 1 1 1 1 * AF2	
1 1 1 1 1 1 1	2 1 2 1 1 1 1	
1 1 1 1 1 1 1	2 2 1 2 1 1 1	
1 1 1 1 1 1 1	1 1 2 1 1 2 1	
1 1 1 1 1 1 1	1 1 1 1 1 2 1	
2 2 2 1 1 1 1	1 1 1 1 2 1 1	
2 2 2 1 1 1 1	1 1 1 1 1 2 1	

TABLE 4.A3.*CASMIN educational classification*

1a	*Inadequately completed elementary education*—inadequately completed
	Haupt- or Volksschule
1b	*Completed (compulsory) elementary education*—graduation from Haupt- or Volksschule
1c	*(Compulsory) elementary education and basic vocational qualification*
	—graduation from Haupt- or Volksschulabschluss and additional
	apprenticeship or graduation as Meister/Techniker
2a	*Secondary, intermediate vocational qualification or intermediate general qualification and vocational training*—graduation from Realschule (Mittlere Reife) and additional apprenticeship or graduation as Meister/Techniker
2b	*Secondary, intermediate general qualification*—graduation from Realschule (Mittlere Reife)
2c_gen	*Full general maturity qualification*—graduation from Gymnasium (Abitur) or Fachhochschulreife
2c_voc	*Full vocational maturity certificate or general maturity certificate and vocational qualification*—graduation from Gymnasium (Abitur) or Fachhochschulreife and additional apprenticeship or graduation as Meister/Techniker
3a	*Lower tertiary education*—graduation from Fachhochschule or Ingenieurschule
3b	*Higher tertiary education*—graduation from university

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5 Change in Intergenerational Class Mobility in France from the 1970s to the 1990s and its Explanation: An Analysis Following the CASMIN Approach

Louis-André Vallet

Two arguments suggest that French society might be an especially interesting case in the context of a comparative project on temporal trends in social mobility and social fluidity. In Erikson and Goldthorpe's seminal work on class mobility in industrial societies (*The Constant Flux,* 1992), France, together with England, was recognised as occupying a central position in the derivation of the pattern of common social fluidity between nations. It was therefore from these two countries that the model of core social fluidity was built and we may thus arguably presume that, as a consequence of that centrality, there will be no endogenous pressure towards any change in relative mobility rates, and social fluidity in England and France will exhibit a particularly high degree of stability over time. However, one decade earlier, Goldthorpe and Portocarero (1981) had used the 1953 *Enquête sur l'emploi* and the 1970 *Formation– Qualification Professionnelle* (FQP) survey to investigate temporal trends in intergenerational mobility for men within French society. They convincingly concluded not only that absolute mobility rates but also relative mobility rates had slightly, but quite systematically, changed to produce a 'less inegalitarian' society over the period of marked economic boom they were considering. From 1953 to 1970 a decrease in the net chances of immobility took place in seven of the nine social classes used in their analysis and aggregation of the data to produce a three-class schema revealed a weakening in seven of the nine odds ratios.[57] Taking as a point of departure the 1970 survey, which was also

[57] As the authors themselves wrote: 'Comme nous le constatons à la fin de la section précédente, en 1970 la France était encore loin d'être une société vraiment ouverte. Et nous pensons qu'il est très probable que, même en tenant compte du mouvement égalitaire que nous avons démontré, l'étude de la mobilité sociale de type comparatif pourrait montrer que la France est encore parmi les sociétés les moins ouvertes de l'Europe occidentale contemporaine. Néanmoins, le fait qu'un tel mouvement se soit produit mérite sûrement d'être reconnu sans réserve—et il doit par conséquent éveiller des questions importantes quant aux processus qui en sont la cause'. (Goldthorpe and Portocarero, 1981: 166).

used to describe French society in *The Constant Flux,* will therefore be of substantial interest in examining whether this opening up of the mobility regime has continued or been interrupted over the last three decades.

Subsequent research on the same topic has nevertheless reached varying and sometimes opposite conclusions. First, extending the period under consideration until 1977, Thélot (1982) entirely confirmed Goldthorpe and Portocarero's conclusion that French society exhibited a reduction in the propensity for intergenerational immobility as regards men over the third quarter of the twentieth century. The same conclusion was later reached for women in the same period, whether their social class was defined according to the conventional approach (father–husband mobility tables) or the individual approach (father–daughter mobility tables) (Vallet 1992). In their comparative project, Ganzeboom et al. (1989) also analysed four male mobility tables collected in 1958, 1964, 1967, and 1970. They observed a progressive weakening in the general strength of the association between origins and destinations in France. However, Wong (1994), who performed a secondary analysis of the same data, found this conclusion less certain.

This quasi-unanimous acceptance of a change in the French mobility regime between 1953 and 1977 breaks down dramatically for the subsequent period. Several French researchers have used the Deming–Stephan algorithm or hierarchical log-linear modelling (the constant social fluidity model) as a benchmark to assess change or lack of change in relative mobility rates for men. Gollac and Laulhé (1987) did this by using data from the 1977 and 1985 FQP surveys. Merllié and Prévot (1997) as well as Goux and Maurin (1997) used the 1977, 1985, and 1993 FQP datasets. Finally, Forsé (1997) exploited the 1982 and 1994 *Emploi* surveys. On the basis of the closeness between the estimations and the actual data, all this research concluded that 'social fluidity is almost constant' (Forsé 1997: 234) or that 'educational and social inequalities have remained broadly the same' (Goux and Maurin 1997: 169). However, applying a more powerful tool (the Unidiff model) to a study of trends over the 1970–85 period had already led Goldthorpe (1995) to detect a modest weakening in the origin–destination association among men aged 20 to 64.[58] With the same model and the 1982 and 1997 *Emploi* surveys, Forsé (1998) obtained a very similar result for men aged 40–55.[59]

[58] Fixed at 0 for the 1970 mobility table, the Unidiff parameter was estimated at −0.06 in 1985 and this difference was significant at the 1% level.

[59] Fixed at 1 for the 1982 mobility table, the Unidiff parameter was estimated at 0.92 in 1997 and this difference was significant at the 10% level.

The author therefore engaged in a comprehensive reanalysis of French intergenerational mobility data for men and women over a forty-year period (Vallet 1999, 2001). The examination of five surveys carried out between 1953 and 1993 highlighted a slight but steady trend towards increasing social fluidity, with a Unidiff parameter declining from 1 to 0.806 for men and 0.783 for women. Such a change could also be expressed, without any significant loss of information, as a decreasing trend of 0.5 percent per year in the general strength of the origin–destination association. A companion article recently investigated the dynamics of the origin–education association from the 1908–12 birth-cohort to the 1968–72 birth-cohort (Thélot and Vallet 2000). Confirming previous work by Smith and Garnier (1986), it also demonstrated a progressive, though uneven, weakening in the inequality of educational opportunity as most of the change took place among cohorts born between the mid-thirties and the mid-fifties.[60] Finally, our brief review of the existing literature on temporal trends in social mobility and social fluidity in French society highlights the fact that, with the exception of Goldthorpe's article, all the research on the last three decades is based on nationally-specific occupational and social classifications. One of the main aims of this chapter is therefore to reanalyse the dynamics of class mobility with the CASMIN occupational and educational schemata, thereby bringing France into a comparative framework.

Change in the French labour market and society since the 1970s

Many profound structural changes have affected French society and its labour market over the last three decades. To a certain extent, France has moved from an industrial to a post-industrial society. In the absence of any precise theory linking these economic and institutional transformations to either absolute or relative variations in mobility rates, precise expectations about the consequences of such a change on the pattern of class mobility are not readily forthcoming and any preliminary hypotheses can only be tentative.

After fifty years of stability during the first half of the century, the total population in the labour force has rapidly grown from the beginning of the sixties. It was estimated by the 1962 census at about 20 million men and women, and rose to nearly 24 million in 1982 and almost 26 million in 1998 (INSEE 1993, 1996, 1999; Marchand and Thélot 1997). However, this increase results from contrasting trends among men and women. The total number of men in the labour force remained fairly stable over the period (between 13 and 14 million)

[60] Fixed at 1 for the 1908–12 birth-cohort, the Unidiff parameter was estimated at 0.982 for the 1933–37 birth-cohort, 0.728 for the 1953–57 birth-cohort, and 0.651 for the 1968–72 birth-cohort.

because the gradual arrival of the numerous generations of baby-boomers was compensated by decreasing participation rates among both the youngest (as a consequence of the expansion of education) and the oldest (due to earlier retirement). Women are therefore almost exclusively responsible for the rise in the total population in the labour force (from 7 to 12 million). The first signs of their increased participation became visible in the mid-1960s. On the basis of population censuses, for the 25–54 age range the percentage of women in the labour force rose from 42.7 percent in 1962 to 44.6 percent in 1968, 54.0 percent in 1975, 63.7 percent in 1982, and 74.4 percent in 1990 (Marchand and Thélot 1997).

The 'feminisation' of the French labour force is therefore one of its most striking features over the last decades. More and more women engage in occupations which were overwhelmingly male-dominated in the past. For instance, the percentage of women in the 'Higher-grade administrative professionals' occupational group (Catégorie socio-professionnelle (CSP) 34) rose from 11.1 percent in 1962 to 22.2 percent in 1982. Similarly, it increased from 31.9 to 53.4 percent in the 'Middle-grade administrative professionals' group (CSP 44) (INSEE 1987; Vallet 1991). Apart from the fact that studying the social mobility of women on the basis of their own occupation has become increasingly necessary, it is difficult to predict the exact consequences of such 'feminisation'. Temporal trends in intergenerational mobility may have been similar for males and females, or alternatively, following an argument put forward by Goldthorpe (1980: 280), the increased participation of the latter may have impeded the development of occupational careers among the former.

The growth on the 'supply' side was not accompanied by an equivalent increase in the number of jobs on the 'demand' side and, as a consequence of economic restructuring, unemployment rose from 1.6 percent of the total population in the labour force in 1966 to 3.0 percent in 1974. The unemployment rate reached 10.7 percent in 1985 and 12.3 percent in 1996 (Marchand and Thélot 1997). The relative amount of long-term unemployment and the average duration of unemployment have also increased almost continuously over time. Whichever year is considered, unemployment is more marked for women than for men, for the young than for the old, for the less qualified than for the more educated, and for manual or routine non-manual workers than for professionals. It must be stressed that, until the start of the nineties, the worsening of unemployment was more pronounced for men and women with the least desirable work positions.[61] In view of the association between class of destination and class of origin, it may be asked whether classifying unemployment as a separate destination might result in different social mobility and

[61] Between 1975 and 1990, the unemployment rate rose from 1.7 to 2.6% among higher-grade professionals (i.e. an odds ratio of 1.5), from 2.1 to 4.1% among middle-grade professionals (an odds ratio of 2.0), from 4.5 to 11.9% among routine non-manual employees (an odds ratio of 2.9), and from 4.1 to 12.2% among manual workers (an odds ratio of 3.3) (INSEE 1999).

social fluidity trends from when the unemployed are disregarded or classified according to their last position.

The disadvantaged position of young people regarding unemployment risk has also increased over time. During the last two decades, the French labour market has tended to provide the youngest generations with less secure job positions, often characterised by part-time and short-term contracts and by deskilling as a consequence of what has been described by some authors as a mismatch between the qualification acquired in the educational system and that required on the job (Goux and Maurin 1998). Indeed, in recent years there has been great concern in France that the negative consequences of the economic depression have been more concentrated on the young than in other comparable European countries such as Germany or the United Kingdom (Chauvel 1998*a*; Baudelot and Establet 2000). In view of this possibility we shall examine whether temporal trends in social fluidity have been differentiated according to age.

The economic divisions in the French labour market were radically reshaped during the second half of the twentieth century. Between the 1962 and 1990 censuses, the agricultural sector declined drastically from 20 percent to less than 6 percent and the tertiary sector rose from 44 to 65 percent. The industrial sector, which accounted for 36 percent in 1962, rose to 39 percent in the mid-seventies to decline to 29 percent in 1990 (Marchand and Thélot 1997). The effect of these transformations on the occupational structure is self-evident. In the 1998 *Emploi* survey, farmers and other self-employed groups represent less than 10 percent of the total population in the labour force, as against 27 percent in 1962. The percentage of manual workers declined from 39 to 27 percent over the same period. Conversely, the relative size of the other occupational groups has risen continuously: routine non-manual employees (from 18 to 30 percent), middle-grade professionals (from 11 to 20 percent), and higher-grade professionals (from 5 to 12 percent). In 1998, about 1 percent of the total population in the labour force had never had a job (INSEE 1987, 1999).

As they created 'increasing room at the top', these changes in the occupational structure certainly affected absolute rates of intergenerational mobility. On the other hand, their impact on relative rates is unclear because it is entirely possible for the previously observed pattern and strength of the association between class of origin and class of destination to have been rigorously preserved despite wider access to professional-level occupations. There is, however, one transformation in French society which might have pushed social fluidity in the direction of increasing openness, and that is the reform of the educational system. After an initial educational expansion which took place among cohorts born around the forties (Chauvel 1998*b*), the school system was progressively reshaped between the end of the fifties and the mid-seventies, changing from a highly-tracked organisation to a more unified

and comprehensive secondary school (Prost 1992).[62] This reform was introduced in order to provide children from all social backgrounds with increased education and to promote equality of educational opportunity. However it is likely that its impact on democratisation and, as a consequence, social fluidity has been rather limited. According to historical research in the Orléans area, educational reform has in fact introduced additional rigidities which have impeded the process of democratisation that had been ongoing since the mid-1940s (Prost 1986). Education has continued to expand after the reforms and this trend has even accelerated considerably since the mid-1980s.

Finally, as trends in inequality of social opportunity might be related to trends in inequality of condition, it is useful to examine change in wage and income inequality over recent decades. After an increase from 3.3 in 1950 to 4.6 in 1967, the ratio of the average wage of higher-grade professionals to that of manual workers was reduced to 3.7 in 1975, then to 2.8 in 1983, mainly because of increases in the minimum wage. This trend has levelled off since 1984 and the ratio stood at 2.6 in the mid-1990s. However, after controlling for age variation between the two occupational groups, the ratio has slightly increased since the mid-1980s (Casaccia and Seroussi 2000). Income inequality among households clearly diminished from 1962 to 1979 and the change was more marked for disposable income than for gross income. During the eighties, the trend in income inequality progressively levelled off and it has been reversed from the early nineties. The corresponding increase in income inequality was nevertheless less pronounced in France than in the United Kingdom or the United States (INSEE 1987, 1996, 1999). It must finally be stressed that age disparities have tended to increase for individual wages as well as household income.

Trends in origin and destination class structures for men and women, 1970–93

Having seen the major economic and institutional shifts which have affected the French labour market and society over the last three decades, we are now in a position to explore to what extent patterns of social mobility for men and women have also been transformed, in either absolute or relative terms, or whether they have remained essentially the same despite the changing context. For this purpose we shall make use of four nationally-representative and large-scale specialised surveys which provide the best comparability across time and the most detailed information about origin and destination class positions, namely the 1970, 1977, 1985, and 1993 FQP surveys. The data appendix

[62] See also Brauns et al. (1999) for a more complete description of the current French educational system.

describes these surveys and the way we applied the CASMIN class and education schemata to the initial variables. Origin class is the class (or last class) of the father when the respondent stopped attending school or university on a regular basis, and destination class is the current (or most recent) class of the respondent according to his/her own occupation at the date of the survey. As the detailed (four-digit) classification of occupations which was used to encode the original data differed between the 1970 survey and the subsequent ones, we cannot absolutely exclude the possibility that minor irregularities have affected our implementation of the class schema across time and result in slight discrepancies in the analysis of trends in absolute mobility rates.[63] It is, however, fairly unlikely that our evaluation of trends in relative mobility rates will be seriously affected.

Table 5.1 shows that, in 1970, of those men aged 25–64 who were currently in employment or unemployed after having had a job, more than a third originated from the class of farmers and smallholders (IVc) or the class of agricultural labourers (VIIb), as against less than 20 percent in 1993.

Conversely, being born into the industrial, skilled or unskilled, working class (V, VI, and VIIa) was a more frequent event in 1993 (46 percent) than in 1970 (35 percent). The declining size of the self-employed petty bourgeoisie in the origin class structure was apparent for the small proprietors and artisans without employees (IVb), but not the employer fraction of the same class (IVa). Finally, the proportion of men who originated in the class of routine non-manual workers (IIIa and IIIb) remained fairly stable over the 1970–93 period, while the representation of the service class rose continuously, from 3 to 6 percent for the lower fraction (II) and from 5 to 9 percent for the upper fraction (I).

Broadly similar shifts characterised the destination class structure for the same population, but it is noticeable that changes over time were in fact slightly less marked for destinations than for origins—the index of dissimilarity between the 1970 and 1993 surveys is equal to 18 percent for the former, but 22 percent for the latter. It is worth mentioning that, in 1993, more than a quarter of all men aged 25 to 64 belonged to the service class as a result of their occupation, as opposed to 15 percent at the beginning of the seventies. Over the same period, the percentage belonging to the industrial working class changed little, falling from 50 to 47 percent. However, a continuous decline, from 22 to 15 percent, in the size of the semi- and unskilled working class (VIIa) characterised the destination distribution without any equivalent in the origin distribution. All these shifts in the class structure resulted in an uneven change in the total discrepancy between origins and destinations. The index of dissimilarity peaked at 26 percent in 1977, then decreased steadily until the nineties: in 1993, 19 percent of all men aged 25–64 who were in employment or unemployed after having had a job 'would have had to

[63] Some irregularities of this type are actually visible in Tables 5.1, 5.2, and 5.3 presented below.

TABLE 5.1. *Origin and destination class structures in 1970, 1977, 1985, and 1993 (men and women aged 25–64 currently in employment or unemployed having had a job)*

	1970	1977	1985	1993				
	Origin	Destination	Origin	Destination	Origin	Destination	Origin	Destination
Men (N=56,356)								
I	5.2	8.6	5.5	10.6	7.2	13.6	8.9	15.8
II	2.7	6.7	4.6	9.5	5.8	9.5	6.3	10.3
IIIa	6.1	6.1	5.3	7.6	5.3	7.1	7.1	8.1
IIIb	2.0	3.0	0.7	2.5	0.7	3.8	0.8	3.7
IVa	5.5	5.5	7.6	4.3	7.4	2.0	7.6	4.5
IVb	9.8	5.4	7.7	5.1	6.9	7.7[a]	5.3	4.7
IVc	27.1	11.4	23.5	8.3	19.6	6.8	14.4	4.1
V	3.2	7.6	3.8	8.3	4.8	8.8	5.7	9.5
VI	15.3	20.5	16.1	23.9	20.2	23.3	22.5	22.9
VIIa	16.1	21.7	19.9	18.1	17.4	16.1	18.1	14.9
VIIb	7.0	3.5	5.3	1.8	4.7	1.3	3.3	1.5
Total	100	100	100	100	100	100	100	100
DI origin-s–destinations	23.6		26.4		22.9		19.0	
DI 1970–93	22.1 (origins)				17.8 (destinations)			
N (population)	9,517,000		10,515,000		11,012,000		12,152,000	
N (survey)	16,504		16,999		16,230		6,623	
Women (N =29,872)								
I	5.4	3.3	5.2	4.2	7.4	6.1	9.7	9.0
II	3.1	11.7	5.2	15.3	5.8	18.0	6.0	19.4
IIIa	5.7	15.1	6.3	22.8	5.3	24.8	8.0	26.8
IIIb	2.3	18.5	0.8	19.9	0.8	20.6	0.8	19.8
IVa	5.4	2.4	7.1	1.2	6.9	1.4	7.2	1.6
IVb	10.2	10.6	8.0	8.4	6.6	6.2 [a]	6.0	3.8
IVc	28.6	15.7	23.7	9.9	19.1	6.1	14.5	3.6
V	2.9	0.9	4.4	0.9	5.2	0.9	5.7	1.4
VI	14.1	4.3	15.1	3.9	19.3	3.7	21.5	4.1
VIIa	16.2	16.5	19.5	13.0	19.1	11.5	17.6	9.9
VIIb	6.1	1.0	4.7	0.5	4.5	0.7	3.0	0.6
Total	100	100	100	100	100	100	100	100
DI origin-s–destinations	34.9		46.1		51.5		51.2	
DI 1970–93	22.9 (origins)				26.9 (destinations)			
DI men–-women	2.9	39.0	2.8	43.3	2.4	43.0	2.5	43.9
N (population)	5,452,000		6,656,000		8,363,000		9,786,000	
N (survey)	5,923		8,615		9,909		5,425	

Notes: Men and women who are unemployed are classified according to their last occupation. Those who are looking for their first job are ignored in the present analysis.

[a] For the respondents to the 1985 survey, class IVb includes small proprietors and artisans without employees and those with one employee or two employees.

change their origins' in order for the origin and destination class structures to become exactly identical.

The transformation of the female labour force was especially marked over the last three decades and, contrary to what was observed for men, the total dissimilarity between 1970 and 1993 was in fact larger for destinations (27 percent) than origins (23 percent) among women, employed or unemployed, aged 25–64. In 1970, nearly 30 percent of all women belonged to the self-employed classes (IVa, IVb, and IVc), as against 9 percent in 1993. Such a dramatic decrease essentially reveals the profound transformation of female work in France, with women moving from the status of domestic help to salaried and more autonomous occupations. Between 1970 and 1993, women increasingly entered the upper service class (from 3 to 9 percent), the lower service class (from 12 to 19 percent), and the class of routine non-manual employees in administration and commerce (IIIa) (from 15 to 27 percent). On the other hand, the size of the class of routine non-manual employees in sales and services (IIIb) has remained fairly stable over time (around 20 percent) and the same holds true for the skilled working class (V and VI) (about 5 percent). While the female and male origin class structures only differed by a negligible amount (less than 3 percent) at each of the dates we are considering, the dissimilarity between the corresponding destination class structures increased from 39 to 44 percent, which suggests increased gender segregation in the entire class structure at the end of the twentieth century. Finally, and partly as a consequence of this gender gap, a considerable and widening discrepancy exists between women's class structure and that of their fathers (35 percent in 1970, 51 percent in 1993).

Trends in observed mobility (or absolute mobility rates) for men and women, 1970–93

Using the collapsed (seven category) version of the class schema provides a general breakdown of observed mobility for both men and women.

Table 5.2 shows that, for men, the changes in the origin and destination class structures resulted in little change in the total mobility rate. In 1970, 1977, 1985, or 1993, about two thirds of the population under consideration (all men aged 25–64, currently employed or unemployed but classified according to their last occupation) had left their father's class as a result of their own occupation. However, this general observation conceals opposing trends in the vertical and non-vertical mobility rates. The former rose continuously, but the latter fell continuously so that the ratio of vertical mobility to non-vertical mobility steadily grew from 1.8 in 1970 to 3.0 in 1993. If vertical mobility is further broken down into upward and downward moves these are seen to be somewhat sensitive to the change in the occupational classification between

TABLE 5.2. *Absolute class mobility rates in 1970, 1977, 1985, and 1993 (seven-class schema) (men and women aged 25–64 currently in employment or unemployed having had a job)*

	1970	1977	1985	1993
Men (N =56,356)				
Total mobility rate	65.3	67.5	67.1	66.6
Total vertical	41.8	47.4	48.9	49.9
Total non-vertical	23.5	20.1	18.2	16.7
Total vertical/total non-vertical	1.8	2.4	2.7	3.0
Total upward	30.7	37.2	36.8	36.0
Total downward	11.2	10.2	12.1	13.8
Total upward/total downward	2.7	3.6	3.0	2.6
Mobile into the service class (I + II)	10.7	14.2	15.7	17.3
Mobile into the service class (I + II) from the working class (V + VI, VIIab)	4.6	6.6	7.7	8.9
Women (N =29,872)[a]				
Total mobility rate	64.7	70.4	73.3	74.0
Total vertical	41.2	46.9	50.5	52.7
Total non-vertical	23.5	23.5	22.7	21.4
Total vertical/total non-vertical	1.8	2.0	2.2	2.5
Total upward	24.3	29.6	31.7	32.3
Total downward	16.8	17.3	18.8	20.4
Total upward/total downward	1.4	1.7	1.7	1.6
Mobile into the service class (I + II)	10.3	14.3	16.8	19.4
Mobile into the service class (I + II) from the working class (V + VI, VIIab)	4.2	6.5	8.0	9.6

Notes: Men and women who are unemployed are classified according to their last occupation. Those who are looking for their first job are ignored in the present analysis.

[a] Following Erikson and Goldthorpe (1992) in the case of women's mobility, classes IIIb and VIIa are grouped together in the seven-class version of the schema for origin and destination.

the 1970 and subsequent surveys. It is nonetheless clear that the relative extent of upward mobility, compared to downward mobility, decreased at least from the mid-seventies, because of the increasing downward mobility rate: the upward/downward ratio was 3.6 in 1977, but 2.6 in 1993.

However, if we focus exclusively on entry to the service class, a different picture is obtained. Men from other backgrounds have benefited from the enlarged size of this class as those who were mobile into class I or class II accounted for 17 percent of the total population under consideration in 1993, as against 11 percent in 1970. And it is noteworthy that the same holds true for men with working class origins: among all men aged 25–64, currently employed or unemployed, the percentage of those who originated from the

working class (including agricultural labourers) and joined the service class as a result of their own occupation actually doubled between 1970 and 1993.

When the same analysis is applied to the female population in the labour force both similarities and differences with the corresponding male population are apparent. Among the similarities are the growing importance of vertical mobility in comparison with non-vertical mobility, the slightly increasing rate of downward mobility, and the growing proportion of women who entered the upper or the lower service class from the other class origins, notably those with working class origins. Over the 1970–93 period, this enlargement of the entrance to classes I and II was in fact a little more marked for women than for men. As regards the differences, the relative constancy, among women, in the ratio of upward to downward mobility must be mentioned and, more significantly, the increase in the total mobility rate from about two thirds in 1970 to nearly three-quarters in 1993—with, among its explanations, the growing dissimilarity we have highlighted above between women's class structure and that of their fathers.

In the data appendix we provide the reader with detailed outflow and inflow mobility tables for both men and women, using the full version of the class schema (eleven categories). Limited space prevents us from providing an exhaustive commentary. However, we can briefly mention a few of the most significant features. First, as regards outflow, it is noticeable that the gross rate of immobility diminished between 1970 and 1993 in seven of the eleven male classes and eight of the eleven female classes. For both sexes, the decline in immobility was especially marked among the offspring of the lower service class (II), the agricultural classes (IVc and VIIb), and the semi- and unskilled working class (VIIa). The change in the entire outflow distribution—as measured with the index of dissimilarity—also peaked among the sons and daughters of men in the farming classes, thereby demonstrating that the declining size of the agricultural sector was a leading factor in the transformation of absolute mobility over the period. As regards inflow, the change in gross rates of self-recruitment was generally less pronounced, but we must again stress that the recruitment of men and women in the upper service class (I) from the industrial working class (V, VI and VIIa) rose, throughout the 1970–93 period, from 19 to 22 percent among women and from 22 to 28 percent among men.

We may, however, be concerned about two features of the analysis in Table 5.2 which could seriously undermine the above findings. First of all, as was explained in the first section, unemployment, and especially *long-term* unemployment, has grown markedly in France since the mid-seventies and it must be asked whether it is still appropriate to classify the unemployed according to their last occupation. Secondly, a reform in the early eighties lowered the legal retirement age and a number of pre-retirement arrangements have also been introduced since the mid-seventies in order to combat unemployment. As a consequence, men and women between 55 and 64 who were still in the

TABLE 5.3. *Absolute class mobility rates in 1970, 1977, 1985, and 1993 (seven-class schema) (men and women aged 25–64 in the labour force or retired—unemployment as a separate destination)*

	1970	1977	1985	1993
Men (N =59,044)				
N (population)	10,017,000	11,106,000	12,171,000	13,638,000
Unemployment	0.8	2.2	5.0	7.3
Total mobility rate	65.2	65.6	63.8	61.6
Total vertical	42.1	45.9	46.7	46.3
Total non-vertical	23.1	19.7	17.2	15.3
Total vertical/total non-vertical	1.8	2.3	2.7	3.0
Total upward	31.2	36.2	35.6	34.6
Total downward	10.9	9.7	11.1	11.7
Total upward/total downward	2.9	3.7	3.2	3.0
Mobile into the service class (I + II)	10.7	13.8	15.5	16.5
Mobile into the service class (I + II) from the working class (V + VI, VIIab)	4.7	6.4	7.6	8.5
Women (N =31,338)[a]				
N (population)	5,732,000	7,039,000	9,187,000	10,820,000
Unemployment	4.9	5.8	11.2	10.6
Total mobility rate	61.4	65.9	64.3	66.0
Total vertical	39.2	43.9	44.4	46.6
Total non-vertical	22.1	22.0	19.9	19.4
Total vertical/total non-vertical	1.8	2.0	2.2	2.4
Total upward	23.7	28.2	29.1	30.0
Total downward	15.6	15.7	15.2	16.6
Total upward/total downward	1.5	1.8	1.9	1.8
Mobile into the service class (I + II)	10.2	13.8	15.6	18.3
Mobile into the service class (I + II) from the working class (V + VI, VIIab)	4.3	6.1	7.3	9.0

Notes: All men and women who are unemployed, including those who are looking for their first job, are classified in a separate destination. Those who are retired are classified according to their last occupation.

[a] Following Erikson and Goldthorpe (1992) in the case of women's mobility, classes IIIb and VIIa are grouped together in the seven-class version of the schema for origin and destination.

labour force in 1985 or 1993 might well represent a selective part of the whole population of their age range.

The same analysis has therefore been replicated in Table 5.3 with two potentially important modifications.

All the unemployed, whether or not they had ever had a job, have been placed in a separate (and additional) destination class and the retired persons in the 25–64 age range have been included and classified according to their last occupation.[64] Apart from the worsening of unemployment which is quite visible and the fact that the total mobility rate among men is now falling slightly, a close examination of the new table does not afford conclusions about trends in observed mobility which depart radically from those we presented above on the basis of the standard analysis. It is, above all, noteworthy that the increasing trend in the size of the group of men and women in the service class with origins in the working class is scarcely affected by the two modifications.

Trends in social fluidity (or relative mobility rates) for men and women, 1970–93

Do the trends in the absolute mobility rates result entirely from changes in the origin and destination class structures over a quarter of a century, or do they *also* express a change in the underlying mobility regime, that is to say in the general level and/or structure of the association between origins and destinations? To answer this question log-linear and log-multiplicative techniques must be applied to the male and female mobility tables.[65]

Beginning our analysis using the eleven-class schema with all currently employed or unemployed men aged 25 to 64 (first panel of Table 5.4), the constant social fluidity model (CnSF), which imposes temporal invariance on all the odds ratios in the mobility table, appears to have considerable potential for describing the mobility regime in France between 1970 and 1993. Although it is rejected by a conventional statistical test as a consequence of the extremely large sample size, the CnSF model has to be preferred to the saturated model on the basis of the bic statistic; it misclassifies only 3.3 percent of the total sample involved and eliminates 97.6 percent of the distance which separates the data from the baseline model—that of perfect fluidity at each date.

However, the Unidiff model, which estimates three supplementary parameters and, by so doing, permits the general strength of the origin–destination association to vary over time, improves on the CnSF model very significantly and is, according to the bic statistic, also preferable to the latter. Moreover, as the estimated Unidiff parameters decline evenly from 1.000 in 1970 to 0.847

[64] However, we did *not* include men and women who had formerly had a job but who had left the labour force a long time ago and did not identify themselves as retired in the surveys—for instance women who had worked during the years immediately before and after their marriage, then became housewives without joining the labour market again.

[65] All the modelling was performed with the Lem software (version 1.0 dating from 18 September 1997) developed by Jeroen K. Vermunt (University of Tilburg, The Netherlands).

TABLE 5.4. *Results of fitting the CnSF and Unidiff models to the 1970, 1977, 1985, and 1993 mobility tables (men and women aged 25–64 currently in employment or unemployed having had a job)*

Model	G^2	d.f.	DI	rG^2	bic
Men (N = 56,356)—Eleven-class schema					
Independence {*OT*}{*DT*}	24,421.1	400	24.1	—	20,045.3
CnSF {*OT*}{*DT*}{*OD*}	590.8	300	3.3	97.6	−22,691.1
Unidiff	539.8	297	3.1	97.8	−22,709.2
Unidiff parameters	*1.000*	*0.970*	*0.903*	*0.847*	
	(1970)	*(1977)*	*(1985)*	*(1993)*	
Unidiff Linear trend	540.7	299	3.1	97.8	−22,730.2
Unidiff Linear trend per year	*−0.0067*				
Men (N = 56,356)—Seven-class schema					
Independence {*OT*}{*DT*}	21,720.8	144	22.7	—	20,145.5
CnSF {*OT*}{*DT*}{*OD*}	300.1	108	2.4	98.6	−881.4
Unidiff	258.2	105	2.2	98.8	−890.5
Unidiff parameters	*1.000*	*0.953*	*0.887*	*0.873*	
Unidiff Linear trend	260.4	107	2.2	98.8	−910.1
Unidiff Linear trend per year	*−0.0063*				
Men (N = 56,356)—Eight-class schema (separating I and II)					
Independence {*OT*}{*DT*}	22,657.2	196	23.0	—	20,513.0
CnSF {*OT*}{*DT*}{*OD*}	372.4	147	2.7	98.4	−1,235.7
Unidiff	326.7	144	2.4	98.6	−1,248.6
Unidiff parameters	*1.000*	*0.972*	*0.896*	*0.862*	
Unidiff Linear trend	328.3	146	2.4	98.6	−1,268.8
Unidiff Linear trend	*−0.0065 per year*				
Women (N = 29,872)—Eleven-class schema					
Independence {*OT*}{*DT*}	10,500.3	400	21.3	—	6,378.5
CnSF {*OT*}{*DT*}{*OD*}	495.9	294	3.9	95.3	−2,533.7
Unidiff	462.8	291	3.8	95.6	−2,535.9
Unidiff parameters	*1.000*	*0.951*	*0.895*	*0.811*	
Unidiff Linear trend	463.3	293	3.8	95.6	−2,556.0
Unidiff Linear trend per year	*−0.0079*				
Women (N = 29,872)—Seven-class schema					
Independence {*OT*}{*DT*}	9,211.1	144	19.8	—	7,727.2
CnSF {*OT*}{*DT*}{*OD*}	207.0	108	2.4	97.8	−905.9
Unidiff	164.7	105	2.2	98.2	917.3
Unidiff parameters	*1.000*	*0.907*	*0.854*	*0.783*	
Unidiff Linear trend	165.8	107	2.2	98.2	−936.8
Unidiff Linear trend per year	*−0.0092*				

Note: *O* = class origin; *D* = class destination; *T* = survey.

For women in the eleven-class schema degrees of freedom are adjusted because of two zeroes in the observed margin {*OD*} (Bishop, Fienberg, and Holland 1975: 115–9).

in 1993, they reveal a monotonic change in the underlying male mobility regime and establish that, during the 1970–93 period, social fluidity (as measured by the logged odds ratios) increased by about 15 percent. Finally, imposing a linear trend on these parameters provides a model which does not significantly distort the fit, exhibits the best equilibrium between parsimony and fit, and demonstrates that, over a quarter of a century, a *slow erosion* in the general strength of the origin–destination association among males took place at an annual rate of −0.7 percent.

Replicating the analysis with the collapsed seven-class schema (second panel) affords conclusions which are rigorously the same except that the increase in social fluidity virtually disappears between 1985 and 1993. However, a weakness of the seven-class schema lies in the fact that it merges the upper and the lower service class; using an eight-class schema to separate class I from class II once more reveals the monotonic change over the entire period (third panel).

For women in the same age range who were currently in employment or unemployed after having had a job previously, statistical modelling once more highlights the now familiar pattern of declining Unidiff parameters. The only slight difference is that the progressive increase in social fluidity was somewhat more pronounced among women than men with an annual trend estimated at −0.8 percent in the eleven-class schema (fourth panel) and −0.9 percent in the seven-class schema (fifth panel) as against −0.7 and −0.6 percent.

To discover period effects in social fluidity the previous analysis used an extremely large age range (25–64) with, as a consequence, a considerable overlap in the populations covered by the successive surveys. It may nonetheless be asked whether the increase in social fluidity was a widely experienced phenomenon or whether it was restricted to a few well-defined birth-cohorts. Using the seven-class schema, we have therefore repeated the same analysis on sub-populations identified by more limited, that is, ten-year, age intervals.[66] For the oldest of these (55–64), the Unidiff model does not significantly improve on the CnSF model for either men or women, but it has already been said that people of this age who were still in the labour force might well represent a selected part of the whole population in the most recent surveys. In five cases the Unidiff model affords a better fit than the model of temporal invariance and the parameters again reveal a monotonic increase in social fluidity over the 1970–93 period: men aged 45–54 (with an improvement in fit that is significant at the 0.01 level), women aged 45–54 (at the 0.05 level), men aged 35–44 (at the 0.001 level), women aged 35–44 (at the 0.001 level), and women aged 25–34 (at the 0.001 level). As regards men aged 25–34, the Unidiff model also improves the fit at the 0.001 level but, after a steady fall from 1.000 in 1970 to 0.817 in 1985, the parameter rose to 0.939 in 1993 for reasons

[66] By doing so, we simultaneously analyse the dynamics of social fluidity using nearly independent ten-year birth-cohorts. For instance, men and women aged 25–34 in 1993 were born between 1959 and 1968 while those of the same age in 1985 were born between 1951 and 1960, and so on.

TABLE 5.5. *Results of fitting the CnSF and Unidiff models to the 1970, 1977, 1985, and 1993 mobility tables (men and women aged 25–64 in the labour force or retired—unemployment as a separate destination)*

Model	G^2	d.f.	DI	rG^2	bic
Men (N = 59,044)—Eleven-class schema					
Independence {*OT*}{*DT*}	24,808.0	440	23.5	—	19,974.2
CnSF {*OT*}{*DT*}{*OD*}	624.7	330	3.3	97.5	−3,000.7
Unidiff	582.4	327	3.1	97.7	−3,010.1
Unidiff parameters	*1.000*	*0.992*	*0.920*	*0.867*	
	(1970)	*(1977)*	*(1985)*	*(1993)*	
Unidiff Linear trend	585.7	329	3.1	97.6	−3,028.7
Unidiff Linear trend per year	*−0.0059*				
Men (N = 59,044)—Seven-class schema					
Independence {*OT*}{*DT*}	22,095.2	168	22.2	—	20,249.6
CnSF {*OT*}{*DT*}{*OD*}	302.8	126	2.3	98.6	−1,081.5
Unidiff	271.3	123	2.2	98.8	−1,080.0
Unidiff parameters	*1.000*	*0.982*	*0.906*	*0.901*	
Unidiff Linear trend	275.1	125	2.2	98.8	−1,098.2
Unidiff Linear trend per year	*−0.0053*				
Men (N = 59,044)—Eight-class schema (separating I and II)					
Independence {*OT*}{*DT*}	23,022.8	224	22.5	—	20,562.0
CnSF {*OT*}{*DT*}{*OD*}	388.2	168	2.6	98.3	−1,457.4
Unidiff	351.7	165	2.5	98.5	−1,461.0
Unidiff parameters	*1.000*	*0.996*	*0.915*	*0.885*	
Unidiff Linear trend	356.1	167	2.5	98.5	−1,478.6
Unidiff Linear trend per year	*1−0.0055*				
Women (N = 31,338)—Eleven-class schema					
Independence {*OT*}{*DT*}	10,786.6	440	21.0	—	6,231.5
CnSF {*OT*}{*DT*}{*OD*}	486.2	321	3.8	95.5	−2,837.0
Unidiff	464.6	318	3.7	95.7	−2,827.5
Unidiff parameters	*1.000*	*0.950*	*0.919*	*0.844*	
Unidiff Linear trend	465.4	320	3.7	95.7	−2,847.4
Unidiff Linear trend	*−0.0063 per year*				
Women (N = 31,338)—Seven-class schema					
Independence {*OT*}{*DT*}	9,564.0	168	19.6	—	7,824.8
CnSF {*OT*}{*DT*}{*OD*}	198.5	126	2.4	97.9	−1,106.0
Unidiff	170.2	123	2.2	98.2	−1,103.2
Unidiff parameters	*1.000*	*0.915*	*0.879*	*0.824*	
Unidiff Linear trend	171.6	125	2.2	98.2	−1,122.5
Unidiff Linear trend per year	*−0.0073*				

For women in the eleven-class schema degrees of freedom are adjusted because of three zeroes in the observed margin {*OD*} (Bishop et al. 1975: 115–9).

which are at the moment unclear. Apart from this exception, the conclusion therefore is that the steady increase in social fluidity was a widely experienced phenomenon, shared by members of different birth-cohorts at different ages.

Finally, as regards trends in relative mobility rates, we may again wonder whether including retired persons in the analysis and classifying all the unemployed in a separate destination class seriously affect our general conclusion.

Table 5.5 replicates the whole analysis with these two modifications. The increase in social fluidity (or the decrease in inequality of occupational opportunity) is still quite clear. Only the pace of change over twenty three years has slightly fallen—see especially the estimated annual trends.

Investigating 'complete' mobility tables

By considering men and women separately, the whole analysis presented above has implicitly adopted an *individual* approach according to which the individual's location in the class structure primarily depends on his or her *work situation* (Goldthorpe 1980: 39). However, men and women often belong to families that can be situated in the class structure according to their *market situation* which depends on the occupations of the different members of the same household (Erikson 1984). Previous research on France, based on data from population censuses, has also demonstrated that the conventional approach to class analysis—in which the family's class position is determined by the husband's occupation—received weaker empirical support during the eighties than during the sixties (Vallet 1986). We have therefore supplemented the foregoing analyses by considering complete mobility tables based on the dominance principle (Erikson and Goldthorpe 1992: 264–75), and also extended the age range to 20–64, exactly as in *The Constant Flux*.

First of all, we selected all those men and women aged 20–64 for whom information was available not only about their father's class but also about their own class (current or last occupation) and/or the class (current occupation) of the respondent's partner (if any). For men and women who were living alone 'own class' has, of course, been defined as the class of destination. The class of destination of those who were not in employment at the time of the survey, but who had a currently employed partner, was defined as this partner's class. Finally, the class of destination of those who belonged to dual-career families with both members in the workforce was defined by using a dominance prin-ciple operating in the following order: class I, class II, class IVab, class IVc, class IIIa, class V and class VI, class IIIb and class VIIa, class VIIb.[67]

[67] Apart from the distinction between class I and class II, this closely resembles the 'Dominance 1' criterion developed by Erikson and Goldthorpe (1992: 266). We were unfortunately unable to use the 'work time' criterion in the implementation of the dominance principle: no distinction was available between full-time and part-time work for the respondents in the 1970 survey, nor in any of the surveys as regards the partners. The analysis of trends in observed mobility on the basis of the complete tables is available on request; it does not differ in any important respect from that described above.

TABLE 5.6. *Results of fitting the CnSF and Unidiff models to the 1970, 1977, 1985, and 1993 complete mobility tables (men and women aged 20–64—destination determined according to the dominance principle)*

Model	G^2	d.f.	DI	rG^2	bic
(N = 111,747)—Eight-class schema (separating I and II)					
Independence {*OT*}{*DT*}	34,849.7	196	19.4	—	32,571.4
CnSF {*OT*}{*D-T*}{*OD*}	496.9	147	2.3	98.6	−1,211.8
Unidiff	400.9	144	2.1	98.8	−1,273.0
Unidiff parameters	*(1970)*	*(1977)*	*(1985)*	*(1993)*	
	1.000	*0.952*	*0.887*	*0.841*	
Unidiff Linear trend	401.3	146	2.1	98.8	−1,295.8
Unidiff Linear trend per year	*−0.0071*				

Table 5.6 displays the analysis of trends in social fluidity on the basis of these complete mobility tables. Again, no detailed commentary is required as the estimations closely parallel those in Tables 5.4 and 5.5. Even with the focus on an enlarged sample—all men and women aged 20–64—and implementation of the dominance principle to determine class destinations, the conclusion is still that a slow erosion in the strength of the association between origins and destinations has taken place in France over a quarter of a century, at an annual rate of −0.7 percent.

Explaining the increase in social fluidity (Part I): the core model revisited

The model of core social fluidity (Erikson and Goldthorpe 1992: 121–40) can provide greater insight into this trend. This model breaks down the overall pattern of association between origins and destinations into a set of eight more basic parameters: two hierarchy effects (HI1 and HI2), three inheritance effects (IN1, IN2, and IN3), one sectoral effect (SE), and two affinity effects (AF1 and AF2). When it is applied to the male sample in the seven-class schema (see Table 5.7), the temporally invariant version of the core model (Model B) indeed compares very favourably with the CnSF model (Model A): its bic statistic is better than that of the latter and it misclassifies only 3.3 percent of the total sample involved. It must also be stressed that the eight parameters estimated from the four surveys are very close to those obtained by Erikson

and Goldthorpe (1992: 147) for France on the basis of the 1970 survey. With twenty-four supplementary parameters, the temporally changing version of the core model (Model C) provides a G^2 statistic which is 117.6 points lower. Within the context of the core model, this represents the whole change in social fluidity which has taken place over twenty-three years, but a more comprehensible account would be provided if we were able to model this variation—or a large part of it—using only a few parameters, in addition to the eight basic effects.

As a first step in this direction we estimated a series of models which incorporate a Unidiff effect—or a log-multiplicative layer effect (Xie 1992)—over time for *only one* of the eight core parameters. Using the temporally invariant core model as a benchmark, a major improvement in the G^2 statistic is provided when this effect is applied to HI1 (Model D), and slightly less marked improvements when it is applied to IN2 and HI2 (Models G and E). In Model L, we have therefore imposed a Unidiff effect on *both* the hierarchy parameters *simultaneously,* which yields the best-fitting model seen thus far in Table 5.7. Moreover, the monotonic change which is depicted in the Unidiff parameters can be summarised, without any significant loss of information, as a linear trend (Model M). Finally, adding another Unidiff effect to the sectoral parameter significantly lowers the G^2 statistic (Model N) and this effect can be represented as a threshold effect which opposes the 1970 survey to the subsequent ones (Model O). Although we investigated a number of supplementary variants of the core model, we were unable to find a more powerful model than Model O: with only two parameters, it eliminates 67.1 percent of the distance between the temporally invariant and temporally changing versions of the model of core social fluidity.

Table 5.8 displays the same analysis applied to the female sample. The temporally invariant core model again appears to be preferable to the CnSF model because of its more satisfactory compromise between parsimony and fit. It is also noteworthy that the three inheritance parameters are distinctly lower among women than men (Model B). This result can at least partly be understood as a direct consequence of the choice of the origins variable (father's class), as earlier work on France based on the 1977 survey demonstrated strong inheritance effects of the mother's class among women, both of whose parents were employed during their youth (Vallet 1991). The distance between the temporally invariant and temporally changing core models is 66.6 points for 24 degrees of freedom (Models B and C). Among the series of eight models, the best fit is achieved by that which incorporates a Unidiff effect over time on the sectoral parameter (Model I). Imposing the same Unidiff effect on both the hierarchy and sectoral parameters results in the best-fitting model seen thus far in Table 5.8 (Model M) and, again, this can be simplified with the estimation of a linear trend (Model N). Although we found two other models with a better fit (Models O and P), we chose to disregard them: they include the AF2 parameter in the interaction with time and

TABLE 5.7. *Results of fitting several variants of the model of core social fluidity to the 1970, 1977, 1985, 1993 mobility tables for men aged 25–64 currently in employment or unemployed having had a job (N = 56,356)*

Model (seven-class schema)	G^2		d.f.		DI	rG^2		bic
A. CnSF {*OT*}{*DT*}{*OD*} Core Models	300.1	108	2.4	98.6	−881.4			
B. Temporally invariant parameters	568.6	136	3.3	97.4	−919.1			
	HI1	HI2	IN1	IN2	IN3	SE	AF1	AF2
France 1970, 1977, 1985, 1993	*−0.243*	*−0.570*	*0.399*	*0.824*	*1.140*	*−0.803*	*−0.817*	*0.451*
France 1970 (The Constant Flux, *p. 147*)	*−0.24*	*−0.47*	*0.41*	*0.92*	*1.00*	*−0.89*	*−0.75*	*0.47*
C. Temporally changing parameters	451.0		112		2.9	97.9		−774.2
	HI1	HI2	IN1	IN2	IN3	SE	AF1	AF2
1970	*−0.318*	*−0.703*	*0.350*	*0.975*	*0.935*	*−0.931*	*−0.572*	*0.459*
1977	*−0.289*	*−0.574*	*0.393*	*0.801*	*1.424*	*−0.665*	*−1.156*	*0.470*
1985	*−0.171*	*−0.538*	*0.425*	*0.742*	*1.091*	*−0.777*	*−0.767*	*0.426*
1993	*−0.083*	*−0.441*	*0.481*	*0.809*	*1.264*	*−0.687*	*−0.665*	*0.407*
D. Only HI1 changes over time	515.5		133		3.1	97.6		−939.5
E. Only HI2 changes over time	544.7		133		3.3	97.5		−910.2
F. Only IN1 changes over time	550.0		133		3.3	97.5		−904.9
G. Only IN2 changes over time	532.4		133		3.2	97.5		−922.6
H. Only IN3 changes over time	566.4		133		3.3	97.4		−888.5
I. Only SE changes over time	555.2		133		3.3	97.4		−899.8
J. Only AF1 changes over time	561.5		133		3.3	97.4		−893.4
K. Only AF2 changes over time	567.8		133		3.4	97.4		−887.1
L. HI1 and HI2 change over time	499.5		133		3.1	97.7		−955.4
Unidiff for HI1 *and* HI2	*1.000 (1970)*		*0.830 (1977)*		*0.619 (1985)*	*0.509 (1993)*		
M. Model L with a linear trend	500.7		135		3.1	97.7		−976.1
Linear trend per year for HI1 *and* HI2	−0.0230							
N. Model M 1 SE changes over time	489.7		132		3.0	97.7		−954.3
Linear trend per year for HI1 *and* HI2	*−0.0227*							
Unidiff for SE	*1.000 (1970)*		*0.825 (1977)*		*0.839 (1985)*	*0.846 (1993)*		
O. Model N with an equality constraint	489.8		134		3.0	97.7		−976.1
Linear trend per year for HI1 *and* HI2	*−0.0226*							
Unidiff (constrained) for SE	*1.000 (1970)*		*0.834 (1977, 1985, 1993)*					

TABLE 5.8. *Results of fitting several variants of the model of core social fluidity to the 1970, 1977, 1985, 1993 mobility tables for women aged 25–64 currently in employment or unemployed having had a job (N = 29,872)*

Model (seven-class schema)	G^2		d.f.		DI	rG^2		bic
A. CnSF {*OT*}{*DT*}{*OD*} Core Models	207.0		108		2.4	97.8		−905.9
B. Temporally invariant parameters	396.9		136		3.5	95.7		−1,004.5
	HI1	HI2	IN1	IN2	IN3	SE	AF1	AF2
France 1970, 1977, 1985, 1993	*−0.238*	*−0.489*	*0.313*	*0.647*	*0.989*	*−0.776*	*−0.672*	*0.405*
Men—France 1970, 1977, 1985, 1993	*−0.243*	*−0.570*	*0.399*	*0.824*	*1.140*	*−0.803*	*−0.817*	*0.451*
C. Temporally changing parameters	330.3		112		3.4	96.4		−823.8
	HI1	HI2	IN1	IN2	IN3	SE	AF1	AF2
1970	*−0.303*	*−0.599*	*0.267*	*0.808*	*0.944*	*−0.899*	*−0.603*	*0.454*
1977	*−0.274*	*−0.451*	*0.297*	*0.670*	*0.680*	*−0.986*	*−0.594*	*0.469*
1985	*−0.208*	*−0.522*	*0.330*	*0.546*	*1.070*	*−0.704*	*−0.830*	*0.358*
1993	*−0.181*	*−0.442*	*0.338*	*0.609*	*1.758*	*−0.157 n.s.*	*−0.511*	*0.332*
D. Only HI1 changes over time	389.0		133		3.6	95.8		−981.6
E. Only HI2 changes over time	385.6		133		3.5	95.8		−985.0
F. Only IN1 changes over time	387.3		133		3.5	95.8		−983.3
G. Only IN2 changes over time	379.3		133		3.4	95.9		−991.3
H. Only IN3 changes over time	388.7		133		3.4	95.8		−981.8
I. Only SE changes over time	375.8		133		3.4	95.9		−994.7
J. Only AF1 changes over time	394.5		133		3.5	95.7		−976.1
K. Only AF2 changes over time	391.8		133		3.5	95.7		−978.7
L. HI1 and HI2 change over time	381.7		133		3.6	95.9		−988.8
Unidiff for HI1 *and* HI2	*1.000 (1970)*		*0.807 (1977)*		*0.747 (1985)*	*0.665 (1993)*		
M. HI1, HI2, SE change over time	362.6		133		3.5	96.1		−1,007.9
Unidiff for HI1, HI2, SE	*1.000 (1970)*		*0.854 (1977)*		*0.766 (1985)*	*0.621 (1993)*		
N. Model M with a linear trend	363.2		135		3.6	96.1		−1,027.9
Linear trend per year for HI1, HI2, SE	*−0.0158*							
O. HI1, HI2, SE, IN2, AF2 change over time	354.7		133		3.5	96.1		−1,015.8
Unidiff for HI1, HI2, SE, IN2, AF2	*1.000 (1970)*		*0.889 (1977)*		*0.803 (1985)*	*0.714 (1993)*		
P. Model O with a linear trend	355.1		135		3.5	96.1		−1,036.0
Linear trend per year for HI1, HI2, SE, IN2, AF2	*−0.0124*							

this parameter is somewhat difficult to interpret as it incorporates a number of different effects (Erikson and Goldthorpe 1992: 129–30). We must finally stress that, with a single parameter, Model N eliminates 50.7 percent of the aforementioned distance between Models B and C.

All in all, our preferred models (whose parameters are fully displayed in Table 5.9) provide us with a straightforward understanding of the changing mobility regime in French society: the increase in social fluidity throughout the 1970–93 period mainly resulted from a progressive weakening in the hierarchical divisions within the class structure which have to be passed through in intergenerational transitions, and also from a reduced distance between the agricultural classes (IVc and VIIb) and the other classes. As regards the weakening of the hierarchy effects, the annual pace of change was −2.3 percent over twenty-three years for men and −1.6 percent for women. Among women, this rate of −1.6 percent also had the effect of increasing the likelihood of intergenerational moves in and out of the agricultural classes whereas, among

TABLE 5.9. *Structural shift parameters and parameters describing the mobility regime and its change with the preferred models*

I + II	III	IVab	IVc	V1VI	VIIa	VIIb	
Men (N = 56,356)—Model O							
Structural shift parameters							
1970	0	−0.905	−1.542	−3.959	−0.620	−1.046	−2.768
1977	0	−0.566	−1.812	−4.185	−0.684	−1.583	−3.167
1985	0	−0.309	−1.486	−3.894	−0.748	−1.314	−3.084
1993	0	−0.397	−1.299	−3.807	−0.767	−1.264	−2.261
Temporally changing parameters	HI1	HI2	Annual trend			SE 1970	SE later
(1970)	−0.309	−0.730	−0.0226		−0.887	−0.740	
Temporally invariant parameters	IN1	IN2	IN3	AF1	AF2		
	0.396	0.835	1.152	−0.813	0.450		
Women (N = 29,872)—Model N							
Structural shift parameters							
1970	0	0.162	−1.136	−2.803	−2.093	−0.454	−3.434
1977	0	0.395	−1.562	−3.282	−2.467	−0.778	−4.074
1985	0	0.689	−1.655	−3.418	−2.722	−0.776	−3.415
1993	0	0.391	−1.932	−3.406	−2.635	−0.685	−2.938
Temporally changing parameters	HI1	HI2	SE	Annual trend			
(1970)	−0.290	−0.608	−0.921	−0.0158			
Temporally invariant parameters	IN1	IN2	IN3	AF1	AF2		
	0.312	0.649	0.966	−0.666	0.403		

men, the sectoral effect simply declined in importance by 16.6 percent between the 1970 survey and subsequent ones.

Table 5.9 also presents the structural shift parameters which express the effects of changes between origin and destination distributions which raised or lowered the odds of mobility to a given destination in a uniform way (Erikson and Goldthorpe 1992: 204–7; Goldthorpe 1995; Luijkx 1994: ch. 7; Sobel et al. 1985). For both men and women, the parameters have been estimated taking the service class as a reference point. As regards men, it is noteworthy that, over the entire period, mobility into the service class was structurally favoured over that into any other class, and that the effect of structural factors on mobility generally peaked at the end of the seventies—for instance, mobility into classes I and II was, in 1977, structurally favoured over mobility into the class of farmers and smallholders (IVc) by a factor equal to exp[0−(−4.185)], that is, more than 65, as against a factor of 45 in 1993 (exp[0−(−3.807)]). As regards women, it is remarkable that, during the same period, it was mobility into the class of routine non-manual employees in administration and commerce (IIIa) which was structurally favoured over mobility into any other class, including the service class.

Explaining the increase in social fluidity (Part II): the central role of education

Amongst stratification researchers, hierarchy effects in fluidity analysis are usually viewed as those effects for which education is an important intermediate variable and it is true that the education distribution changed considerably in France during these decades. Using the Comparative Analysis of Social Mobility in Industrial Nations (CASMIN) educational categories which are detailed in the data appendix, in 1970, among persons aged 25–64 whether currently employed or unemployed, 69.6 percent of men and 71.2 percent of women had received no more than a general elementary education, while 8.4 percent and 8.8 percent respectively held at least a secondary maturity certificate. In 1993, the corresponding figures were 32.6 percent and 32.9 percent for the least qualified, 26.1 and 31.6 percent for the most qualified.[68] It would therefore be quite unlikely that educational expansion had played no role at all in the increase in social fluidity.

If education were to be introduced as an intermediate variable between origins and destinations, the decline in the total association between origin

[68] In the same samples, the average number of years of education grew from 9.5 in 1970 to 12.3 in 1993 among men (from 9.2 to 12.2 among women) and the standard deviation remained quite stable, varying between 3.5 and 3.6 for men (3.2 and 3.3 for women), so that the coefficient of variation steadily declined from 0.37 in 1970 to 0.29 in 1993 among men (from 0.35 to 0.27 among women).

class and destination class could be explained by four transformations: a weakening in the 'indirect' effect (i.e. that mediated by education) of origin on destination which can be broken down into a decrease in the association between origin and education—that is to say, a decrease in the inequality of educational opportunity (first transformation)—and/or a decrease in the association between education and destination—that is to say, a decrease in the relative occupational advantage afforded by education (second transformation); third, a weakening in the 'direct' effect (i.e. controlling for education) of origin on destination; fourth, a compositional effect by which educational expansion increases the size and influence of more qualified groups in which the net association between origin and destination is weaker (Hout 1984, 1988).

A general test of these four hypotheses is provided for men in Table 5.10 and for women in Table 5.11. To begin with, we have analysed the dynamics of the association between origin class and education with our usual models. The Unidiff model is preferable to the constant association model and the Unidiff parameters clearly reveal a decline—21.6 percent for men and 26.4 percent for women in the logged odds ratios—in the strength of the association between origin class and education between the population surveyed in 1970 and that surveyed in 1993 (Model C). Especially for men, the negative trend progressively decelerates, which is fully consistent with earlier research which found that most of the change took place among cohorts born between the mid-1930s and the mid-1950s (Thélot and Vallet 2000). Our initial conclusion is therefore that a decline in the inequality of educational opportunity has occurred for both men and women.

Secondly we have analysed the three-dimensional origin–education– destination tables from a temporal perspective. The RG^2 statistic clearly suggests that the education–destination association is stronger than the origin–destination association (Models E and F) and that the gap is especially marked among women, consistently with the weaker inheritance effects we commented on above. Starting with the model which incorporates these two associations (Model G), we can then introduce a Unidiff effect over time on one, the other, or both of them (Models H, I, and J). For men and women, the G^2 and bic statistics clearly favour model I which reveals a decline—26.0 percent for men and 29.4 percent for women in the logged odds ratios—in the strength of the association between education and destination. Thus, our second conclusion is that a decline in the relative occupational advantage afforded by education has occurred for both men and women, but that the direct effect of origin on destination has changed little in France over the 1970–93 period.

Finally, for both men and women, an even better fit is achieved by supplementing Model I with a Unidiff effect on education for the origin–destination association (Model K). The estimated parameters clearly reveal, albeit with

TABLE 5.10. *Results of introducing education as an intermediate variable in 1970, 1977, 1985, and 1993 (men aged 25–64 currently in employment or unemployed having had a job (N = 56,356))*

Model (seven-class schema)	G^2	d.f.	DI	rG^2	bic
Analysis of the origin–education tables					
A. Independence {*OT*}{*ET*}	12,720.2	192	16.5	—	10,619.8
B. Constant association {*OT*}{*ET*}{*OE*}	418.4	144	−.8	96.7	−1,156.9
C. Unidiff	335.9	141	−.5	97.4	−1,206.5
Unidiff parameters for {*OE*}	*1.000 (1970)*	*0.886 (1977)*	*0.808 (1985)*	*0.784 (1993)*	
Analysis of the origin–education–destination tables					
D. Independence {*OET*}{*DT*}	41,547.0	1,482	32.6	—	25,334.8
E. Constant {*OD*} association {*OET*}{*DT*}{*OD*}	20,126.4	1,446	20.4	51.6	4,307.9
F. Constant {*ED*} association {*OET*}{*DT*}{*ED*}	15,920.4	1,434	17.1	61.7	233.3
;G. Constant associations {*OET*}{*DT*}{*OD*}{*ED*}	2,449.1	1,398	5.8	94.1	−12,844.3
H. Only {*OD*} changes over time	2,428.1	1,395	5.7	94.2	−12,832.5
Unidiff parameters for {*OD*}	*1.000*	*0.956*	*0.894*	*0.890*	
I. Only {*ED*} changes over time	2,342.4	1,395	5.5	94.4	−12,918.2
Unidiff parameters for {*ED*}	*1.000*	*0.910*	*0.855*	*0.740*	
J. Both {*OD*} and {*ED*} change over time	2,325.5	1,392	5.4	94.4	−12,902.2
Unidiff parameters for {*OD*}	*1.000*	*0.961*	*0.902*	*0.909*	
Unidiff parameters for {*ED*}	*1.000*	*0.912*	*0.859*	*0.743*	
K. Model I 1 {*OD*} changes over education	2,238.7	1,387	5.4	94.6	−12,934.3
Unidiff (time) parameters for {*ED*}	*1.000 (1970)*	*0.906 (1977)*	*0.851 (1985)*	*0.740 (1993)*	

Unidiff (education) parameters for {*OD*}	*1a*	*1b*	*1c*	*2a*	*2b*	*2cgen*	*2cvoc*	*3a*	*3b*
1.000	*1.089*	*1.014*	*0.988*	*0.858*	*0.499*	*0.814*	*0.725*	*0.633*	

Notes: Degrees of freedom (d.f.) are adjusted because of one zero in the observed margin {*OET*} (Bishop et al. 1975: 115–9); *E* = education.

some irregularities, that the direct effect of origin on destination is generally weaker among people with more qualifications—especially from the intermediate general qualification (2b) among men, and from the intermediate vocational qualification (2a) among women, to the highest tertiary qualifications

TABLE 5.11. *Results of introducing education as an intermediate variable in 1970, 1977, 1985, and 1993 (women aged 25–64 currently in employment or unemployed having had a job (N = 29,872))*

Model (seven-class schema)	G^2	d.f.	DI	rG^2	bic
A. Independence {*OT*}{*ET*}	6,469.3	192	16.8	—	4,490.8
B. Constant association {*OT*}{*ET*}{*OE*}	314.7	144	3.5	95.1	−1,169.2
C. Unidiff	270.1	141	3.3	95.8	−1,182.9
Unidiff parameters for {*OE*}	*1.000 (1970)*	*0.853 (1977)*	*0.823 (1985)*	*0.736 (1993)*	
Analysis of the origin–education–destination tables					
D. Independence {*OET*}{*DT*}	24,508.8	1,476	35.8	—	9,299.1
E. Constant {*OD*} association {*OET*} {*DT*} {*OD*}	15,504.7	1,440	−6.4	36.7	666.0
F. Constant {*ED*} association {*OET*} {*DT*} {*ED*}	7,080.6	1,348	15.6	71.1	−6,810.1
G. Constant associations {*OET*} {*DT*} {*OD*} {*ED*}	2,140.0	1,312	7.3	91.3	−11,379.7
H. Only {*OD*} changes over time	2,113.2	1,309	7.3	91.4	−11,375.7
Unidiff parameters for {*OD*}	*1.000*	*0.921*	*0.843*	*0.766*	
I. Only {*ED*} changes over time	1,994.1	1,309	6.9	91.9	−11,494.7
Unidiff parameters for {*ED*}	*1.000*	*0.996*	*0.875*	*0.706*	
J. Both {*OD*} and {*ED*} change over time	1,972.3	1,306	6.8	92.0	−11,485.6
Unidiff parameters for {*OD*}	*1.000*	*0.919*	*0.849*	*0.794*	
Unidiff parameters for {*ED*}	*1.000*	*1.000*	*0.880*	*0.712*	
K. Model I + {*OD*} changes over education	1,892.4	1,301	6.8	92.3	−11,514.0
Unidiff (time) parameters for {*ED*}	*1.000 (1970)*	*0.994 (1977)*	*0.875 (1985)*	*0.708 (1993)*	

Unidiff (education) parameters for {*OD*}	*1a*	*1b*	*1c*	*2a*	*2b*	*2cgen*	*2cvoc*	*3a*	*3b*
	1.000	*0.927*	*0.894*	*0.623*	*0.685*	*0.342*	*0.271*	*0.296*	*0.337*

Notes: Degrees of freedom are adjusted because of two zeroes in the observed margin {*OET*} and three zeroes in the observed margin {*ED*} (Bishop et al. 1975: 115–9).

(3a and 3b).[69] Thus, our third conclusion is that a compositional effect has played a role for both men and women, progressively increasing the size and influence of the educational categories for which the direct effect of origin on destination is reduced.

[69] As it does not reproduce the observed {*ED* } margin exactly, Model K is in fact a non-hierarchical model. Consequently, the estimations with effect coding which are displayed in Tables 5.10 and 5.11 differ slightly from those which can be obtained with dummy coding. We have checked that the differences are only minor and that the general conclusion is entirely unaffected. We thank Jeroen K. Vermunt for his advice on this part of our work.

In the context of Model K, the capability of advanced education to weaken the 'ascriptive effect' (or the partial origin–destination association) can be roughly represented by the negative slope of the regression line estimated from the log-multiplicative parameters (using 1, 2, 3, … to represent educational category 1a, 1b, 1c, and so on). That slope is −0.058 for men and −0.101 for women. It is however worthwhile to note that imposing the Unidiff structure not on education only, but on the joint time–education variable significantly improves the fit at the 0.001 level for men and the 0.05 level for women (with 27 d.f. the difference in G^2 is 55.9 for the former and 41.4 for the latter). This mainly corresponds to the fact that the aforementioned negative slope diminishes steadily over the period. For men, it was estimated at −0.068 in 1970, but −0.033 in 1993; for women, the corresponding figures were −0.183 and −0.054. So, 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. Such a result might be interpreted in the context of signalling theory: for instance, as tertiary education is less rare in 1993 than in 1970, it might represent a less strong signal and might therefore be less powerful in offsetting the origin effect. Future investigations will have to examine whether such a trend can be confirmed.

Discussion and conclusion

As we have demonstrated in this chapter, the most important change which affected intergenerational class mobility in France from the start of the seventies was a progressive opening up in the mobility regime which has probably continued a similar change that is apparent from the middle of the twentieth century (Goldthorpe and Portocarero 1981; Vallet 1999, 2001). This slow erosion has revealed itself as quite robust. It is apparent in both men's mobility and women's mobility, and is also revealed by an analysis of 'complete' mobility tables built according to the dominance principle. Moreover, it was scarcely sensitive to the manner in which unemployed and retired persons were treated in the analysis or the number of divisions in the class schema. The opening up of the mobility regime resulted from a decline in the hierarchical divisions within the class structure and from a reduction in the distance between the agricultural classes and the others. Finally, we have demonstrated the central role that education played in this change as the opening up of the mobility regime also resulted from three components: a decrease in inequality of educational opportunity, a weakening in the relative occupational advantage afforded by education, and, lastly, a compositional effect according to which educational expansion increased the size and influence of more qualified groups in which the direct effect of origin on destination is generally weaker.

Even if we have established these conclusions with empirical clarity in the French case, we must finally emphasise that they are not entirely new. The decline in inequality of educational opportunity in France parallels that which has been demonstrated in Sweden—even as regards the precise birth-cohorts in which most of the change took place—and also in Germany, using the same statistical techniques (Erikson and Jonsson 1996*c*; Jonsson and Erikson 2000; Jonsson et al. 1996). Some signs of a decrease in the socio-economic returns to education were observed in France by Chauvel (1998*b*: 25–9), Goux and Maurin (1998: 124–7), and Brauns et al. (1999: 74–6), albeit with less powerful models than those we have used here. Rather similar results were also obtained in England and Sweden (Breen and Goldthorpe 2001; Goldthorpe 1996*a*; Jonsson 1996). Our results for France on this topic indeed parallel earlier research which demonstrated declining wage returns on education from the start of the seventies (Baudelot and Glaude 1989; Goux and Maurin 1994). In fact, as early as 1974, in work essentially based on simulation, Boudon anticipated the decline in the occupational advantages provided by education—though in absolute rather than relative terms—and this was one of the few points on which Hauser agreed with him. As Hauser wrote in the last sentence of his review of Boudon's book, 'lowered status expectations may well be the price of mass enlightenment' (1976: 927). But Boudon did not anticipate that the combination of declining inequality of educational opportunity and declining occupational returns on education could produce *increasing* social fluidity. And this was definitely *not* the whole story. As Hout (1984, 1988) demonstrated for the United States and as we have also demonstrated for France in this chapter, educational expansion increases the size of more qualified groups of individuals and education *also* lowers the direct effect of origin on destination. In future research, we intend to gain more insight into the relative importance of these three components and to introduce birth-cohort analysis into the study of the dynamics of social fluidity within French society.

Appendix

The 1970, 1977, 1985, and 1993 FQP surveys were conducted by the French National Institute of Statistics and Economic Surveys (INSEE) two or three years after a population census. Using a complex sampling design they covered all men and women in metropolitan France with a quite substantial number of individual face-to-face interviews: 37,843 in 1970, 39,103 in 1977, 39,233 in 1985, and 18,023 in 1993. The questionnaire and the way information was collected by INSEE have remained essentially the same since 1970, thereby allowing detailed comparisons over time. In France these surveys are usually considered as offering unique information about social background,

educational career and qualifications, position on the labour market, and detailed characteristics of occupation (or last occupation) at the time of the survey (see also Goux and Maurin (1997: 160–1) for a description of the technical features of the surveys). We thank LASMAS—Institut du Longitudinal (CNRS) and the Laboratoire de Sociologie Quantitative (CREST-INSEE) who provided us with the data, as well as Hildegard Brauns (formerly at the MZES in Mannheim) who kindly shared her experience with us regarding the implementation of the CASMIN categories on French surveys. The software code we have developed to implement the CASMIN schemes on the four FQP surveys and on French data more generally is available on request.

In the analyses presented above, the origin class is defined as the class (or last class) of the father when the respondent stopped attending school or university on a regular basis. In 1970, the coding of this variable in the eleven-class schema (Erikson and Goldthorpe 1992: 38–9) uses the two-digit CSP classification (thirty occupational groups), the four-digit classification of occupations (444 occupations), and information about employment status, number of employees, and occupational qualification. In 1977, 1985, and 1993, the coding of the variable uses the two-digit *Professions et Catégories Socioprofessionnelles* (PCS) classification (thirty-one occupational groups) and information about employment status and number of employees.

The destination class is the current (or most recent) class of the respondent according to his/her own occupation at the date of the survey. In 1970, the coding of this variable in the eleven-class schema uses the two-digit CSP classification, the four-digit classification of occupations, and information concerning employment status, number of employees, and occupational qualification. In 1977, 1985, and 1993, the coding of the variable uses the four-digit PCS classification (455 occupations) and information about employment status, number of employees, and occupational qualification. Because of a limitation imposed by the original coding of the 1985 survey, class IVb in that survey not only includes small proprietors and artisans without employees, but also those with one or two employees.

The class of the respondent's partner has also been specified in order to build complete mobility tables according to the dominance principle. This variable is of lower quality than the other class variables and is also less comparable across surveys. The information comes from the 1968 census, the 1975 census, the 1982 census, and the 1993 survey. The variable uses only ten categories of the class schema because no information is available on the number of employees, so it is not possible to distinguish between classes IVa and IVb. In 1970, the information is only available for women married to currently (in 1968) employed heads of households. Another restriction is that in 1977 and 1985 sufficiently detailed information is only available for currently (in 1975 or 1982) employed partners and we have therefore applied the same

restriction to the 1993 dataset. The coding of the variable uses the two-digit PCS classification in 1993, the four-digit PCS classification in 1985, but the two-digit CSP classification in 1970 and 1977. For the 1970 and 1977 surveys, we have therefore introduced some modifications to the first proposal for France (Erikson, Goldthorpe, and Portocarero 1979: Table II) in order to achieve the best comparability with the other surveys.

Finally, the education variable is the respondent's highest diploma from initial schooling including apprenticeship. This variable does not take post-school or in-service training into account. It closely follows the 'old' version of the CASMIN educational schema (Brauns and Steinmann 1999: Table A1) in order to achieve the best comparability across surveys. In Table 5.A1 below we present a summary of the main French diplomas which are associated with each of the categories.

TABLE 5.A1.*The CASMIN educational categories defined for French diplomas*

	CASMIN educational classification	Corresponding French diplomas
1a	Inadequately completed general education	Sans diplôme
1b	General elementary education	Certificat d'Études Primaires
1c	Basic vocational qualification (with or without 1b)	Certificat d'Aptitude Professionnelle, Examen de Fin d'Apprentissage Artisanal
2a	Intermediate vocational qualification (with or without 2b)	Brevet d'Études Professionnelles, Brevet Professionnel, BEA, BEC, BEI, BES
2b	Intermediate general qualification	Brevet Élémentaire, Brevet d'Études du Premier Cycle, Brevet des collèges
2c_gen	General maturity certificate	Baccalauréat général, Brevet Supérieur
2c_voc	Vocational maturity certificate	Brevet de Technicien, Baccalauréat de Technicien, Baccalauréat technologique, Baccalauréat professionnel
3a	Lower tertiary education	Diplômes universitaires du premier cycle, Diplôme Universitaire de Technologie, Brevet de Technicien Supérieur, Certificat d'Aptitude Pédagogique
3b	Higher tertiary education	Diplômes universitaires des deuxième et troisième cycles, Doctorat, CAPES, Agrégation, Diplôme de Grande École

TABLE 5.A2. *Outflow rates in 1970 and 1993 from different class origins (men and women aged 25–64 currently in employment or unemployed having had a job)*

Origin	Year	I	II	IIIa	IIIb	IVa	IVb	IVc	V	VI	VIIa	VIIb	Total	DI
Men														
I	1970	**46**	13	7	3	4	3	2	9	9	4	0	100	
	1993	**48**	14	10	3	4	4	0	7	7	3	0	100	7
II	1970	27	**27**	11	1	2	4	0	9	12	7	0	100	
	1993	34	**18**	11	5	4	3	0	10	10	5	0	100	14
IIIa	1970	14	13	**12**	4	5	5	1	10	21	14	1	100	
	1993	17	17	**12**	5	2	3	1	10	22	9	2	100	10
IIIb	1970	9	9	9	**6**	3	6	1	11	21	23	2	100	
	1993	(17)	(12)	(8)	**(6)**	(0)	(7)	(0)	(5)	(25)	(20)	(0)	100	16
IVa	1970	16	7	5	5	**26**	10	1	6	13	10	1	100	
	1993	20	12	7	5	**16**	9	1	6	14	10	0	100	12
IVb	1970	10	6	8	3	11	**15**	2	7	19	17	2	100	
	1993	16	11	7	5	9	**13**	2	8	16	13	0	100	14
IVc	1970	2	2	4	2	3	4	**38**	3	12	24	6	100	
	1993	8	6	5	2	3	4	**25**	6	22	16	3	100	24
V	1970	14	13	4	5	5	4	1	**19**	23	12	0	100	
	1993	19	16	13	2	4	2	1	**13**	19	11	0	100	17
VI	1970	6	7	8	3	4	5	1	10	**33**	22	1	100	
	1993	9	8	7	3	3	4	1	12	**33**	19	1	100	6
VIIa	1970	3	6	6	3	3	3	1	10	31	**32**	2	100	
	1993	7	8	8	4	3	4	0	11	30	**24**	1	100	11
VIIb	1970	1	3	4	2	3	5	7	4	20	35	**16**	100	
	1993	4	6	6	3	3	5	2	8	29	23	**11**	100	22
Women														
I	1970	**19**	36	20	6	3	10	2	1	1	2	0	100	
	1993	**32**	30	21	9	2	2	0	1	1	2	0	100	17
II	1970	13	**43**	23	6	3	2	1	1	2	6	0	100	
	1993	16	**36**	27	10	1	3	1	1	2	3	0	100	12
IIIa	1970	5	20	**23**	15	3	10	1	0	6	16	1	100	
	1993	10	22	**34**	18	0	3	1	2	3	7	0	100	23
IIIb	1970	2	9	22	**28**	1	12	2	2	2	20	0	100	
	1993	(10)	(5)	(35)	**(18)**	(0)	(3)	(0)	(2)	(12)	(15)	(0)	100	31
IVa	1970	5	14	23	14	**7**	24	5	0	4	4	0	100	
	1993	15	24	28	13	**5**	6	2	1	3	3	0	100	26
IVb	1970	3	13	17	19	5	**22**	5	1	3	12	0	100	
	1993	8	20	31	17	3	**6**	2	1	3	7	2	100	28
IVc	1970	1	5	6	12	1	8	**47**	0	3	16	1	100	
	1993	3	15	20	22	2	5	**18**	1	3	10	1	100	38
V	1970	4	15	31	20	1	10	0	**2**	4	13	0	100	
	1993	12	23	39	15	2	2	1	**2**	2	2	0	100	26
VI	1970	2	12	20	23	2	8	3	1	**8**	21	0	100	
	1993	4	17	27	24	2	4	1	2	**6**	12	1	100	17
VIIa	1970	1	8	16	28	1	9	2	1	7	**26**	1	100	
	1993	2	12	27	27	1	4	1	1	6	**18**	1	100	16
VIIb	1970	1	4	8	32	2	6	10	1	3	26	**7**	100	
	1993	4	9	19	30	0	5	4	1	7	21	**0**	100	23

Note: Percentages in brackets correspond to a total marginal frequency of less than 100 in the survey and are therefore somewhat imprecise.

TABLE 5.A3. *Inflow rates in 1970 and 1993 for different class destinations (men and women aged 25–64 currently in employment or unemployed having had a job)*

Destination	Year	I	II	IIIa	IIIb	IVa	IVb	IVc	V	VI	VIIa	VIIb	Total	DI
Men														
I	1970	**28**	9	10	2	10	11	7	5	10	7	1	100	
	1993	**27**	14	8	1	9	5	7	7	13	8	1	100	11
II	1970	10	**11**	11	3	6	9	10	6	17	14	3	100	
	1993	12	**11**	12	1	9	5	8	9	17	14	2	100	9
IIIa	1970	6	5	**12**	3	5	13	16	2	19	15	4	100	
	1993	11	8	**11**	1	7	5	9	9	20	17	2	100	20
IIIb	1970	5	1	9	**4**	9	11	17	5	17	16	6	100	
	1993	8	9	10	**1**	10	7	9	3	19	21	3	100	20
IVa	1970	4	1	5	1	**25**	19	17	3	11	10	4	100	
	1993	8	5	4	0	**28**	11	11	5	16	10	2	100	18
IVb	1970	2	2	6	2	10	**28**	18	3	14	9	6	100	
	1993	7	4	5	1	15	**14**	11	3	21	16	3	100	26
IVc	1970	1	0	0	0	0	2	**90**	0	1	2	4	100	
	1993	1	0	1	0	2	2	**86**	1	3	2	2	100	6
V	1970	6	3	8	3	5	9	11	**8**	21	22	4	100	
	1993	7	7	8	0	5	5	9	**8**	28	20	3	100	12
VI	1970	2	2	6	2	3	9	16	4	**24**	25	7	100	
	1993	2	3	7	1	5	4	14	5	**32**	23	4	100	13
VIIa	1970	1	1	4	2	3	8	30	2	15	**23**	11	100	
	1993	2	2	4	1	5	5	15	4	28	**29**	5	100	25
VIIb	1970	1	0	1	1	1	4	47	0	6	8	**31**	100	
	1993	1	1	10	0	2	1	32	1	11	18	**23**	100	27
Women														
I	1970	**32**	12	9	1	8	10	8	4	9	6	1	100	
	1993	**34**	11	9	1	12	5	5	7	10	5	1	100	10
II	1970	17	**11**	10	2	7	11	11	4	15	10	2	100	
	1993	15	**11**	9	0	9	6	11	7	19	11	2	100	10
IIIa	1970	7	5	**8**	3	8	12	12	6	19	17	3	100	
	1993	8	6	**10**	1	7	7	11	8	22	18	2	100	10
IIIb	1970	2	1	5	**3**	4	11	19	3	18	24	10	100	
	1993	4	3	7	**1**	5	5	16	4	26	24	5	100	16
IVa	1970	6	3	6	1	**17**	20	16	1	14	11	5	100	
	1993	(10)	(4)	(1)	(0)	**(21)**	(13)	(15)	(6)	(21)	(9)	(0)	100	21
IVb	1970	5	1	5	3	12	**21**	22	3	11	13	4	100	
	1993	5	4	6	1	12	**9**	18	3	21	17	4	100	18
IVc	1970	1	0	1	0	2	3	**85**	0	2	2	4	100	
	1993	1	3	1	0	3	3	**73**	2	5	6	3	100	13
V	1970	7	4	4	6	3	10	6	**6**	18	27	9	100	
	1993	(8)	(3)	(10)	(1)	(8)	(6)	(9)	**(9)**	(33)	(12)	(1)	100	33
VI	1970	1	2	9	1	5	6	16	2	**26**	27	5	100	
	1993	3	3	5	3	6	5	10	3	**32**	25	5	100	13
VIIa	1970	1	1	5	3	1	7	27	2	18	**25**	10	100	
	1993	2	2	6	1	3	4	16	1	27	**31**	7	100	20
VIIb	1970	(0)	(0)	(4)	(0)	(0)	(4)	(39)	(0)	(2)	(9)	**(42)**	100	
	1993	(0)	(0)	(6)	(0)	(2)	(18)	(15)	(3)	(36)	(18)	**(2)**	100	64

Note: Percentages in brackets correspond to a total marginal frequency of less than 100 in the survey and are therefore somewhat imprecise.

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6 The Italian Mobility Regime: 1985–97

Maurizio Pisati and Antonio Schizzerotto

During the period 1985–97 Italy has undergone some structural changes and only a few minor variations in its institutional arrangements. The most important structural changes related to social mobility processes are represented by (1) the constant, though slow, upgrading of the occupational structure; and (2) the upward shift in educational attainment. As regards the occupational structure, it should be noted that—on the whole—classes I + II (service class), IIIa (routine non manual employees), and V + VI (skilled working class) have expanded. On the contrary, the two agricultural classes and the unskilled working class have shrunk (see Table 6.1). This pattern of change is basically the same for both men and women, with the single exception of the service class. Expressly, during the period 1985–97, the weight of class I+II has increased among men but decreased somewhat among women.

TABLE 6.1. *Occupational class distribution, by sex and year*[a]

Class	1985		1997		Total labour force	
	Men	Women	Men	Women	1985	1997
I + II	20.8	32.6	25.6	29.1	24.6	27.0
IIIa	10.0	15.4	11.9	21.4	11.7	15.7
IVab	22.1	17.4	20.8	16.6	20.6	19.1
IVc	5.2	4.6	2.2	1.2	5.0	1.8
V + VI	20.4	2.5	22.4	5.5	14.7	15.6
VIIa	18.8	25.0	14.7	23.6	20.8	18.3
VIIb	2.7	2.5	2.4	2.6	2.6	2.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
N	1,695	797	2,779	1,855	2,492	4,634
Δ	11.7		11.1		3.7	

[a] Italian men and women in the labour force at the time of the interview, 1985 and 1997.

Leaving aside gender disparities in the distribution of occupational classes, it is worth noting that usually the structural changes described above are interpreted as signs of the transition from an industrial to a post-industrial economy. However, this is not entirely true in the case of Italy. Industry still represents the widest productive sector in the Italian economy. And in fact the skilled and unskilled working classes, taken together, currently are the same size as during the 1980s (see Table 6.1).

As mentioned above, during the period 1985–97 educational stratification has changed as well. The proportion of Italians aged 18–65 with a university degree has increased from 5 to 8 percent, while the proportion of people with upper secondary school diplomas has grown from 24 to 32 percent. Despite this expansion of higher school qualifications, no real and stable reduction of class inequality in terms of educational opportunities has occurred (Schizzerotto 1997).

Turning to institutional arrangements related to social mobility processes, the regulation of the Italian labour market, already strict in the mid-1970s, had become even more rigid during the 1980s. Since the beginning of the 1990s, however, some of these rigidities have weakened, and both hiring and dismissal procedures have been slightly relaxed. In particular, some types of flexible contracts have been introduced, i.e. fixed-term, work-training, and temporary contracts. Yet, most of these changes have only affected the degree of job protection enjoyed by young people, rather than increasing the flexibility of the whole Italian labour market.

This persistent rigidity becomes particularly evident when we consider the high degree of credentialism that continues to characterise the Italian labour market. Despite the little attention to the requirements of the economy paid by the Italian post-compulsory school system, Italy shows—together with Germany—the highest occupational returns to education in Europe (Schizzerotto 1997; Müller and Shavit 1998). Educational qualifications still possess a legal value in Italy. Therefore, Italian firms can hire young university graduates or high-school diploma holders using fixed term, work-training, and temporary contracts, but they cannot assign them manual tasks. Moreover, because of the low chances of upward career mobility allowed by Italian work career regulation (Pisati and Schizzerotto 1999; Bernardi et al. 2000), very few graduates or diploma holders would accept such menial jobs. As a consequence, most people with higher school qualifications start their career from white-collar positions.

The above picture applies also to young people hired through atypical contracts. As mentioned above, the degree of job stability they are experiencing has diminished in comparison with that of (older) persons appointed through a standard contract. This change, however, does not imply that the link between educational level and occupational class has weakened. On the contrary, as we shall see later, there are good reasons to believe that

the differences between educational qualifications in terms of occupational returns have slightly increased over time. Put another way, highly educated young people accept that they will not, initially, have permanent employment, provided that the class position of their job corresponds to their expectations.

In Italy, career progression is governed by collective contracts. To date, an egalitarian and corporatist approach has prevailed in the regulation of career steps. As a consequence, work careers display a bureaucratic pattern being linked mainly to seniority, rather than to ability and commitment to work (Pisati and Schizzerotto 1999). This is one of the reasons why, as we said above, Italy displays very low rates of intragenerational class mobility. In the case of manual workers, there is a second reason that can account for their low chances of upward career mobility. About one third of them are employed in very small firms where there is no real internal hierarchy of positions. As a consequence, manual workers in these very small firms have little chance of ascending the class structure. Nor can they do that by looking for a job in a bigger firm, because in the north-eastern and central Italian regions, where the small firms are concentrated in so-called 'industrial districts', practically no mid-size or large firms exist.

Research hypotheses

In the light of the above picture—limited changes in the occupational structure and educational stratification, and substantial stability of the rules governing both labour market entrance and subsequent work career—we do not expect any major variation in the Italian intergenerational mobility regime during the period 1985–97. The only minor changes we expect concern the flows between the two white-collar classes on the one hand, and the two urban working classes on the other. Expressly, we hypothesise that the social barriers that hinder the intergenerational movements between these two groups of classes have somewhat heightened during the last fifteen years.

This hypothesis stems from two basic facts: (1) the increasingly credentialistic character of the Italian labour market; and (2) the increasing rigidity of the rules regulating work careers of Italians. As shown elsewhere (Schizzerotto 1997; Bernardi et al. 2000), long-term unemployment of highly qualified young people—rather than a decline in the market value of educational credentials—is the Italian answer to the increasing supply of upper secondary school diplomas and university degrees. This means that a decreasing number of people with compulsory school qualifications can enter a white-collar class position at the beginning of their work career. And most of these poorly qualified people are sons and daughters of manual workers. In other words,

high school and university degrees have become a more stringent requirement for entry into junior and senior white-collar positions than they used to be.

The credentialist rules governing hiring procedures both in the public and the private sector are not the only closure mechanism that low-educated children of manual workers have to face when entering the labour market. The second one is the already mentioned low chances of career mobility observed in Italy, mainly among those who start from working class positions (Cobalti and Schizzerotto 1994; Pisati and Schizzerotto 1999). The effect of this mechanism is now stronger than in the past because currently the first career step is not from a lower to a higher class position, but rather from an insecure to a stable job *within the same class.* Almost no Italian manual worker—independently of his/her commitment, ability, level of education, or quality of on-the-job training—succeeds in attaining a white-collar class position during the life course. This is particularly the case for people employed in the public sector or in mid-size and large private firms, where the corporatist rules governing careers are mostly effective.

Data and variables

The data used in this chapter come from two different sources. The 1985 data are drawn from the *Indagine Nazionale sulla Mobilità Sociale* (National Survey on Social Mobility), conducted by the universities of Bologna, Trento, and Trieste (Barbagli 1988; Cobalti 1988; de Lillo 1988; Schizzerotto 1988; Cobalti and Schizzerotto 1994). This survey was carried out on a representative sample of non-institutionalised Italian men and women aged 18–65 and residing in Italy at the time of the interview. The sample design was a stratified three-staged one. The 8,055 Italian municipalities were taken as the primary sampling units (PSUs) and divided into twenty strata defined by two variables: geographical location (north-west, north-east, centre, south, and islands) and size (less than 20,000 residents, 20,000–50,000 residents, 50,000–100,000 residents, and more than 100,000 residents). The forty-eight municipalities with more than 100,000 residents were included in the sample as self-representing PSUs. Within each of the remaining fifteen strata, a simple random sample of municipalities was extracted; in total, 241 municipalities were selected. Next, within each of these municipalities a simple random sample of electoral precincts (taken as the secondary sampling units) was extracted, for a total of 2,057 units. Finally, using the population register as the sampling frame, a simple random sample of individuals aged 18–65 was drawn from each electoral precinct; 5,016 personal interviews were successfully accomplished.

The 1997 data, in turn, come from the first wave of the *Indagine Longitudinale sulle Famiglie Italiane* (Italian Household Longitudinal Survey),

conducted by a consortium made up of three Italian universities (Trento, Milano, and Bologna) and other non-academic institutions (Istituto Trentino di Cultura and Istat). This survey was carried out on a representative sample of non-institutionalised Italian men and women aged eighteen or older and residing in Italy at the time of the interview (Schizzerotto 2002). The sample design was a stratified two-staged one. The 8,104 Italian municipalities were taken as the PSUs and divided into forty-two strata defined by two variables: region and municipality type (metropolitan, suburban, other). The twelve metropolitan municipalities were included in the sample as self-representing PSUs. Within each of the remaining thirty strata, a random sample of municipalities was extracted with probabilities proportional to the number of residents; in total, 248 municipalities were selected. Next, within each of these municipalities a simple random sample of households was extracted, using the population registry list as the sampling frame; on the whole, 4,637 households were selected. Within each household, all individuals aged eighteen or older were defined as eligible for interview. Overall, 9,770 personal interviews were successfully accomplished.

Since both the 1985 and the 1997 data come from surveys based on a complex sample design, our significance tests—based on the assumption of simple random sampling—are likely to be biased. However, an exploratory analysis has shown that design effects tend to be fairly small, ranging in most cases from 0.8 to 1.2. Therefore, no attempt has been made to incorporate the complexity of the sample design in the analysis.

In this paper we restrict our attention to Italian men and women in the labour force and aged 24–65 at the time of the interview. The upper age limit has been dictated by the characteristics of the 1985 data (see above). On the other hand, respondents aged 18–23 have been excluded from the analysis because, at the time of the interview, only a relatively small number of them had already entered the labour market; thus, if included in the analysis, these individuals would have given a biased representation of their cohort (cf. Hout 1988: 1366). After these restrictions, the 1985 dataset includes 2,492 cases and the 1997 dataset includes 4,637 cases. Because of missing values on respondent's occupational class, three subjects (0.06 percent) have been excluded from the 1997 dataset; because of missing values on father's occupational class, we have also dropped 88 cases (3.5 percent) from the 1985 dataset and 291 additional cases (6.3 percent) from the 1997 dataset. In the end, the total number of valid cases is 2,404 (1,640 men and 764 women) for 1985, and 4,343 (2,593 men and 1,750 women) for 1997.

As regards variables, social origin is defined as father's occupational class when the respondent was fourteen years old; on the other hand, social destination is defined as the respondent's current (relative to interview time) occupational class or, in the case of the unemployed, most recent class. Both social origin and social destination have been classified according to

a modified version of the seven-category Erikson–Goldthorpe class schema (Erikson and Goldthorpe 1992: 38–9). In this modified version, classes IIIa and IIIb are kept apart, and the latter is merged with class VIIa.

Trends in absolute rates of mobility

We begin our analysis by considering absolute rates of mobility and their trends over time. Table 6.2 shows how men's total mobility rate and its components have changed during the period 1985–97.[70] As we can see, consistent with our expectations no major transformation has occurred. In 1985 about seven men out of ten occupied a class position different from their father's. Given the massive upgrading of the occupational structure that took place in Italy after the Second World War, most of this mobility (about two-thirds) was vertical; in turn, most vertical mobility (a bit more than two-thirds) was upward mobility, testifying to the constant movement of sons of farmers, agricultural workers, and blue-collar workers into the ever-growing white-collar positions. Twelve years later this picture appears virtually unaltered. The only visible change regards upward mobility, which increased somewhat as a consequence of the continuing occupational upgrading (see the appendix tables).

If we turn to women (Table 6.3), in the first place we can see that—as in the case of men—no significant change has occurred between 1985 and 1997. Moreover, on the whole women's total mobility rate and its components do not exhibit any major departure from men's, with one exception: downward mobility is somewhat more likely among women than among men. Women's higher risk of being downwardly mobile clearly reflects the presence—in the Italian labour market—of a certain degree of occupational segregation by sex (cf. Cobalti and Schizzerotto 1994; Pisati 1995; Chiesi 1997). In fact, while the distribution of social origins (i.e. father's occupational class) is basically the same for men and women, the distribution of social destinations is largely affected by sex. In this regard, as far as downward mobility rates are concerned,

TABLE 6.2. *Decomposition of total mobility rates (TMR) into total vertical (TV) and total non-vertical (TNV) mobility, and of total vertical mobility into total upward (TU) and total downward (TD) mobility, by year (Italian men, 1985 and 1997)*

Year	TMR	TV	TNV	TV/TNV	TU	TD	TU/TD
1985	68.7	44.6	24.1	1.9	30.6	14.0	2.2
1997	70.8	49.7	21.1	2.4	37.7	12.0	3.1

[70] The decomposition of the total mobility rate has been carried out following Erikson and Goldthorpe's (1992: 195) guidelines.

TABLE 6.3.*Decomposition of total mobility rates (TMR) into total vertical (TV) and total non-vertical (TNV) mobility, and of total vertical mobility into total upward (TU) and total downward (TD) mobility, by year (Italian women, 1985 and 1997)*

Year	TMR	TV	TNV	TV/TNV	TU	TD	TU/TD
1985	71.2	52.0	19.2	2.7	34.8	17.2	2.0
1997	74.1	53.7	20.4	2.6	34.6	19.1	1.8

it is worth noting that both in 1985 and in 1997 women turned out to be decidedly overrepresented in the unskilled industrial and service working class (VIIa + IIIb).[71]

Since our mobility tables tend to mix experiences of individuals of very different ages, and given the relatively short span considered herein, the analysis documented in Table 6.2 and 6.3 is probably not adequate to detect any significant trend over time. Therefore, we have pursued a different analytical strategy, estimating trends in the total mobility rate and its components by means of a cohort analysis. Specifically, assuming that in Italy most individuals reach occupational maturity in their late thirties (Pisati and Schizzerotto 1999, 2000), in the first place we have selected men and women aged 37–65 at the moment of the interview, that is, born between 1920 and 1960. Then, using lowess regression (Cleveland 1979), we have estimated the probability of being immobile, non-vertically mobile, upwardly mobile, and downwardly mobile for each year of birth.

Figure 6.1 displays the results of our cohort analysis for men. Since no major change in social fluidity has occurred during the period considered (see below; also Cobalti and Schizzerotto 1994; Pisati 2000), the trends in absolute rates of mobility shown by this graph can be ascribed to the evolution of the occupational structure that took place in Italy in the post-war period. For about three decades, the relentless contraction of the agricultural working class (VIIb), associated with the progressive expansion of the two upper classes (I + II and IIIa), has produced, on the one hand, a steady growth in the upward mobility rate, and, on the other, a decline in the downward mobility, non-vertical mobility, and immobility rates. In the 1980s the Italian occupational structure has started to approach maturity and, therefore, the occupational upgrading has slowed down considerably. As a consequence, the downward mobility rate has stopped decreasing; likewise, the upward mobility rate has halted its run and started to reduce, leaving room for an increase in the immobility rate.

As regards women, the picture offered by Fig. 6.2 is somewhat less clear-cut than that concerning men. A careful examination of this figure, however, suggests that—on the whole—trends in women's absolute rates of mobility

[71] For details, see the appendix tables.

FIG. 6.1. *Smoothed immobility, non-vertical mobility, upward mobility, and downward mobility rates, by year of birth for Italian men aged 37–65 at the time of the interview*

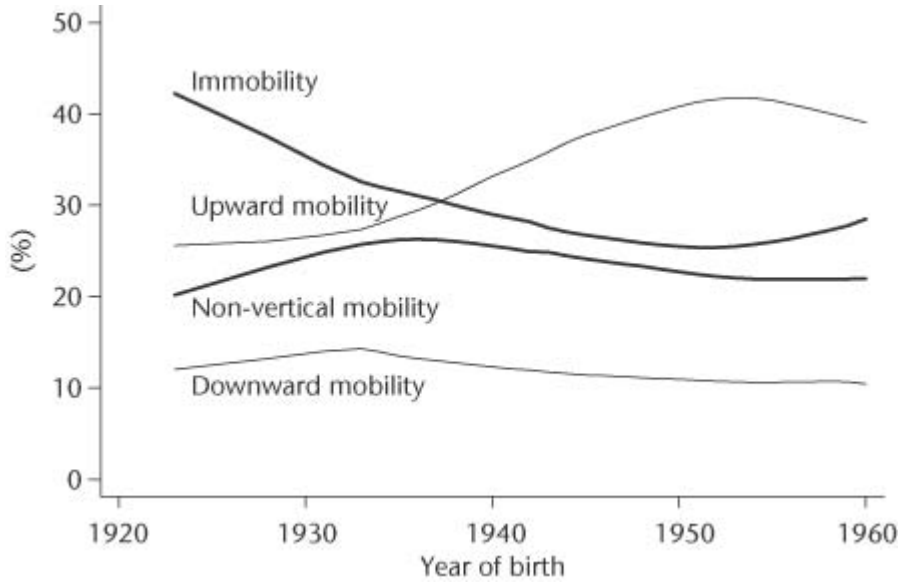
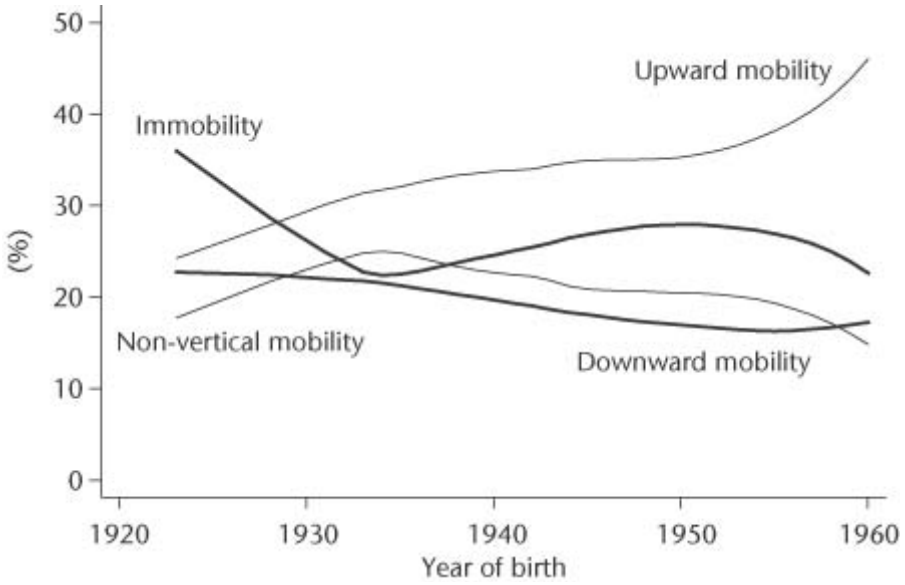


FIG. 6.2. *Smoothed immobility, non-vertical mobility, upward mobility, and downward mobility rates, by year of birth for Italian women aged 37–65 at the time of the interview*



approximate those observed among men, though with a ten-year delay. In fact, in the youngest cohort the upward mobility rate is still increasing, the downward mobility rate is substantially stable, and the non-vertical mobility and immobility rates keep following a negative trend. These results suggest that women's participation in the labour force is still far from

maturity, a conclusion consistent with the relatively low female activity rate observed in Italy (cf. Chiesi 1997).

The analysis of social fluidity

To investigate men's and women's social fluidity patterns and their variation between 1985 and 1997, we have employed standard log-linear analysis. To devise the preferred log-linear model, we have followed a two-step procedure. First, drawing from Erikson and Goldthorpe's (1992: 121–31) core fluidity model, our own research (Cobalti and Schizzerotto 1994; Pisati 1997), and the hypothesis outlined, we have formulated a theoretical model that accounts for the mobility propensities (or chances) exhibited by both Italian men and women in terms of a small set of underlying social mechanisms.[72] This model has been translated into the following hybrid log-linear model:

$$\ln(F_{ij}) = \lambda + \lambda_i^O + \lambda_j^D + \beta^X x_i x_j + \beta^{IN1} d_{ij}^{IN1} + \beta^{IN2} d_{ij}^{IN2} + \beta^{IN3} d_{ij}^{IN3} + \beta^{SE} d_{ij}^{SE} + \beta^{HI1} d_{ij}^{HI1} + \beta^{HI2} d_{ij}^{HI2}$$

where i indicates origins, j indicates destinations, and F_{ij} denotes the expected frequency in cell (i, j). To simplify notation, the above equation can be re-expressed as follows:

$$\ln(F_{ij}) = O + D + X + IN1 + IN2 + IN3 + SE + HI1 + HI2$$

As we can see, our model states that the pattern of social fluidity—as represented by the typical intergenerational mobility table—is a function of seven components. Table 6A.13 in the appendix describes these. The first one—denoted by X—is a linear-by-linear interaction (Hout 1983: 53) that represents a general hierarchical effect. This component is made up of three elements: the origin scores x_i, the destination scores x_j, and the association parameter β^X. The origin scores are seen as expressing the amount of general resources for mobility that—on average—each individual can draw from his or her class of origin (cf. Hout 1984; Breen 1987; Yamaguchi 1987; Breen and Whelan 1993, 1994). On the other hand, destination scores can be seen as expressing the degree of desirability that—on average—people attribute to each class of destination, *regardless* of their social origin. Finally, the association parameter expresses the overall strength of the general hierarchical effect, that is, the intensity with which class inequality in terms of available

[72] Our basic assumption, here, is that the mechanisms postulated by the model underlie the mobility propensities of men and women alike, both in 1985 and in 1997. On the other hand, the *intensity* with which such mechanisms operate may vary by gender, as well as over time.

general resources (inequality of condition) affects class inequality in terms of mobility chances (inequality of opportunity). On the whole, X represents the following mechanism: in the competition for accessing destination D_j rather than destination D_j* (where the first is more desirable than the second), the *advantage* that individuals of origin O_i have over individuals of origin O_i* (where the former are better-off that the latter) will increase as (1) the resource differential ($x_i - x_i$*) increases; (2) the desirability differential ($x_j - x_j$*) increases; and (3) the value taken by the association parameter β^X increases. Since education is recognised as both the most general resource for mobility and the best predictor of socio-economic status, we have chosen to express both the amount of general resources and the degree of desirability of each class by means of the average years of education observed in that class when considered as a destination (see Table 6.A13).

Moving to the following components, it is well known that in every mobility table diagonal cells typically display large frequencies, indicating a relatively high propensity for individuals to follow in their father's footsteps. The general hierarchical effect accounts for some of this immobility by means of a very simple mechanism: the higher the degree of desirability attributed to a given class, the higher the propensity to remain in that class. By itself, however, this mechanism is not able to explain all the observed immobility. Therefore, we have included in our model three additional inheritance effects. The first—denoted by IN1—is represented by an indicator variable that takes the value 1 in all the diagonal cells, and 0 otherwise; this component expresses a general propensity for immobility that characterises the members of all classes alike. The second inheritance effect—denoted by IN2—embodies the role played by the intergenerational transmission of economic capital; as such, it is expressed by an indicator variable that takes the value 1 in the two cells that represent immobility in classes IVab and IVc, and 0 otherwise.[73] The last inheritance effect—denoted by IN3—is expressed by an indicator variable that takes the value 1 in the two cells that represent immobility in classes IVc and VIIb, and 0 otherwise; this component has been included in the model to account for the 'social viscosity' that typically characterises the agricultural classes due to the cultural barriers that separate rural from urban society (cf. Erikson and Goldthorpe 1992).

The fifth component of our model—denoted by SE—represents a sector effect that postulates the existence of specific barriers that make it particularly difficult to move between agricultural and non-agricultural classes. The sixth component—denoted by HI1—is included in the model to express a specific hierarchical effect that adds to the general hierarchical effect represented by X. This component underscores the social distance—in terms of both social and cultural resources—that separates agricultural manual workers (class VIIb)

[73] Class I + II has been excluded from the specification of this effect because the proprietors it includes (i.e. large entrepreneurs and self-employed professionals) represent only a small share of the whole class.

from urban non-manual workers (classes I + II and IIIa); the movements between these positions can be regarded as particularly difficult to carry out because they involve the crossing of two social boundaries at once: one that separates urban from rural society, and another that divides manual and non-manual work.

Finally, the seventh component—denoted by HI2—represents a supplementary specific hierarchical effect implied by our hypothesis about change over time. This component adjusts the chances of moving between the two white-collar classes (I + II and IIIa) on the one hand, and the two blue-collar classes (V + VI and VIIa + IIIb) on the other. For the reasons outlined earlier, we expect that the movements between these two groups of classes are more difficult in 1997 than in 1985.

Once specified, our social fluidity model has been tried out by fitting it to the 1997 men's mobility table.[74] The analysis of the parameter estimates thus obtained has shown that all the effects postulated by the model contributed to generating the observed mobility regime as expected. However, the inspection of cell residuals has also pointed out a significant and systematic lack of fit in six cells: (1) the two representing the flows between class I + II and the urban petty bourgeoisie (class IVab); and (2) the four representing the movements between the white-collar classes (I + II and IIIa) and the unskilled urban working class (VIIa + IIIb). The residuals belonging to the first group were positive, indicating the existence of an unanticipated affinity between the upper class and the urban petty bourgeoisie, namely one that facilitates the movements between them. The other residuals were positive as well, suggesting that our specific hierarchical effect HI2 was misspecified; precisely, the values taken on by these residuals revealed that while it is proper to include in the model an effect that adjusts the chances of moving between the two white-collar classes and the skilled blue-collar class (V + VI), there is no need for such an adjustment as far as the flows between the two white-collar classes and the unskilled blue-collar class (VIIa + IIIb) are concerned.

To remedy the lack of fit that emerged from our preliminary analysis, we have modified our initial model as follows. First, we have revised effect HI2 so as to exclude from its specification movements between the two white-collar classes and class VIIa + IIIb (Table 6.A13 shows these revised matrices). Second, we have included in the model an additional component—denoted by AF—representing the affinity between class I + II and class IVab. After these amendments, our preferred log-linear model for the analysis of the Italian mobility regime can be formulated as follows:

$$\ln(F_{ij}) = \lambda + \lambda_i^O + \lambda_j^D + \beta^X x_i x_j + \beta^{\mathrm{IN1}} d_{ij}^{\mathrm{IN1}} + \beta^{\mathrm{IN2}} d_{ij}^{\mathrm{IN2}} + \beta^{\mathrm{IN3}} d_{ij}^{\mathrm{IN3}} + \beta^{\mathrm{SE}} d_{ij}^{\mathrm{SE}} + \beta^{\mathrm{HI1}} d_{ij}^{\mathrm{HI1}} + \beta^{\mathrm{HI2}} d_{ij}^{\mathrm{HI2}} + \beta^{\mathrm{AF}} d_{ij}^{\mathrm{AF}}$$

[74] This is the table with the larger number of cases.

or, using the simplified notation:

$$\ln (F_{ij}) = O + D + X + \text{IN1} + \text{IN2} + \text{IN3} + \text{SE} + \text{HI1} + \text{HI2} + \text{AF}$$

Table 6.4 reports the goodness-of-fit statistics pertaining to several log-linear models applied to the data for men. The first part of the table compares the performances of five models applied to the origin-by-destination-by-year table: the conditional independence model, the constant social fluidity model (CnSF), the Unidiff model with full-interaction baseline pattern of association (Erikson and Goldthorpe 1992; Xie 1992), the Erikson–Goldthorpe core fluidity model with time-varying effects (Erikson and Goldthorpe 1992), and our preferred model with time-varying effects. As we can see, the constant social fluidity model does not fit the data sufficiently well, suggesting that some change did take place in the mobility regime of men between 1985 and 1997. The parameter estimates of the Unidiff model indicate that, on the whole, this change has been towards a slight decrease in inequality, though the model itself does not fit any better than the constant social fluidity model. The core fluidity model with time-varying effects significantly improves on parsimony, but its fit is far from being satisfactory. On the other hand, our

TABLE 6.4. *Goodness-of-fit statistics for selected log-linear models applied to the origin-by-destination-by-year table (Italian men, 1985 and 1997)*

Model	*N*	G^2	d.f.	*p*	rG^2	Δ	Bic
Models applied to table ODY							
Conditional independence	4,233	1,307.8	72	0.00	—	19.8	706.5
CnSF	4,233	56.5	36	0.02	95.7	4.0	−244.2
Unidiff[a]	4,233	53.5	35	0.02	95.9	3.9	−238.8
Core fluidity (time-varying effects)	4,233	155.9	56	0.00	88.2	5.9	−311.7
Preferred (time-varying effects)	4,233	66.5	56	0.16	95.0	3.7	−401.1
Models applied to table OD|Y = 1985							
Independence	1,640	616.9	36	0.00	—	20.7	350.4
Core fluidity	1,640	72.3	28	0.00	88.3	5.8	−135.0
Preferred	1,640	26.6	28	0.54	95.7	3.6	−180.7
Models applied to table OD|Y = 1997							
Independence	2,593	702.9	36	0.00	—	19.3	419.9
Core fluidity	2,593	83.6	28	0.00	88.1	6.0	−136.5
Preferred	2,593	40.0	28	0.07	94.3	3.7	−180.1

[a] Scaled parameters: 1985 5 1.00; 1997 5 0.90.

preferred model brings together both parsimony and an acceptable fit; therefore, it can be regarded as an adequate representation of the Italian men's mobility regime and its changes over time. This conclusion is corroborated by the fact that—as the second part of Table 6.4 shows—our model provides a good fit not only to the 1997 data (which guided the ad hoc refinement of our model), but also the 1985 data.

The information reported in Table 6.5 gives further support to our model, showing that it fits the women's data as satisfactorily as the men's. The statistics associated with the constant social fluidity model also suggest that no significant change has occurred in the mobility regime of women during the period 1985–97.

Having established the adequacy of our social fluidity model, we can now focus our attention on the values taken by its parameters in each of the four mobility tables which are the object of our analysis. The examination of these values will allow us to detect the sources, magnitude, and direction of change in mobility chance inequality that took place in Italy between 1985 and 1997.

Starting with men, Table 6.6 reports maximum likelihood estimates of effect parameters and corresponding standard errors for both 1985 and 1997. To highlight the degree of uncertainty that surrounds parameter estimates and facilitate the comparison between 1985 and 1997, we also present kernel

TABLE 6.5. *Goodness-of-fit statistics for selected log-linear models applied to the origin-by-destination-by-year table (Italian women, 1985 and 1997)*

Model	*N*	G^2	d.f.	*p*	rG^2	Δ	Bic
Models applied to table ODY							
Conditional independence	2,514	622,6	72	0.00	—	17.6	58.7
CnSF	2,514	35.6	36	0.49	94.3	3.6	−246.3
Unidiff[a]	2,514	35.1	35	0.46	94.4	3.5	−239.0
Core fluidity (time-varying effects)	2,514	106.4	56	0.00	83.6	5.8	−332.1
Preferred (time-varying effects)	2,514	60.4	56	0.32	90.7	4.2	−378.1
Models applied to table OD|Y = 1985							
Independence	764	260.9	36	0.00	—	20.6	21.9
Core fluidity	764	31.8	28	0.28	87.8	5.4	−154.1
Preferred	764	33.8	28	0.21	87.0	5.3	−152.1
Models applied to table OD|Y = 1997							
Independence	1,750	386.5	36	0.00	—	16.4	117.7
Core fluidity	1,750	74.6	28	0.00	80.7	6.0	−134.5
Preferred	1,750	26.6	28	0.54	93.1	3.6	−182.5

[a] Scaled parameters: 1985 5 1.00; 1997 5 0.93.

TABLE 6.6. *Maximum likelihood estimates of selected parameters and corresponding standard errors for the preferred log-linear model (Italian men, 1985 and 1997)*

Effects	1985		1997		1997–85	
	$\hat{\beta}$	$\hat{\sigma}(\hat{\beta})$	$\hat{\beta}$	$\hat{\sigma}(\hat{\beta})$	$\hat{\beta}$	$\hat{\sigma}(\hat{\beta})$
Inheritance effect 1	0.32	0.09	0.22	0.07	−0.10	0.12
Inheritance effect 2	0.75	0.17	0.94	0.14	0.18	0.23
Inheritance effect 3	1.31	0.31	0.42	0.26	−0.89	0.41
Sector effect	−0.50	0.20	−0.65	0.14	−0.15	0.25
General hierarchical effect	0.45	0.05	0.48	0.04	0.02	0.06
Specific hierarchical effect 1	−1.16	0.32	−0.05	0.19	1.11	0.37
Specific hierarchical effect 2	0.23	0.12	−0.21	0.10	−0.44	0.16
Affinity effect	−0.00	0.15	0.43	0.11	0.43	0.19
	$\hat{\kappa}$	$\hat{\sigma}(\hat{\kappa})$	$\hat{\kappa}$	$\hat{\sigma}(\hat{\kappa})$	$\hat{\kappa}$	$\hat{\sigma}(\hat{\kappa})$
Overall association	0.92	0.06	0.73	0.04	−0.19	0.08

density estimates of effect parameters for both years[75] (Fig. 6.3). Overall we can notice that—consistent with our expectations—the Italian men's mobility regime has undergone no major change during the period considered. This conclusion rests on the fact that the general hierarchical effect, which represents by far the most important source of mobility chance inequality in both years,[76] does not exhibit any significant variation. The general inheritance effect (IN1), the petty bourgeoisie inheritance effect (IN2), and the sector effect show no substantial sign of change as well.

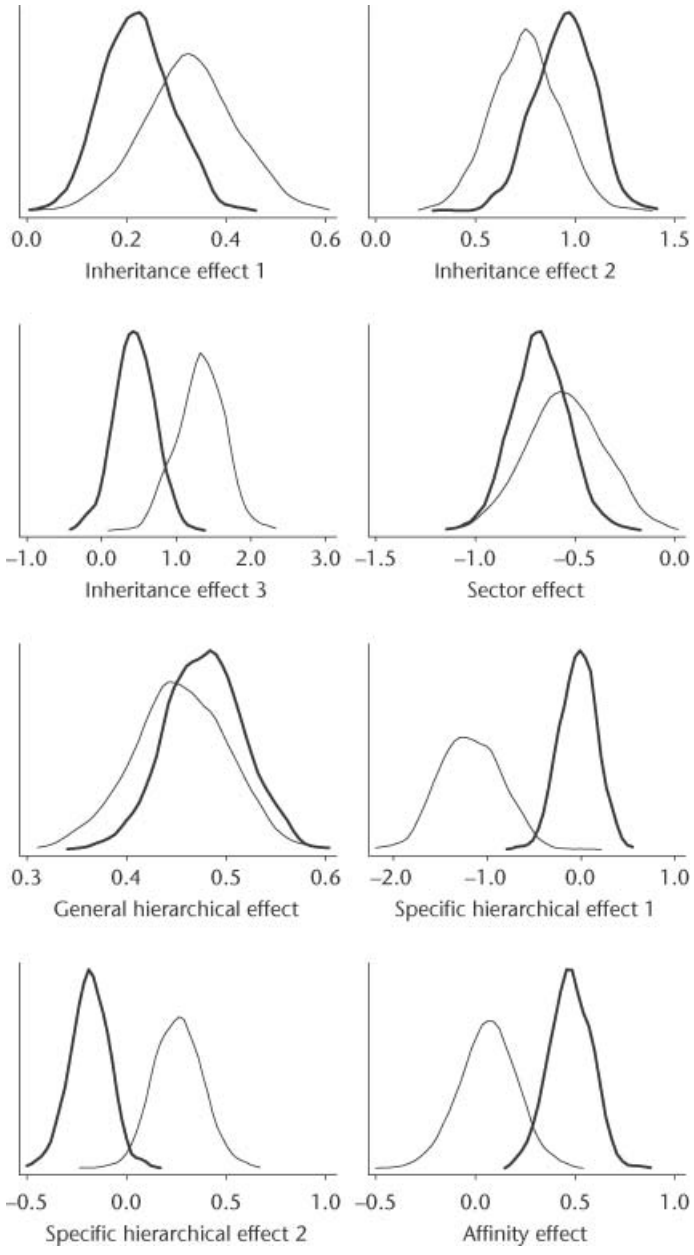
On the other hand, all the other effects do vary significantly over time. First, the affinity between the urban petty bourgeoisie (class IVab) and the upper class (I + II) has increased somewhat, making the movements between these two classes more fluid. Second, the traditional viscosity of the agricultural classes seems to have weakened: on the one hand, immobility within classes IVc and VIIb (i.e. inheritance effect 3) has decreased considerably; on the other hand, the chances of moving between the agricultural working class and the two non-manual classes (I + II and IIIa)—though still very low—have increased during the period considered.[77] Finally, the specific hierarchical effect 2 takes a positive value in 1985, but becomes negative in 1997.

[75] Kernel densities have been computed by applying the simulation-based approach recently set forth by King et al. (2000).

[76] By itself, this effect accounts for about 70% of the total origin–destination association both in 1985 and in 1997.

[77] This change corresponds to a decrease in the specific hierarchical effect 1.

FIG. 6.3.*Kernel density estimates of effect parameters for the preferred log-linear model. Italian men, 1985 (thin line) and 1997 (thick line)*



Consistently with our research hypothesis, this change indicates that while in 1985 the movements between the skilled urban working class (V + VI) and the two white-collar classes were easier than expected on the basis of the general hierarchical effect alone, twelve years later the situation has reversed: moving between these two groups of classes has become more difficult than one would expect by taking into account only class inequality in terms of available general resources.

On the whole—as already suggested by the parameters of the Unidiff model—the changes that occurred between 1985 and 1997 have produced greater social fluidity. As shown in Table 6.6, the overall degree of association between origin and destination—as measured by the kappa index (Hout et al. 1995)—has dropped from 0.92 to 0.74: a small but statistically significant change.[78]

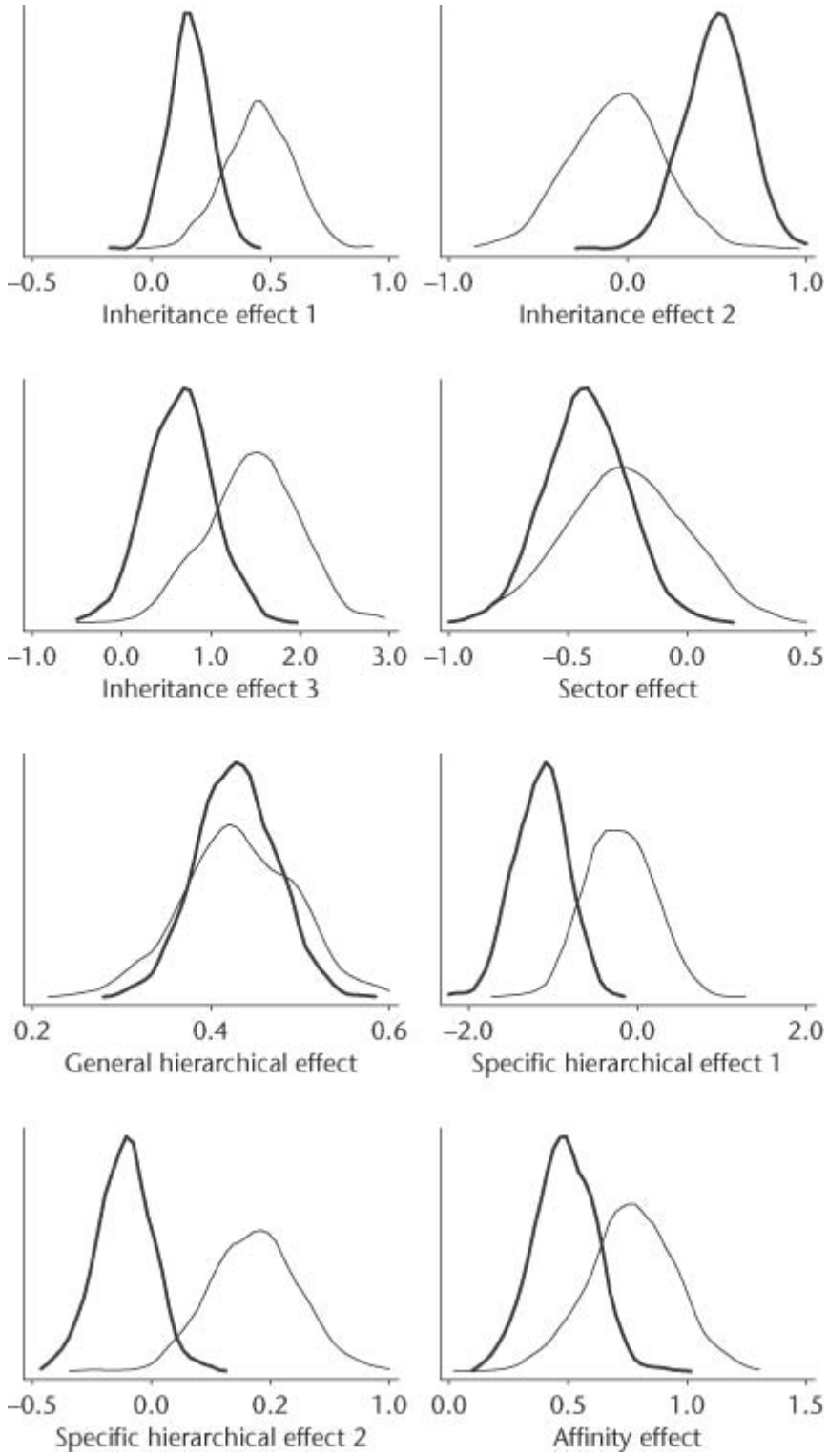
Turning to women, Table 6.7 and Fig. 6.4 reveal less signs of change in social fluidity than we have observed among men. As before, the general hierarchical effect, the general inheritance effect, the petty bourgeoisie inheritance effect, and the sector effect do not exhibit any statistically significant variation over time. In addition, a substantial stability is observed in inheritance effect 3, the affinity effect, and the specific hierarchical effect 1. Consistently with our research hypothesis, a statistically significant change is observed only in the specific hierarchical effect 2, whose decrease over time

TABLE 6.7.*Maximum likelihood estimates of selected parameters and corresponding standard errors for the preferred log-linear model (Italian women, 1985 and 1997)*

Effects	1985		1997		1997–85	
	$\hat{\beta}$	$\hat{\sigma}(\hat{\beta})$	$\hat{\beta}$	$\hat{\sigma}(\hat{\beta})$	$\hat{\beta}$	$\hat{\sigma}(\hat{\beta})$
Inheritance effect 1	0.45	0.14	0.16	0.09	−0.29	0.17
Inheritance effect 2	0.03	0.29	0.61	0.18	0.59	0.34
Inheritance effect 3	1.48	0.52	0.63	0.37	−0.84	0.64
Sector effect	−0.23	0.27	−0.43	0.19	−0.20	0.33
General hierarchical effect	0.45	0.07	0.44	0.05	−0.00	0.08
Specific hierarchical effect 1	−0.23	0.41	−1.20	0.30	−0.96	0.51
Specific hierarchical effect 2	0.47	0.19	−0.09	0.12	−0.56	0.22
Affinity effect	0.77	0.18	0.49	0.12	−0.28	0.22
	$\hat{\kappa}$	$\hat{\sigma}(\hat{\kappa})$	$\hat{\kappa}$	$\hat{\sigma}(\hat{\kappa})$	$\hat{\kappa}$	$\hat{\sigma}(\hat{\kappa})$
Overall association	0.71	0.07	0.78	0.06	0.07	0.09

[78] Standard errors of the kappa indices have been computed by applying the simulation-based approach of King et al. (2000).

FIG. 6.4.*Kernel density estimates of effect parameters for the preferred log-linear model. Italian women, 1985 (thin line) and 1997 (thick line)*



has made exchanges between the skilled working class and the two white-collar classes more difficult, as in the case of men. Overall, the values taken on by the kappa indices (Table 6.7) show that, among women, the degree of association between origin and destination has not changed significantly during the period considered.

A further look at the Italian mobility regime

Given the relatively short span covered by our data, it is not surprising that no major change in men's and women's mobility chances has emerged from our analyses. The question, then, is whether a different picture would come to light were we able to extend our study to earlier decades. To give a partial answer to this question, we have expanded our dataset so as to include data on Italian men's intergenerational mobility collected in four additional years: 1963, 1968, 1972, and 1975. These data, originally put together by Ganzeboom et al. (1989), do not come from mobility studies and their quality is far less than satisfactory (Ganzeboom et al. 1989: 21–3). Therefore, the results reported in this section should be regarded only as indicative.

To prepare our expanded dataset for the analysis we have proceeded as follows. First, given the limitations of the additional data, we have restricted our attention to men aged 21–64 who were in the labour force at the time of the interview. Second, to maximise data comparability, both social origin and social destination have been classified according to a six-category version of the Erikson–Goldthorpe class schema, in which class IVc (agricultural petty bourgeoisie) is merged with class VIIb (agricultural working class). Finally, to deal with the small size of the additional data,[79] we have collapsed years 1963 and 1968 on the one hand, and years 1972 and 1975 on the other. By so doing, we have obtained four 6 × 6 intergenerational mobility tables pertaining respectively to 1963–8, 1972–5, 1985, and 1997.

Figure 6.5 shows how men's immobility rate and the various components of men's total mobility rate have changed during the period 1963–97. As we can see, the main story told by this chart is substantially similar to that already spelled out: because of the systematic upgrading of the Italian occupational structure during the post-war period, the upward mobility rate exhibits a positive trend, mirrored by a steady decline in the immobility rate.

Turning to relative mobility chances, Fig. 6.6 displays how the net association between origin and destination—as measured by the kappa index—has changed during the period considered.[80] This graph clearly shows that the

[79] The relevant *N*s are as follows: 1963 = 1,045; 1968 = 960; 1972 = 590; and 1975 = 595.

[80] The kappa indices reported in Fig. 6.6 have been computed on the parameters of a quasi-symmetry model applied separately to each mobility table analysed.

FIG. 6.5.*Immobility, non-vertical mobility, upward mobility, and downward mobility rates, by year (point estimates and corresponding 95% confidence intervals). Italian men aged 21–64, 1963–97*

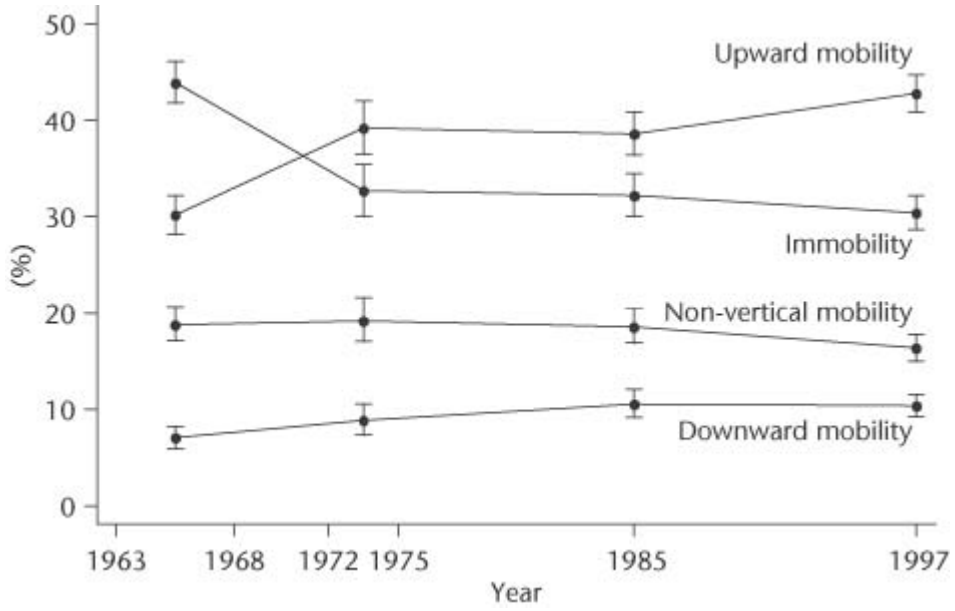
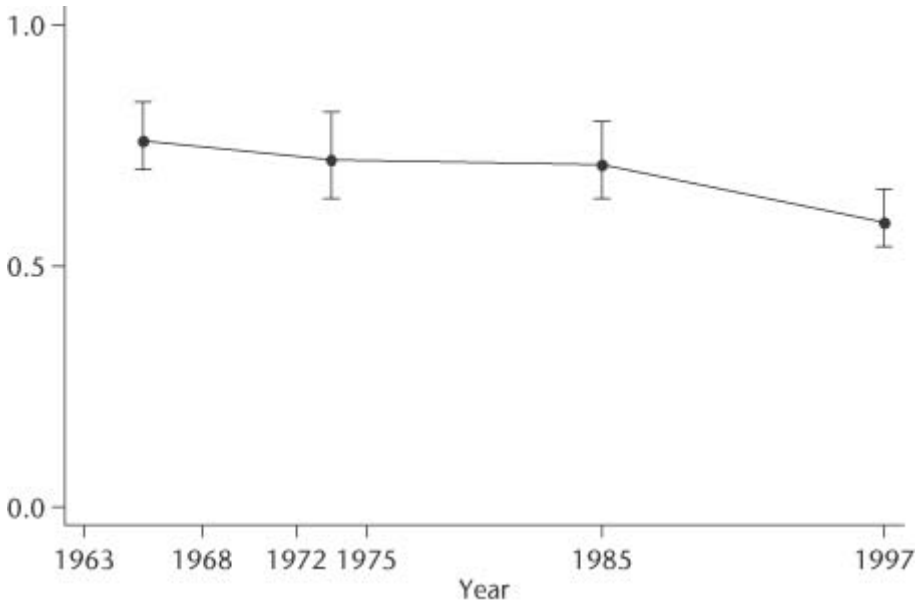


FIG. 6.6.*Net association between origin and destination (kappa index), by year (point estimates and 95% confidence intervals). Italian men aged 21–64, 1963–97*



picture of substantial stability which emerged from the detailed analysis of the 1985 and 1997 data remains virtually the same when we extend the scope of our study back to the 1960s and the 1970s. Given the many structural, cultural, and institutional changes that Italy has undergone during the period 1963–97,

this result suggests that the basic mechanisms responsible for the Italian regime of social fluidity are deeply rooted in Italian social structure.

To achieve a deeper understanding of the Italian mobility regime, we have also tried to take into account the role of geographical variation. In other words, in the light of the well-known dualistic character of the Italian economy, we have checked whether any substantial disparity exists between the mobility regime of the southern regions and that prevailing in the rest of the country. Unfortunately, the results of this analysis are rather inconclusive: although some geographical heterogeneities have come to light, the statistical uncertainty that surrounds our estimates is so high that no firm and reliable conclusion can be drawn from the available data regarding geographical differences.

Conclusions

Our analyses have both confirmed our basic expectations and shed light on some unanticipated changes over time. Consistent with our expectations, absolute rates of mobility have remained substantially stable during the period 1985–97, with the notable exception of men's upward mobility, which increased by seven percentage points. As regards relative mobility chances, the picture of change disclosed by our analyses is somewhat more variegated than we expected.

First of all, our analyses have substantially corroborated our research hypothesis: among both men and women, the intergenerational exchange between the white-collar and blue-collar classes has become somewhat more difficult in 1997 than it used to be in 1985. In other words, in Italy, during the twelve-year period analysed, the strength of the barriers separating the urban manual and non-manual classes has increased somewhat.[81]

However, our analyses have also shown that—at least in the case of men—the overall degree of social fluidity has slightly increased over time. This means that the decrease in social fluidity brought about by the increased difficulty of exchange between the blue-collar and white-collar classes has been more than counterbalanced by other changes in the opposite direction. As discussed earlier, these changes towards greater social fluidity are mainly to do with the agricultural classes, whose degree of viscosity has reduced over time: first, the propensity to immobility exhibited by the sons of farmers and agricultural workers has considerably decreased; second, the barriers separating the agricultural working class from the white-collar classes have weakened,

[81] To be sure, our hypothesis strictly applies only to the exchanges between the two white-collar classes and the skilled working class. This suggests that the intergenerational mobility chances of children of skilled and unskilled urban manual workers have become more similar over time.

making relations between these two groups of classes somewhat more fluid. As shown in our analyses, the overall increase in men's social fluidity observed during the period 1985–97 is also due to the fact that movement between the urban petty bourgeoisie and the service class have become easier.

All the changes responsible for the observed increase in men's social fluidity can be explained, on the one hand, by the increased level of education of the sons of farmers and agricultural workers,[82] and, on the other, by the success story of Italian small industrial firms. During the period of analysis, many of these firms have grown in size; as a consequence, an increasing proportion of the children of the urban petty bourgeoisie have become large proprietors, that is, members of class I+II. Likewise, many entrepreneurs have helped their children to establish their own small firm, making them members of the urban petty bourgeoisie. Moreover, one has to take into account that, given the high level of aggregate unemployment among young Italians, some children of the service class are pushed towards self-employment.

The increase in social fluidity produced by the effects summarised above should not, however, be emphasised: first, because it is quite modest in size; second, because it involves a limited number of subjects. Therefore, we can conclude that—over the period 1985–97—the overall degree of class inequality in terms of intergenerational mobility chances has remained substantially unchanged.

Appendix

TABLE 6.A1.*Intergenerational mobility table: absolute frequencies (Italian men, 1985)*

Origin	Destination	Total						
	I + II	IIIa	IVab	IVc	V + VI	VIIa + IIIb	VIIb	
I + II	97	15	7	3	14	6	0	142
IIIa	25	19	12	0	11	11	0	78
IVab	63	29	142	2	50	41	2	329
IVc	41	23	58	73	75	70	7	347
V + VI	68	38	49	1	73	53	1	283
VIIa + IIIb	6	34	65	2	69	78	2	296
VIIb	6	6	32	6	38	46	31	165
Total	346	164	365	87	330	305	43	1,640

[82] As shown elsewhere (Cobalti and Schizzerotto 1994), in Italy disparities in educational opportunities have diminished over time only in the case of children of the agricultural classes.

TABLE 6.A2.*Intergenerational mobility table: outflow rates (Italian men, 1985)*

Origin	Destination							Total	*N*
	I + II	IIIa	IVab	IVc	V + VI	VIIa + IIIb	VIIb		
I + II	68.3	10.6	4.9	2.1	9.9	4.2	0.0	100.0	142
IIIa	32.1	24.4	15.4	0.0	14.1	14.1	0.0	100.0	78
IVab	19.2	8.8	43.2	0.6	15.2	12.5	0.6	100.0	329
IVc	11.8	6.6	16.7	21.0	21.6	20.2	2.0	100.0	347
V + VI	24.0	13.4	17.3	0.4	25.8	18.7	0.4	100.0	283
VIIa + IIIb	15.5	11.5	22.0	0.7	23.3	26.4	0.7	100.0	296
VIIb	3.6	3.6	19.4	3.6	23.0	27.9	18.8	100.0	165
Total	21.1	10.0	22.3	5.3	20.1	18.6	2.6	100.0	1,640

TABLE 6.A3.*Intergenerational mobility table: inflow rates (Italian men, 1985)*

Origin	Destination							Total
	I + II	IIIa	IVab	IVc	V + VI	VIIa + IIIb	VIIb	
I + II	28.0	9.2	1.9	3.5	4.2	2.0	0.0	8.7
IIIa	7.2	11.6	3.3	0.0	3.3	3.6	0.0	4.8
IVab	18.2	17.7	38.9	2.3	15.2	13.4	4.7	20.1
IVc	11.9	14.0	15.9	83.9	22.7	23.0	16.3	21.2
V + VI	19.7	23.2	13.4	1.2	22.1	17.4	2.3	17.3
VIIa + IIIb	13.3	20.7	17.8	2.3	20.9	25.6	4.7	18.1
VIIb	1.7	3.7	8.8	6.9	11.5	15.1	72.1	10.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	346	164	365	87	330	305	43	1,640

TABLE 6.A4.*Intergenerational mobility table: absolute frequencies (Italian men, 1997)*

Origin	Destination							Total
	I + II	IIIa	IVab	IVc	V + VI	VIIa + IIIb	VIIb	
I + II	172	31	29	2	13	13	2	262
IIIa	108	49	23	1	24	22	0	227
IVab	135	56	191	5	83	41	4	515
IVc	39	28	66	39	75	51	18	316
V + VI	107	52	90	4	151	81	3	488
VIIa + IIIb	94	76	103	1	166	131	8	579
VIIb	24	20	33	5	67	32	25	206
Total	679	312	535	57	579	371	60	2,593

TABLE 6.A5.*Intergenerational mobility table: outflow rates (Italian men, 1997)*

Origin	Destination							Total	*N*
	I + II	IIIa	IVab	IVc	V + VI	VIIa + IIIb	VIIb		
I + II	65.7	11.8	11.1	0.8	5.0	5.0	0.8	100.0	262
IIIa	47.6	21.6	10.1	0.4	10.6	9.7	0.0	100.0	227
IVab	26.2	10.9	37.1	1.0	16.1	8.0	0.8	100.0	515
IVc	12.3	8.9	20.9	12.3	23.7	16.1	5.7	100.0	316
V + VI	21.9	10.7	18.4	0.8	30.9	16.6	0.6	100.0	488
VIIa + IIIb	16.2	13.1	17.8	0.2	28.7	22.6	1.4	100.0	579
VIIb	11.7	9.7	16.0	2.4	32.5	15.5	12.1	100.0	206
Total	26.2	12.0	20.6	2.2	22.3	14.3	2.3	100.0	2,593

TABLE 6.A6.*Intergenerational mobility table: inflow rates (Italian men, 1997)*

Origin	Destination							Total
	I + II	IIIa	IVab	IVc	V + VI	VIIa + IIIb	VIIb	
I + II	25.3	9.9	5.4	3.5	2.3	3.5	3.3	10.1
IIIa	15.9	15.7	4.3	1.8	4.2	5.9	0.0	8.8
IVab	19.9	18.0	35.7	8.8	14.3	11.1	6.7	19.9
IVc	5.7	9.0	12.3	68.4	13.0	13.8	30.0	12.2
V + VI	15.8	16.7	16.8	7.0	26.1	21.8	5.0	18.8
VIIa + IIIb	13.8	24.4	19.3	1.8	28.7	35.3	13.3	22.3
VIIb	3.5	6.4	6.2	8.8	11.6	8.6	41.7	7.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	679	312	535	57	579	371	60	2,593

TABLE 6.A7.*Intergenerational mobility table: absolute frequencies (Italian women, 1985)*

Origin	Destination							Total
	I + II	IIIa	IVab	IVc	V + VI	VIIa + IIIb	VIIb	
I + II	64	9	11	1	2	5	0	92
IIIa	24	10	11	0	1	5	0	51
IVab	68	23	31	5	1	21	2	151
IVc	22	17	20	29	5	36	5	134
V + VI	47	27	19	0	6	34	0	133
VIIa + IIIb	27	24	31	2	4	72	3	163
VIIb	3	6	7	0	1	15	8	40
Total	255	116	130	37	20	188	18	764

TABLE 6.A8.*Intergenerational mobility table: outflow rates (Italian women, 1985)*

Origin	Destination							Total	*N*
	I + II	IIIa	IVab	IVc	V + VI	VIIa + IIIb	VIIb		
I + II	69.6	9.8	12.0	1.1	2.2	5.4	0.0	100.0	92
IIIa	47.1	19.6	21.6	0.0	2.0	9.8	0.0	100.0	51
IVab	45.0	15.2	20.5	3.3	0.7	13.9	1.3	100.0	151
IVc	16.4	12.7	14.9	21.6	3.7	26.9	3.7	100.0	134
V + VI	35.3	20.3	14.3	0.0	4.5	25.6	0.0	100.0	133
VIIa + IIIb	16.6	14.7	19.0	1.2	2.5	44.2	1.8	100.0	163
VIIb	7.5	15.0	17.5	0.0	2.5	37.5	20.0	100.0	40
Total	33.4	15.2	17.0	4.8	2.6	24.6	2.4	100.0	764

TABLE 6.A9.*Intergenerational mobility table: inflow rates (Italian women, 1985)*

Origin	Destination							Total
	I + II	IIIa	IVab	IVc	V + VI	VIIa + IIIb	VIIb	
I + II	25.1	7.8	8.5	2.7	10.0	2.7	0.0	12.0
IIIa	9.4	8.6	8.5	0.0	5.0	2.7	0.0	6.7
IVab	26.7	19.8	23.9	13.5	5.0	11.2	11.1	19.8
IVc	8.6	14.7	15.4	78.4	25.0	19.2	27.8	17.5
V + VI	18.4	23.3	14.6	0.0	30.0	18.1	0.0	17.4
VIIa + IIIb	10.6	20.7	23.9	5.4	20.0	38.3	16.7	21.3
VIIb	1.2	5.2	5.4	0.0	5.0	8.0	44.4	5.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	255	116	130	37	20	188	18	764

TABLE 6.A10.*Intergenerational mobility table: absolute frequencies (Italian women, 1997)*

Origin	Destination							Total
	I + II	IIIa	IVab	IVc	V + VI	VIIa + IIIb	VIIb	
I + II	137	52	28	1	3	12	0	233
IIIa	78	46	14	0	1	22	0	161
IVab	109	70	81	3	14	63	2	342
IVc	33	30	27	13	11	46	9	169
V + VI	87	86	53	1	29	88	8	352
VIIa + IIIb	68	90	61	2	29	133	8	391
VIIb	9	5	22	2	10	39	15	102
Total	521	379	286	22	97	403	42	1,750

TABLE 6.A11.*Intergenerational mobility table: outflow rates (Italian women, 1997)*

Origin	Destination							Total	*N*
	I + II	IIIa	IVab	IVc	V + VI	VIIa + IIIb	VIIb		
I + II	58.8	22.3	12.0	0.4	1.3	5.2	0.0	100.0	233
IIIa	48.5	28.6	8.7	0.0	0.6	13.7	0.0	100.0	161
IVab	31.9	20.5	23.7	0.9	4.1	18.4	0.6	100.0	342
IVc	19.5	17.8	16.0	7.7	6.5	27.2	5.3	100.0	169
V + VI	24.7	24.4	15.1	0.3	8.2	25.0	2.3	100.0	352
VIIa + IIIb	17.4	23.0	15.6	0.5	7.4	34.0	2.1	100.0	391
VIIb	8.8	4.9	21.6	2.0	9.8	38.2	14.7	100.0	102
Total	29.8	21.7	16.3	1.3	5.5	23.0	2.4	100.0	1,750

TABLE 6.A12.*Intergenerational mobility table: inflow rates (Italian women, 1997)*

Origin	Destination							Total
	I + II	IIIa	IVab	IVc	V + VI	VIIa + IIIb	VIIb	
I + II	26.3	13.7	9.8	4.6	3.1	3.0	0.0	13.3
IIIa	15.0	12.1	4.9	0.0	1.0	5.5	0.0	9.2
IVab	20.9	18.5	28.3	13.6	14.4	15.6	4.8	19.5
IVc	6.3	7.9	9.4	59.1	11.3	11.4	21.4	9.7
V + VI	16.7	22.7	18.5	4.6	29.9	21.8	19.1	20.1
VIIa + IIIb	13.1	23.8	21.3	9.1	29.9	33.0	19.1	22.3
VIIb	1.7	1.3	7.7	9.1	10.3	9.7	35.7	5.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	521	379	286	22	97	403	42	1,750

TABLE 6.A13.*Design matrices for the effects of the preferred log-linear model*

	Inheritance effect 1	Inheritance effect 2	Inheritance effect 3	Sector effect
I + II	**1** 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 **1** 0 0 **1**
IIIa	0 **1** 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 **1** 0 0 **1**
IVab	0 0 **1** 0 0 0 0	0 0 **1** 0 0 0 0	0 0 0 0 0 0 0	0 0 0 **1** 0 0 **1**
IVc	0 0 0 **1** 0 0 0	0 0 0 **1** 0 0 0	0 0 0 **1** 0 0 0	**111** 0 **11** 0
V + VI	0 0 0 0 **1** 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 **1** 0 0 **1**
VIIa + IIIb	0 0 0 0 0 **1** 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 **1** 0 0 **1**
VIIb	0 0 0 0 0 0 **1**	0 0 0 0 0 0 0	0 0 0 0 0 0 **1**	**1 + 1** 0 **1 1** 0

	Specific hierarchical effect 1	Specific hierarchical effect 2	Affinity effect	Class scores for general hierarchical effect
I + II	0 0 0 0 0 0 **1**	0 0 0 0 **1** 0 0	0 0 **1** 0 0 0 0	13.9
IIIa	0 0 0 0 0 0 **1**	0 0 0 0 **1** 0 0	0 0 0 0 0 0 0	10.9
IVab	0 0 0 0 0 0 0	0 0 0 0 0 0 0	**1** 0 0 0 0 0 0	7.9
IVc	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	5.5
V + VI	0 0 0 0 0 0 0	**1 1** 0 0 0 0 0	0 0 0 0 0 0 0	7.3
VIIa + IIIb	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	6.4
VIIb	**1 1** 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	5.1

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7 Class Transformation and Trends in Social Fluidity in the Republic of Ireland 1973–94

Richard Layte and Christopher T.Whelan

The 'industrialisation thesis' held that economically advanced societies would share a high level of social mobility.[83] Such uniformly high rates of mobility would come about, it was argued, because these societies spawned a large number of higher managerial and professional positions, and also because these positions would be filled on the basis of meritocratic and 'universalistic' principles rather than social position and family connections. Although a variety of studies have presented evidence that challenges this thesis, almost all have used data from countries that have already reached industrial maturity. The Irish case, as Erikson and Jonsson (1996*b*: 46) note, provides a particularly appropriate test of the ascription-to-achievement hypothesis. Since the Republic of Ireland underwent industrialisation particularly rapidly and comparatively recently, the available data make it is possible to examine the process as it unfolds.

In this chapter we use data collected at three points in time—the early 1970s, the late 1980s, and the mid-1990s—to examine the relationship between social class origins and destination class, and the role that education plays in mediating this relationship. In the early 1970s, Ireland was still in transition from an agricultural to an industrial society (Whelan et al. 1992), whereas in the mid-1990s, arguably Ireland has progressed further toward 'post-industrial' society than many other European nations (O'Connell 1999, 2000). The aim of this chapter is to examine the consequences of these developments in Ireland in terms of social mobility and the role of education in this process.

[83] See Lipset and Bendix (1959), Blau and Duncan (1967), and Treiman (1970).

Following Breen and Whelan (1992) we specify a model of mobility termed the 'Agriculture, Hierarchy, and Property' (AHP) model and we test its usefulness in explaining the observed patterns of association between class origins and destinations. Although we would like to examine men's and women's mobility, the data for the 1970s refer only to men and their partners. Since female labour force participation was very low in the early 1970s, this means that there are insufficient data to examine women's mobility in this survey. Instead, we examine the similarities and differences between men's and women's mobility in the mid-1990s.

In the next section of this chapter we discuss the nature of Irish industrialisation. We then move on to a brief examination of the expectations we would have from the application of the liberal theory of industrialisation. In the third section we go on to examine the data and variables used in this chapter before turning, in section four, to a descriptive analysis of the structure of social mobility in Ireland in the 1970s, 1980s, and 1990s. In the fifth section we describe our approach to modelling trends in the origin–destination association and the specification of the AHP model of Irish social fluidity. In section six we introduce educational qualifications as an intervening variable in our analysis. The final section discusses our findings and their implications.

Industrialisation in Ireland

The founding of the Irish state in 1922 separated the industrial north-east of Ireland from the largely agricultural twenty-six counties in the south and, in spite of government attempts to stimulate domestic industry through protectionist policies, there was little subsequent industrial development until the 1960s. Even as late as 1961, two thirds of Irish exports were agricultural, going mainly to Britain, and this was reflected in the very large proportion of males in agricultural work. Increases in social mobility associated with economic development are primarily an outcome of structural effects. Goldthorpe (1985: 558–9) makes the distinction between 'shift' and 'compositional' effects. The former refers to changes in the 'shape' of the structure within which mobility is being experienced; the latter stems from the fact that different classes may have different propensities for immobility or for particular types of mobility, and thus total mobility will in part reflect the relative size of these classes. Goldthorpe emphasises that there is no evidence that the former will steadily increase with economic development or that its importance is closely correlated with prevailing rates of economic growth. Our attention will therefore be on the changing structural context within which mobility occurs rather with economic growth per se.

In 1961 professionals, managers, and administrators (the upper middle class in Table 7.1) made up only 8 percent of those at work, while skilled or

TABLE 7.1.*Males at work by class categories 1951–96*

	%					
	1951	1961	1971	1981	1990	1996
Employers and self-employed	46.7	43.9	35.8	28.9	29.4	28.1
Agricultural	38.2	36.1	27.5	19.2	16.4	13.3
Non-agriculture	8.1	7.8	8.3	9.7	13.1	14.9
Employees	53.3	56.1	64.2	71.1	70.6	71.9
(i) Upper middle class	5.3	7.6	10.9	16.0	19.2	20.4
(ii) Lower middle class	13.8	15.6	18.0	20.3	21.9	21.1
(iii) Skilled manual	10.1	12.0	16.5	20.3	16.8	18.1
(iv) Semi/un-skilled manual	24.5	20.9	18.8	14.6	11.7	12.3
Total at work	100	100	100	100	100	100
Total unemployed	3.7	5.7	6.6	10.1	15.5	14.7

Source: Breen et al. (1990; Table 3.2) and O'Connell (2000; Table 4.9).

unskilled manual workers made up around 21 percent. Agriculture itself was based on small, usually family run, farming enterprises with the consequence that 44 percent of the labour force derived their living from property. This had particular implications for social mobility since 'life chances centred on the prospects of inheriting the family business and the accompanying house and household goods. Realistically, education or training could secure a livelihood within Ireland for only a minority of those aspiring to the workforce' (O'Connell & Rottman 1992: 69). Even up until the early 1970s this meant that inheritance was a particularly strong feature of Irish society. After 1961, social and economic change occurred rapidly with profound effects on Irish society. Between 1961 and 1996, the number of males in agriculture as a percentage of those at work fell from 36 to 13 percent whilst the proportion of managers, professionals, and administrators grew from 8 to over 20 percent. Similarly, the skilled manual workforce grew from 12 to 21 percent by 1981, although this declined to 18 percent by 1996.

In terms of social mobility, these developments had two main effects. First, the importance of direct inheritance as a way of acquiring a social position in Ireland declined after the 1960s such that, whereas 50 percent of men aged 15–19 in the 1920s who did not emigrate could depend upon family employment leading to inheritance, this figure had dropped to less than 15 percent in the 1970s (Breen et al. 1990: 56). Second, educational qualifications were increasingly a prerequisite of the newly created positions. Educational participation expanded at a rapid rate. In 1967, free secondary education was introduced and the proportion of each age cohort in full-time education up to Leaving Certificate (age 17–18) rose from 14 percent in 1964 to 40 percent in 1985 and

80 percent by 1997. Third-level participation by those completing the Leaving Certificate increased from 20 percent in 1979 to almost 40 percent in 1997.

Given the historically high levels of emigration from the Republic of Ireland the question arises of how this might have affected social mobility patterns. As Breen and Whelan (1999: 334) note, for emigration to affect our conclusions it must be selective within classes with respect to factors that influence mobility and, furthermore, this selectivity must operate differently among people from different class origins. Using the British General Household Survey, Breen and Whelan compared the relationship between class origins and educational qualification for migrants to Britain with that found for respondents in the 1994 Living in Ireland Survey (LIPS) and found greater educational fluidity among migrants. This leads one to suspect that the exclusion of emigrants may lead us to underestimate the level of social fluidity. Of course, as Breen and Whelan (1999: 337) note, one could equally hypothesise that well-qualified people from less advantaged classes migrated precisely because they believed barriers to mobility would prevent them from securing an adequate return on their qualifications.

The Irish case allows us to perform an appropriate test of what Jonsson (1992) has labelled the 'Increased Merit Selection' (IMS) hypothesis, which suggests that access to education becomes decreasingly determined by class origin and that class position is increasingly dependent on educational achievement, as the direct influence of characteristics associated with family background diminish. Critics have suggested that the industrialisation thesis takes too simplistic a view of the extent to which the forces of competition lead to more meritocratic selection procedures. They draw attention to the ability of those in positions of power and privilege to maintain their position against encroachment, even in the face of the functional requirements of industrial society (Goldthorpe 1985). The thesis has also been shown to gain little support from those data that have been used to test it internationally (Erikson and Goldthorpe 1992). However, most of these data refer to the 1970s when most of these countries would already have been mature industrial economies for over seventy years, thus they may not offer the best test. In the Irish case, however, recent and swift industrialisation means that we can perform a more thorough test of the theory.

Data and variables

Three data sets are used in this chapter, one from each of the last three decades of the twentieth century. All comprise nationally representative samples and were conducted by the Economic and Social Research Institute, Dublin. In each case we restrict our analysis to men aged between 20 and 64. The sample sizes are 2,291, 2,471, and 3,065 for 1973, 1987, and 1994 respectively. The data

from the 1970s come from the 1973 'Survey of the Determinants of Occupational Status and Mobility', which has been described in detail by Hout (1989). For 1987 the data come from the Survey of Income Distribution and Poverty, details of which can be found in Callan et al. (1989). The 1994 data come from the first wave of the LIPS survey is described in detail in Callan et al. (1993).

Both the social class variables and education variables are coded using the classifications employed in the CASMIN (Comparative Analysis of Social Mobility in Industrial Nations) study (König et al. 1988). Thus the origin and destination class variables are the conventional CASMIN seven-category groupings. Origin class is that of the main breadwinner in the household when the respondent was growing up. Destination class is based on the respondent's current or (where the respondent does not have an occupation) most recent occupation. Education in the CASMIN schema distinguishes eight categories according to level and type of schooling. However, we have chosen to collapse the eight categories into a four-fold classification. Thus categories 1a, 1b, and 1c (inadequate, completed, and basic vocational elementary education) are combined into a primary or incomplete secondary category. It makes no sense in the Irish context to separate early leavers from the junior cycle of secondary education from those who leave without qualifications, and 1c (elementary education plus vocational training) does not exist in the Irish school system. Lower and intermediate secondary education (CASMIN 2a and 2b) are combined to form a single lower secondary category since 2a (general intermediate plus specific vocational training) does not exist in Ireland. The closest approximation to this is apprenticeship training that usually follows completion of general intermediate education. Apprenticeships are almost exclusively taken by men and the numbers involved are small and have been declining. Category 2c is retained as a higher secondary category and higher and lower level third-level education (3a and 3b) are combined to make a single tertiary education category. The four educational categories we use are thus as follows: (1) primary certificate or no qualifications; (2) Group or Intermediate Certificate; (3) Leaving Certificate or equivalent; and (4) any post second-level qualification at sub-degree, primary, or higher degree level.[84]

Some descriptive analyses

Having introduced the data and variables to be used, we can now proceed to some descriptive analyses of the pattern of social mobility in Ireland in 1973,

[84] The 1973 Survey of the *Determinants of Occupational Status and Mobility* used a collapsed qualification schema which we interpreted in the following manner: no education up to incomplete primary was coded as 'primary or less' in the CASMIN schema, incomplete secondary as 'lower secondary', complete secondary as 'higher secondary', and incomplete tertiary and above as 'tertiary'.

1987, and 1994. As our earlier discussion made clear, we should expect large changes in the distribution of classes simply through the transformation of the occupational structure away from agriculture and towards industry. This is shown in Table 7.2 where the proportions described as smallholders declined from 20 percent in 1973 to 10 percent in 1987 and 9 percent in 1994, and the share of agricultural labourers also fell, from 7 to 3 percent.

However, Ireland never developed the heavy industries or large factory system common to the 'golden period' of industrialisation in other countries and in many respects moved directly from an agricultural society into a post-industrial one (or perhaps this should be termed late-industrial). The restructuring that occurred among protected Irish industries in the 1980s as they were exposed to international competition in a global recession encouraged this process. Unskilled manual workers formed a smaller proportion of employees in 1994 than they did in 1973 and 1987. At the same time the service and routine non-manual classes and technical and skilled manual classes were expanding. Service class occupations increased from 13 percent of destinations in 1973 to 17 percent in 1987 and 19 percent in 1994, a process mirrored in the expansion of technical and skilled manual employees from 19 to 29 percent. The pattern of change was rather different in the two periods. Between 1973

TABLE 7.2.*Percentage distribution of CASMIN origin and destination social classes 1973, 1987 and 1994*

	%					
	1973		1987		1994	
	Origins	Destination	Origins	Destination	Origins	Destination
I + II	5.9	12.9	8.1	17.1	9.4	19.0
III	4.4	8.3	6.8	10.2	9.4	15.7
IVab	10.3	8.2	5.8	7.3	7.3	4.3
IVc	37.5	20.0	26.3	10.1	23.4	9.1
V + VI	14.0	19.4	20.2	27.6	22.1	29.0
VIIa	20.8	24.1	27.4	24.3	25.5	20.0
VIIb	7.2	7.2	5.4	3.4	3.0	2.9
Total	100	100	100	100	100	100

Note: The classes are:

I + II: Service

III: Routine non-manual

IVab: Self-employed with or without employees

IVc: Small holders

V + VI: Technicians and supervisors of manual workers

VIIa: Semi-skilled and unskilled workers not in agriculture

VIIb: Farm workers.

and 1987 the structural context of changes in mobility patterns was one in which a significant decline in numbers in farming was accommodated by increased opportunities in manual and non-manual work. In the later period the decline in farming was a good deal more modest and change was driven mainly by a substantial increase in non-manual work

These large changes in the economic and occupational structure would inevitably have profound effects on the patterning of social mobility in two particular ways. First of all, we would expect to see a great deal more overall mobility as the occupational structure changes. Second, the constriction of agriculture and the expansion of skilled and white-collar occupations must initiate an increase in absolute mobility away from smallholder, agricultural labourer, and unskilled locations to skilled and white-collar locations. In what follows we consider the consequences of these changes first by examining the changing composition of current classes and second by documenting the changing probabilities of movement from class of origin.

In Table 7.3 we examine the changing inflow pattern between 1973 and 1994. The picture is one of growing heterogeneity across the class structure. In 1973 just over one third of the service class came from routine non-manual or manual backgrounds but by 1994 this had risen to half. This opening up also occurs among routine non-manual workers who are drawn far less from the smallholder and petty bourgeoisie classes and more from the skilled manual and service classes. The petty bourgeoisie also undergo a transformation as self-recruitment falls and there are increasing inflows from skilled manual and routine white-collar locations, and, particularly, from unskilled manual locations. Little change is observed among the skilled manual class. The unskilled manual class is the exception to this pattern of increasing heterogeneity. Here the degree of self-recruitment increases from 33 to 42 percent

TABLE 7.3.*Comparative inflow rates: percentage in selected classes from different class origins, 1973 and 1994*

	%													
	I + II		III		IVa + b		IVc	V + VI		VIIa		VIIb		
	73	94	73	94	73	94	73	94	73	94	73	94	73	94
I + II	24.5	25.8	10.3	13.2	4.0	3.7	0.7	1.1	4.3	5.0	2.1	3.5	0.0	2.2
III	8.1	14.9	12.6	15.0	3.4	6.6	0.5	1.4	5.1	8.6	3.5	6.1	0.7	2.2
IVa + b	16.8	9.7	9.8	8.5	34.1	27.2	1.2	1.4	7.5	5.8	10.9	4.6	2.0	5.6
IVc	21.2	16.1	19.0	12.6	28.4	25.0	92.5	88.7	14.7	15.4	23.6	17.1	55.6	47.8
V + VI	15.0	18.3	16.1	24.2	8.0	10.3	0.5	1.4	31.6	31.8	15.6	23.1	0.7	11.1
VIIa	12.5	14.4	26.4	24.8	13.6	22.1	2.6	5.7	31.9	29.7	32.9	41.6	17.6	15.6
VIIb	1.8	0.7	5.7	1.6	8.5	5.1	2.1	0.4	4.8	3.7	11.3	4.0	23.5	15.6
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100

TABLE 7.4. *Absolute class mobility levels in the Republic of Ireland 1973, 1987, and 1994*

	1973	1987	1994
% Mobile	58.8	62.8	66.6
% Upwards (U)	22.3	27.6	30.2
% Downwards (D)	19.8	16.2	15.8
Ratio of U/D	1.13	1.70	1.91
% Mobile into the service class (I + II)	9.7	12.5	14.1
% Mobile into the service class from the working class (V,VI,VII)	3.7	5.7	6.3
% Mobile into the non-skilled working class (VII) from the service class	16.2	13.0	11.7

and recruitment from the skilled manual class rises from 16 to 23 percent. Thus, while elsewhere the picture is one of increasing diversity, the manual working class comes closer to resembling the 'mature' working classes of other industrial societies.

In Table 7.4 we shift our attention to outflow patterns and show the levels of absolute mobility at each of the three points. In all cases the percentages we report are of the total sample. Overall mobility increased over time from 59 percent in 1973 to 63 percent in 1987 and 66 percent in 1994. The sharpest increase was in upward mobility,[85] which rose from 22 percent in 1973 to 28 percent in 1987 and 30 percent in 1994. As downward mobility declined from 20 to 16 percent over the same period, the ratio of upward to downward mobility increased from 1.13 in 1973 to 1.91 in 1994. Mobility into the service class rose gradually from 10 percent in 1973 to 14 percent in 1994. Similarly mobility from the unskilled working class to the service class rose from 4 to 6 percent. Rather than observing a corresponding increase in long-range downward mobility, precisely the opposite outcome was observed. In 1973 16 percent had been downwardly mobile from the service class to the unskilled class. By 1987 this had fallen to 13 percent and by 1994 it was down to 11 percent.

The profound changes in the class structure had created a situation where working class respondents experienced significantly increased long-range upward mobility opportunities. At the same time, groups more favourably located in the class structure were also able substantially to reduce their risks of falling into the non-skilled manual class.

Since the benefits of the upgrading of the class structure were experienced across the continuum of class origins, what effect did this have on the pattern

[85] We follow Erikson and Goldthorpe (1992: 45) in defining upward mobility as movement into classes I and II from any other class, or into II, IV, V, or VI from VII. Downward mobility is then mobility into class VII from any other, or into III, IV, V, or VI from I or II.

of relative mobility between social classes? Do we see increasing openness and 'fluidity' in Irish society? Does mobility become increasingly mediated by educational attainment? As we have already seen, some have predicted that with increasing industrialisation educational credentials become the pre-eminent selection criterion in employment recruitment. Moreover, in Ireland the high level of 'standardisation' in the Irish educational system would have facilitated this process.[86] Were enhanced absolute mobility opportunities and the expansion of educational opportunities associated with greater equality of opportunity? It is to these issues that we now turn our attention.

Modelling trends in social fluidity

We begin by fitting general models of the class origin–destination association to allow us to test the thesis that industrialism is associated with a weakening of this association.

In Table 7.5, Model A, the model of independence or perfect mobility, serves as a reference point for more plausible models. Model B, the Constant Social Fluidity Model (CnSF), allows for variation over time in levels of absolute mobility but constrains relative mobility to be constant over time. This model misclassifies only 3.8 percent of all cases and reduces the G^2 value of the independence model by 96.7 percent. However the G^2 value of 115.0 with 72 d.f. fails to provide a satisfactory fit by conventional statistical standards. We proceed therefore to test whether the strength of the origin–destination relationship has changed over time, as the liberal theory of industrialism would suggest. To address this issue we employ Model C, a log-multiplicative

TABLE 7.5. *Results of fitting the CnSF and Unidiff models to seven-class intergenerational tables for 1973, 1987, and 1994*

I Models	G^2	d.f.	*p*	rG^2	D	Bic
A. Independence {*OT*}{*DT*}	3,451.3	108	0.000		25.9	2,487
B. CnSF {*OT*}{*DT*}{*OD*}	115.5	72	0.001	96.7	3.83	−527.7
C. Unidiff	107.0	70	0.003	96.9	3.67	−518.4
II. Unidiff parameters	1973	—	1987	—	1994	—
	0.000	—	0.026	—	−0.112	—
Asymptotic standard error	—	—	0.057	—	0.051	—

Note: *O* = class origin; *D* = class destination; *T* = survey

[86] For a discussion of standardisation see Allmendinger (1989) and for a development of its implications in the Irish situation see Breen, Hannan, and O'Leary (1995).

layer effect model—the so-called 'Unidiff' model'. This model posits that the pattern of association is the same over time, but it permits the strength of this association to differ by a uniform amount, so allowing for more or less marked inequality in social fluidity across time. (Erikson and Goldthorpe 1992; Xie 1992). This model uses two d.f. more than the CnSF model and yields a G^2 of 107.2 with 70 d.f. It reduces the G^2 compared with the independence model by 96.9 percent and misclassifies 3.7 percent of cases. The improvement in G^2 of 8.3 for 2 d.f. suggests a very modest deviation from the pattern of no change. The Unidiff coefficients have been normalised by setting the value for 1973 to zero.[87] A Unidiff coefficient less than zero serves to reduce the size of the origin–destination association relative to the baseline values, and conversely for a coefficient greater than zero. The observed values of 0.032 for 1987 and −0.112 for 1994 indicate no clear trend towards reduced association over time.

The models we have applied up to this point involve very general hypotheses about trends in the nature of the origin–destination mobility process but do not specify substantive hypotheses relating to the underlying determinants of the mobility process. In this section, we proceed to examine change over time employing such a model. We take as our basic theoretical model that outlined by Goldthorpe (1980: 99). Under this model the pattern of social fluidity is considered to be shaped by three factors. These are the relative desirability of different class destinations; the resources available to individuals within each class origin which help them gain access to more desirable destinations; and barriers to movement between classes. Typically we think of resources as 'economic, cultural, and social resources' (Erikson and Goldthorpe 1987*a*: 64) while barriers to mobility would include the necessity to own the means of production and educational and other qualifications needed for entry to the occupations that comprise a class grouping.

Ideally we would like to have measures of the above variables available to us. In the absence of such measures we operationalise the model, in a manner similar to Erikson and Goldthorpe (1987*a, b*), through the use of dummy variables. Our model, however, differs in certain respects from theirs and is an attempt to simulate the earlier Breen and Whelan (1992) 'Agriculture, Hierarchy, and Property' model (AHP). The model includes the following elements.

Agriculture: AGB—the term reflecting the barrier to movement into agricultural destinations from non-agricultural destinations.
Hierarchy H1, H2, H3—These terms are intended to capture the effect of generalised resources, desirability, and barriers conceptualised in a hierarchical

[87] The Unidiff parameters are here reported in their logged form. Letting γ represent these, then $\gamma_k = \ln(\beta_k)$ where, as in earlier chapters, β indicates the usual Unidiff parameter. So we have the following expression for the odds ratios: $\ln\theta_{ijk} = \gamma_k \ln\theta_{ij}$.

fashion and reflecting the extent of movement up or down the class hierarchy. We distinguish four hierarchical levels:

(i) I + II
(ii) III
(iii) IVa + b + c, V/VI
(iv) VIIa + b

H1 captures movements involving one step across this hierarchy; H2 indicates the additional effect of a two step movement; and H3 the further effect of a three-step shift. The coefficients are thus cumulative.

Property PB—This term captures the tendency for reciprocal movement between the farming and petty bourgeois classes.

SLP—the term for movement between petty bourgeois origins and the service class.[88] Together the terms PB and SLP capture the pattern of movement within the classes that own the means of production.

Inheritance INH1, INH2, INH3, INH4, INH5—A very specific resource for mobility is indicated by the tendency for class inheritance, where origin in a given class improves ones relative chances of remaining in that class even controlling for other factors in the model. The reasons for this are diverse but include such things as direct inheritance of the means of production, family tradition, and access to social networks. The five inheritance parameters constitute a set of cumulative terms that capture these effects. INH1 is the term for all cells on the main diagonal. INH2 reflects the departure of immobility in the non-skilled manual class from the overall level, INH3 to INH5 capture successively the additional effects required to capture immobility in the skilled manual class, the petty bourgeoisie, and farming classes.

Affinity Terms OAF1—It is also necessary to add a positive affinity term (in Erikson and Goldthorpe's terminology) to capture the fact that our model consistently overestimates the flow from farming origins to routine white-collar destinations (see the appendix to Chapter 7 for details of how this term is defined).

We can write this model as:

$$Log(F_{ij}) = \mu + \lambda^{O} + \lambda^{D} + \lambda^{\mathrm{AGB}} + \lambda^{\mathrm{PB}} + \lambda^{\mathrm{SLP}} + \sum_{i=1}^{3} \lambda^{\mathrm{HI}_i} + \sum_{i=1}^{5} \lambda^{\mathrm{INH}_i} + \lambda^{\mathrm{OAF1}}$$

where F_{ij} is the expected value in the *ij*th cell of the table. We refer to the AHP model augmented by the OAF1 term as AHP+OAF1.

In Table 7.6, employing the procedure outlined by Breen (1985), we proceed to partition the over time mobility variance. Model A, which is a model of no mobility

[88] In the earlier version of the model movement from IVc to I + II was also included in this term.

TABLE 7.6. *Goodness-of-fit of the AHP model*

Model	G^2	d.f.	D	*p*	bic
A. No Mobility Differences $O + D + T +$ AHP + OAF1	671.45	120	11.49	.000	−400.5
B. Absolute Mobility Differences $O * T + D * T$ + AHP + OAF1	168.22	96	4.51	.000	2689.4
C. Absolute and Relative Mobility Differences $O * T + D * T +$ AHP + OAF1 + OAF2 * T + OAF3 * 87/94 + INH2 * 87/94 + INH3 * 87/94 + H3 * T	116.69	87	3.37	.019	2660.5

differences over time, returns a deviance of 671.45 with 120 d.f. and misclassifies 11.5 percent of cases. Model B, which allows for absolute mobility differences produces a value of 168.2 with 96 d.f. and misclassifies 4.5 percent of cases. In the final model we allow the inheritance parameters for the skilled and non-skilled manual classes to differ between 1973, on the one hand, and 1987 and 1994 on the other. The H3 term relating to long-range mobility is allowed to vary over all three surveys. We also add two additional affinity terms (also defined in the appendix). The first, OAF2, allows for the fact that the flow from the agricultural workers class to the petty bourgeoisie is significantly weaker in 1987 than in either the earlier or later period. The second, OAF3, is introduced to capture the reduced flow from the petty bourgeoisie to the skilled manual class after 1973. There is no obvious substantive reason for this variation. Model C which allows for absolute and relative mobility variation results in a deviance value of 116.7 with 87 d.f. and misclassifies only 3.4 percent of cases and comes very close to providing a statistically satisfactory fit. The total mobility variance (Model A – Model C) is 554.76. Variation over time in levels of absolute mobility accounts for 90.7 percent of this variance and differences in patterns of social fluidity for the remaining 9.3 percent.

In Table 7.7 we set out the parameter estimates for Model C. This model allows absolute mobility and some of the AHP parameters to vary across time. The reference category for the inheritance parameters is the white-collar classes and agricultural workers. In 1973 non-skilled manual workers showed a significantly lower tendency towards inheritance (captured in INH2) while the opposite was true for skilled manual workers (INH3). By 1994 these differences, although still observable, had been significantly reduced. Barriers to long-range mobility (H3) declined over time. With the exception of the effects captured in OAF2 and OAF3, all of the other effects were constant across time. As far as the hierarchy terms are concerned, a clear gradient is evident with an increasing gap between levels as one moves from one step to three step movements, reflecting the relative infrequency of long-distance mobility. The PB, SLP, and AGB terms effects are all highly significant and consistent with theoretical

TABLE 7.7.*Results of applying the AHP model to seven-class intergenerational mobility tables for the Republic of Ireland in 1973–87–94*

Parameter	Estimate	s.e
INH1	0.209	0.093
INH2	−0.769	0.145
INH2 * 1987/94	0.473	0.149
INH3	1.549	0.192
INH3 * 1987/94	−0.941	0.207
INH4	0.930	0.155
INH5	0.671	0.207
H1	−0.171	0.057
H2	−0.528	0.046
H3	−1.230	0.163
H3 * 1987	0.243	0.204
H3 * 1994	0.388	0.194
SLP	0.704	0.114
AGB	−1.934	0.133
PB	0.925	0.103
OAF1	−0.384	0.110
OAF2	0.983	0.103
OAF2 * 1987	−1.775	0.657
OAF2 * 1994	−0.089	0.247
OAF3	0.070	0.185
OAF3 * 1987/94	−0.643	0.247

expectations. Our findings therefore suggest very modest changes over time. The greater proportion of the change over time in mobility is variation in absolute mobility. A reduction in the level of immobility for the skilled manual class is counterbalanced by an increase in immobility for the non-skilled manual class. We do observe a slight reduction in the barriers to long-range movement but the stability of the overall pattern indicates that the overall distribution of class advantage has been maintained over time.

The class mobility of women in the Republic of Ireland

The 1973 survey of social mobility in the Republic of Ireland only contains data on the wives of the male respondents. Given the low labour force participation rates of married women at this time, this means that we would have an insufficient number (and an unrepresentative sample) of cases for analysis in the 1973 data. However, increases in women's labour force participation

rates since the early 1970s mean that there is no justification for the neglect of women's class mobility. As McRae (1990:122) notes, the initial impetus for the challenge to the conventional approach to class analysis arose as a result of the marked increase in the labour force participation of women. In Ireland in 1971 27.2 percent of women were economically active, but by 1985 this had risen to 36.5 percent. However, these figures conceal conflicting trends: an increasing age of entry to the labour market for young women and dramatic increases in the labour force participation of married women. In 1971, 7.5 percent of married women were active in the labour force but this had risen to 34.2 percent by 1995 (O'Connor and Shortall 1999: 288). The increase in female participation has been almost entirely concentrated in upper middle-class positions. The percentage of women at work who were in such positions rose from 16.5 percent in 1971 to 28.3 percent in 1991. Women, however, are largely concentrated in the lower middle class where one in two are still found. The major decline has been observed in agriculture.

The changes in women's participation levels suggests that models of social mobility that might have been appropriate in the early 1970's may have become increasingly misleading. The Irish case also provides a better testing ground for the impact of female participation than the overall levels of participation might suggest because the levels of part-time work are significantly below the European average. Thus while in 1993 part-time employment in Great Britain constituted 45 percent of female employment, the corresponding figure in the Republic of Ireland was 19 percent (O'Connor and Shortall, 1999: 291). In examining women's mobility we will not address the thorny issue of the appropriate unit of analysis. Instead we will use our 1994 data to compare the occupational mobility of women and men in the labour force at the time of the survey. We begin by examining the extent to which men and women differ in their distribution across origin and destination classes.

Because women are significantly less likely than men to be found in the property owning or skilled manual classes, they are more likely to experience mobility. Using an alternative seven-class schema where lower routine non-manual employees (IIIb) are combined with unskilled manual workers (VIIa), 75 percent of women and 66 percent of men have experienced intergenerational mobility. Structural difference leads to a looser association between origin and destination for women in the sense that they experience greater upward and downward mobility. The remaining question is whether, underlying such differences in absolute mobility, there are also differences in relative mobility that reflect gender based variations in class-related inequality of opportunity.

In order to test this hypothesis we apply Model B (in Table 7.8), the constant social fluidity model, which allows for absolute differences but assumes a common underlying pattern of social fluidity for men and women in 1994. This produces a G^2 of 41.21 with 36 d.f. that provides a satisfactory fit by conventional statistical standards. This model accounts for 97 percent of the independence model deviance and misclassifies only 3.09 percent of cases.

TABLE 7.8. *Results of fitting the CnSF and Unidiff and AHP models to seven-class intergenerational tables for women and men in the Republic of Ireland in 1994*

Model	G^2	d.f.	p	rG^2	Δ
A. Independence O * S + D * S	1,358.0	72	.000		20.66
B. CnSF O * S + D * S + O * D	41.21	36	.253	97.0	3.09
C. Unidiff	35.89	35	.427	97.4	3.01
D. Homogenous AHP + OAF1	119.89	60	.000	92.2	4.83
E. Homogenous AHP + OAF1 + IN2 * S + IN3 * S + IN4 * S + GAF1 + GAF2	67.32	55	.123	94.6	2.92

Note: S = sex

Differences in origins, but more particularly destinations, are clearly the crucial factor leading to gender differences in mobility patterns. However, we continue to explore the nature of any residual differences in social fluidity patterns by applying two further models.

Model C is the Unidiff model that assumes that the pattern of association is the same for men and women but allows the strength of this association to vary by a uniform amount. This produces a G^2 of 35.89 with 35 d.f. This constitutes a statistically significant improvement on the CnSF model although the improvement is of a marginal nature with the model accounting for 97.4 percent of the independence model G^2 and misclassifying 3.01 percent of cases. The Unidiff coefficient of −0.199 (s.e. = 0.085) indicates that the strength of the origin-destination association is weaker for women. Finally we apply our theoretically informed AHP model (including the OAF1 term) to the male–female mobility table. Model D, which allows for no variation in the operation of the model by gender, gives a G^2 of 119.89 with 60 d.f. and fails to fit the data. However, as the application of Model E shows, a significantly better fit is found by allowing some of the inheritance terms to vary and by introducing two further affinity terms—GAF1 and GAF2. The inheritance interactions capture the fact that immobility in the non-skilled manual and farming classes, but particularly the latter, is less for women. The affinity terms take into account, respectively, that the density of the flow from farming origins to the service class is significantly stronger for women while the relative flow to the skilled manual class is weaker. This outcome is entirely consistent with previous evidence of the differential education strategies pursued by farmers for sons and daughters. This model produces a G^2 of 67.32 with 55 d.f. and provides a satisfactory fit to the data. Thus relative mobility differences between men and women are almost entirely confined to those from farming origins.

The weight of our analysis suggests that patterns of social fluidity appear to be 'gender blind'. Explanations of differences in male and female mobility

processes and their development over time will require a concentration on patterns of absolute social mobility and the processes that generate sex segregation in employment. As Erikson and Goldthorpe (1992: 253) note, it appears that that such explanations will need to be ones that are, for the most part, developed independently of class analysis.

The joint effects of class origins and education

We now turn to the extent to which the relationship between class origins and class destination is mediated via the effects of educational level. In order to do so we must first model the relationship between class origins and educational qualifications, then we model the relationship between education and class destinations. Elsewhere we have set out in detail the results of this analysis (Whelan and Layte 2002). Here we concentrate on the manner in which the origin–destination relationship is mediated by educational qualifications. We compare the 1973 with the 1994 data and thus we revert to analysing only men. We begin by examining, at the most general level, the manner in which class origin and educational level combine to influence class destination. Model A in Table 7.9 hypothesises that the link between educational credentials and destination class is the same across all origin classes. It thus excludes the three-way interaction between origins, education, and destination but it includes the terms O * E * T (the partial association between class origins and education is allowed to vary over time), O * D * T (the partial association between origins and destinations can vary over time), and E * D * T (the partial education–destination association can vary over time).

This model produces a G^2 of 429.0 with 324 d.f. Adding the O * E * D term in Model B brings an improvement in the deviance value of 173.6 for 108 d.f. and

TABLE 7.9. *Model fits for origin–education–destinations tables for 1973 and 1994*

	G^2	d.f.	D	*p*	bic
A. All three way effects except O * E * D	429.00	324	6.31	.001	−2465
B. All three way effects	255.41	216	4.68	.034	−1674
C. Substitute column effects model for E * D * T	538.13	362	7.31	.000	−2695
D. Substitute AHP model for O * D * T	544.55	411	7.34	.000	−3126
E. Substitute column effects model and AHP model for E * D * T and O * D * T	685.98	452	8.81	.000	−3351

Note: E = education

comes close to fitting the data. But this improvement is bought at the cost of a considerable reduction in parsimony and we conclude that the O * E * D term may be omitted. We then attempt to assess whether the models of the educational and class origin effects that we have developed prove adequate when used to model their partial effects.

In Model C, a column effects education–destination model which treats educational levels as an ordered variable is substituted for the three way interactions E * D * T. This results in a G^2 of 538.13 with 362 d.f. Compared with Model A, this involves an increase in the deviance of 109.13 for a gain of 38 d.f. The next model substitutes the AHP model, including the affinity terms and interactions terms for O * D * T, and gives a G^2 of 544.6 for 411 d.f. This involves an increase in G^2 of 115.55 for a gain of 87 d.f. Finally, in Model E, we substitute the column effects model and the AHP model for E * D * T and O * D * T. The outcome is a G^2 of 685.98 with 452 d.f. constituting an increase in the deviance level over Model A of 256.98 for a gain of 128 d.f. The model misclassifies 8.8 percent of cases compared to 6.3 percent for Model A. Overall then our theoretical models perform very well.

At this stage we turn to a comparison of the gross and partial effects of class origins on class destination. In Table 7.10 we look at the partial parameters for class origins while controlling for education. A comparison between Table 7.7 and 7.10 reveals significant differences between the gross and partial coefficients. The coefficients relating to barriers to entry to agriculture and the movement between the petty bourgeoisie and farming classes, where there is no reason to expect education to play a mediating role, remain largely unchanged. Inheritance effects also appear to operate independently of educational level. The parameters that are affected are those relating to hierarchy and the SLP term which captures the additional advantage enjoyed by those from the petty bourgeoisie in gaining access to the service class. The H1 and H2 terms are almost halved. A comparison of Table 7.10 with Table 7.7 shows that the H1 term declines from −0.171 to −0.092 and the H2 term from −0.528 to −0.283, with the former becoming statistically insignificant. In 1973 the net H3 term is 25 percent less than the gross effect. Controlling for education makes the net H3 interactions in 1987 and 1994 almost identical, whereas in Table 7.7 the gross 1994 term had been larger. Following from this the percentage reduction in H3 in 1987 is over three-quarters while for 1994 it is in the region of two-thirds.

Thus, in relation to long-range hierarchical movement there is some evidence that not only is there a reduction in the barriers over time but the effect is increasingly mediated by education. This, however, is the only evidence for increasing merit selection. With the exception of the term relating to short-range movement the net hierarchy terms remain highly significant. Furthermore, apart from the SLP term, which declines from 0.704 to 0.429, the remaining effects are almost entirely unaffected by controlling for educational attainment.

TABLE 7.10.*Partial origin association destination— parameters from the origin–education–destination model*

Parameters	Estimate	s.e
INH1	0.179	0.097
INH2	−0.664	0.151
INH2 * 1987/94	0.536	0.154
INH3	1.386	0.198
INH3 * 1987/94	−0.973	0.214
INH4	1.018	0.159
INH5	0.865	0.214
H1	−0.092	0.058
H2	−0.283	0.051
H3	−0.924	0.184
H3 * 1987	0.693	0.227
H3 * 1994	0.629	0.217
SLP	0.429	0.139
AGB	−1.831	0.137
PB	0.939	0.104
OAF1	−0.419	0.111
OAF2	1.340	0.677
OAF2 * 1987	−1.870	1.345
OAF2 * 1994	−1.034	0.904
OAF3	0.124	0.196
OAF3 * 1987/1994	−0.518	0.259

Conclusions

In this chapter we have analysed trends in social mobility from the early 1970s to the mid-1990s. The changes in the class origin and destination distributions that we have observed reflect the economic transformation from an agrarian and petty bourgeois society to a modern industrial, and indeed post-industrial, society. A rapid decline in the absolute importance of inheritance of property went together with an unprecedented expansion in the educational system. The three observation points available allow us to identify rather different periods of the transformation of the class structure. The nature of long-term transformation of the class structure in Ireland was such that extreme social closure at the top was not a possibility. While increasing heterogeneity of classes is the predominant pattern, this is not true of the non-skilled manual class, which became largely recruited from the manual classes. The demise of the traditional small proprietor is reflected in the changing composition of the self-employed class, which increasingly recruits from the manual working class and is dominated by 'own account' skilled manual workers. In most cases the decreased importance of the propertied classes results in greater heterogeneity, except at the bottom of the hierarchy where it leads to the emergence of a smaller but

self-recruiting unskilled manual block that more closely resembles the 'mature' working class of countries which had industrialised in the previous century or in the early twentieth century. There was a steady increase in the overall level of mobility over time. However, while upward mobility increased substantially, downward mobility declined producing a sharp increase in the ratio of upward to downward mobility. The rising tide had indeed lifted many boats.

Much of our attention has been focused on the question of whether such developments were associated with greater equality of opportunity and the emergence of a more meritocratic society. In fact our analysis provides little support for the IMS thesis. Overall there was very little change in the relationship between class origin and destination over time. No evidence was found of a substantial weakening in either the gross or net relationship between class origins and destination. We found a tendency over time towards equalisation of inheritance tendencies within the employee classes. We also observed some reduction in the scale of long-range barriers to social mobility and the impact of hierarchy increasingly operated through education. 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.[89] Thus, as Goldthorpe (1996*a*: 268) notes, if it is accepted that in modern industrial societies the educational system plays the main role in discovering talent, and educational attainment is the prime indicator of merit, then results of the kind we have reported must seriously undermine the notion of increasing merit selection.

Appendix

TABLE 7.A1.*Design matrices of the 'Affinity Terms' for the 7 × 7 origin by destination table*

OAF1	OAF2	OAF3
Class Destination		
0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0
0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0
0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 1 0 0
0 1 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0
0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0
0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0
0 0 0 0 0 0 0	0 0 1 0 0 0 0	0 0 0 0 0 0 0

[89] The limited impact of education arises from the fact that the class origins–educational qualifications relationship remains unchanged while the impact of educational qualifications on class destination actual weakens over time. For further discussion of these relationships see Whelan and Layte (2002).

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8 Trends in Intergenerational Class Mobility in Britain in the Late Twentieth Century

John H.Goldthorpe and Colin Mills

Our concern in this chapter is specifically with trends in intergenerational *class*—rather than, say, occupational or status—mobility: that is, with trends in intergenerational social mobility as viewed within a class structural context. By way of introduction, therefore, we need to say something, if only briefly, about the development of the British class structure over the years that are of interest to us.[90]

In Table 8.1 we give some relevant quantitative information in the form of the class 'origins' and 'destinations' distributions of male and female respondents to the General Household Survey (GHS) in 1973 and 1992. The GHS dataset for this period is that which we shall subsequently use in our mobility analyses, and we work here with the same nine-category version of the CASMIN class schema as in these analyses. As can be seen from the table, the basic seven-category version of the schema is expanded in that classes IIIa and IIIb are distinguished and classes V and VI separated; but, because of certain limitations of the dataset (to be discussed further below), class IVa has to be combined with classes I and II.

The dissimilarity indices (Δ) reported in Table 8.1 suggest that the twenty years covered were ones in which marked changes occurred in the distribution of individuals across different class positions. Most importantly, it may be noted that the Δs for the class destination distributions, as between 1973 and 1992, of both men and women imply that a 'redistribution' of about a fifth would be required (21 percent and 19 percent, respectively) in order to bring the destinations of the latter year into accord with those of the former. The detailed distributions in the main body of the table then show that with

[90] The conceptualisation of class that informs this paper—and, more specifically, of class positions and in turn class structure as being grounded in employment relations—is set out elsewhere (see esp. Goldthorpe 2000: ch. 10).

TABLE 8.1. *Class origins (O) and class destinations (D) of men and women, Great Britain, 1973 and 1992, (Percent by column)*[a] *and selected dissimilarity indices*

Class	1973				1992			
	Men		Women		Men		Women	
	O	D	O	D	O	D	O	D
Panel A. Origin and Destination distributions								
I + II + IVa Salariat and employers	18	26	19	16	31	39	30	33
IIIa Routine non-manual workers,higher grade	8	10	8	38	5	8	5	32
IIIb Routine non-manual workers,lower grade	1	—	1	13	1	1	1	8
IVb Self-employed workers	4	4	4	2	6	9	6	3
IVc Farmers	4	1	4	—	2	1	3	—
V Foremen and technicians	5	5	5	1	11	7	12	2
VI Skilled manual workers	36	33	35	6	25	19	25	3
VIIa Non-skilled manual workers	20	19	20	23	17	15	16	18
VIIb Agricultural workers	4	2	4	1	2	1	2	1
Panel B. Dissimilarity indices					Δ			
Men's destinations 1973—men's destinations 1992					21			
Men's origins 1973—men's destinations, 1973					10			
Men's origins 1992—men's destinations, 1992					14			
Women's destinations, 1973—women's destinations, 1992					19			
Women's origins 1973—women's destinations, 1973					45			
Women's origins 1992—women's destinations, 1992					39			
Men's origins 1973—women's origins 1973					1			
Men's origins 1992—women's origins 1992					2			
Men's destinations 1973—women's destinations 1973					45			
Men's destinations 1992—women's destinations 1992					34			

[a] For both men and women, class origins are indexed by class of father's employment at the time of respondent's early adolescence, and class destinations are indexed by class of respondent's own employment at time of enquiry (or of last employment in the case of those not in employment at that time).

both men and women the proportion of those holding positions within the service class, or salariat, of professional, managerial, and administrative employees increased sharply.[91] But while for men this increase was essentially offset by falling numbers in skilled manual jobs, for women it was offset by a decline in the proportion found in almost all other types of employment.

Two major factors underlying these changes can be identified. First, following on the oil crises of the mid-1970s, sectoral change within the British economy accelerated. The services sector, in which the ratio of professional, managerial, and administrative to lower-level positions is relatively high, maintained its expansion, but manufacturing industry declined at a yet faster rate than before. Secondly, women's labour force participation continued to rise. By the 1990s, over 60 percent of single women of working age and over 50 percent of married women were in the labour market. Thus, the growth of services enlarged opportunities to enter the salariat for men and women alike. However, with the latter, and in the context of their increased supply, this was *in addition to* a continuing expansion, in absolute terms, of more traditional female employment in routine non-manual positions, even though at a slower rate than previously. In contrast, the traditional male preserve of skilled manual work in manufacturing contracted not just in relative but in absolute terms also, so that for men the objective opportunity structure tended in effect to polarise between positions in the salariat, on the one hand, and *non*-skilled manual work, on the other.

It may then be further observed from Table 8.1 that although the Δ for men's and women's class origin distributions (as indexed by father's class) is quite negligible in 1973 and 1992 alike—indicating that no 'class selection' effects operate in the case of working women—the Δ for men's and women's class destination distributions falls, as between these two dates, from 45 to 34. And, as the detailed distributions again show, this is largely in consequence of women's increased entry into the salariat. In turn, the Δ for women's class origins and women's class destinations also falls between 1973 and 1992 from 45 to 39 (while the corresponding Δ for men increases slightly from 10 to 14).

Two qualifications to the foregoing should be made. First, the distribution of individuals across class positions is unlikely to be an entirely accurate indicator of the structure of these positions themselves, since at least in tight labour markets some positions may remain unfilled. And, conversely, when the demand for labour is weak, not all individuals in the active population may be able to find employment and thus be allocated to a class position on this basis. The period with which we are concerned did in fact see the return to Britain of unemployment on a mass scale after the ending of the 'long boom' of the post-war years. Thus, in 1982 around 13 percent of the active

[91] We know that the proportion of the active population classified as employers also grew somewhat over the period in question, but by no means as much as the employee groupings within class I + II + IVa.

population reported themselves as being unemployed and in 1993 around 10 percent. Throughout, the risk of unemployment remained strongly associated with class of last employment, and was by far the greatest for those engaged in non-skilled wage labour (Gallie et al. 1998). However, the issue may still be raised of whether unemployment should not itself be regarded as a class position: that is, that of those who are excluded from employment relations of any kind. We would ourselves believe that such a view is a very defensible one in the case of unemployment of a long-term or recurrent kind. Unfortunately, though, we have information only on whether or not the individuals we study were unemployed at the time of interview, and we have therefore decided to follow here the standard practice of allocating unemployed respondents—and likewise those who reported themselves as being out of the labour market (very largely women)—to class positions on the basis of their *last* employment.[92]

Second, to treat the class positions of married (or cohabiting) women as being determined by their own employment, without reference to their partner's, may be thought problematic, and especially where, as with the majority of such women, this employment is only part-time. For the implication then is that the conjugal family need no longer be regarded as the basic unit of class analysis and that, where the class of employment of conjugal partners differs, lines of class division may be seen as running through, rather than between, such families. There are some obvious analytical advantages in dealing with the mobility of men and women separately, and this is the strategy that we shall for the most part follow; but we shall try not to lose sight of the fact that it may in certain respects prove misleading.

Data: the General Household Survey

As indicated above, the dataset on which we draw for our analyses of intergenerational class mobility is that of the GHS. The GHS is an official British survey that has been running since 1971. It is carried out continuously over each year on the basis of a multi-stage stratified sample of the British population resident in private households.

In previous attempts to establish rates and patterns of class mobility in later twentieth century Britain, sociologists have for the most part sought to extend the findings of the Oxford Mobility Study (OMS) of 1972 by exploiting

[92] In our analyses of relative rates (see text below), we experimented by introducing separate 'destination' categories for the unemployed and the economically inactive (at time of interview). For the most part, these modifications did not lead to any qualitatively different results from those that are reported. The main difference was that if economically inactive women were allocated to a separate category, rather than to a class on the basis of their last employment, the apparent trend towards greater fluidity in the A series tables (see text below) disappeared.

the dataset of the British General Election Surveys (BGES) that have been carried out in the year of every General Election from 1964 onwards (e.g. see Goldthorpe 1987: ch. 9; Macdonald and Ridge 1988; Jonsson and Mills 1993; Goldthorpe 1995; and, most comprehensively, Heath and Payne 2000). The BGES provide data that are highly comparable with those of the OMS, more so in fact than those of the GHS. However, taking various other issues into consideration, we have come to the view that, on balance, it is the latter that provides the better basis on which to work.[93]

The main weakness of the GHS dataset, so far as the analysis of intergenerational class mobility is concerned, arises with the information that is available on respondents' class origins: in particular, on the employment of the respondent's father (or other family head). From 1971 to 1976 such information was collected for all respondents age sixteen and over. However, in 1977 and 1978 this information was not collected at all; from 1979 to 1988 it was collected only for persons aged 16–49; and from 1989 to 1992, only for persons aged 16–59. In 1993 the collection of such information was again suspended and has not, unfortunately, since been resumed.

Moreover, while the social classification that is in standard use in reports on the GHS is the official Socio-Economic Groups (SEGs), it has at no stage been possible to apply this classification fully to respondents' fathers. Specifically, where the respondent's father is reported to be an employer, no further question has been asked on the number of his employees, and thus no distinction can be made between 'large' and 'small' employers (i.e. between SEGs 1.1 and 1.2). This means, therefore, that the usual procedure for moving from the SEGs to a good approximation to the categories of the CASMIN (or Goldthorpe) class schema (Heath and McDonald 1987) cannot in this case be fully implemented. *All* employers, rather than just 'large' employers, have to be allocated to classes I + II; and, in turn, class IV becomes simply class IVb, that of self-employed workers without employees.

As regards the quality of data on class origins, then, the GHS is inferior to the BGES (which would allow the use of the unmodified CASMIN class schema throughout). At the same time, though, there are at least three other respects in which, for our present purposes, the GHS must be reckoned as clearly superior to the BGES, and it is these that lead us to opt for its use.

1. The GHS provides relatively large sample sizes. For the early years mobility tables can be constructed with Ns of 7,000–8,000 and for the later years with Ns of 5,000–6,000 for both men and women. In contrast, such tables constructed from the BGES have Ns of only 500–1,500.

[93] The neglect of the GHS by previous mobility researchers is rather surprising. A conference paper by Ganzeboom et al. (1992) which, though preliminary, showed the potential of the GHS and suggested important findings, was not followed up by any publication.

2. In 1984 the sampling frame for the GHS was changed from the Electoral Registers to the far more accurate and reliable Postcode Address File (PAF), while the BGES moved over from the Electoral Registers to PAF only in 1997.
3. The GHS has managed to maintain consistently high response rates. For the period of interest here—that is, from the start of the survey through to 1992—the response rate remained always above 80 percent. In contrast, response rates for the BGES range from 61 to 76 percent even though calculated, it would seem, on a somewhat less stringent basis than in the case of the GHS.[94]

Finally, we can report that, despite the problems earlier noted, mobility tables based on the GHS do appear to have a very high degree of continuity with those of the OMS. Thus, a comparison of a 1973 GHS table for men aged 20–64 and resident in England and Wales with the formally equivalent OMS table for 1972 reveals virtually the same class destination distributions, and the hypothesis that the pattern of association between class origins and destinations is identical for the two tables cannot be rejected.[95]

From the foregoing it then follows that there are two different ways in which we can investigate trends in intergenerational class mobility on the basis of the GHS, both of which we seek to exploit.

1. We can construct mobility tables for those particular years of the GHS where in the case of respondents in the relatively wide age-band of 20–59 we have the requisite information for their fathers. Rather conveniently for our purposes, these years happen to fall into two blocks some two decades apart: 1971–6 and 1989–92. Unfortunately, major technical difficulties arise with the surveys of 1971 and 1972 that have led us to abandon the attempt to produce tables for these years and to start rather with that for 1973. We will call these tables the A series.
2. We can also construct mobility tables for respondents in the more limited age-band of 20–49 that are, however, of a more continuous kind. These cover in fact all years from 1973 through to 1992 with the exceptions only of 1977 and 1978, when (as earlier noted) no questions on father's employment were asked, and 1985 and 1986 when we have no information on the last employment of respondents who, at time of interview, were unemployed or economically inactive. We will call these tables the B series.

Trends in absolute mobility rates

Previous work based on the BGES dataset has tended to confirm—and to extend to women—the finding of the OMS of a rising rate of total mobility,

[94] The GHS reports in fact three response rates: the minimum rate which excludes all partially responding households; the maximum rate which includes all such households; and the most commonly used 'middle' rate—to which the figure in the text refers—which excludes 'partials' in those cases where there is a *complete* lack of information for at least one household member.

[95] Details of this comparison are available from the authors on request.

TABLE 8.2. *Class categories and levels as basis for determining total mobility rates*

Class	Description	Level
I + II + IVa	Salariat and employers	1
IIIa	Routine non-manual workers, higher grade	
IVb	Self-employed workers (non-professional)	
IVc	Farmers	2
V	Foremen and technicians	
VI	Skilled manual workers	
IIIb	Routine non-manual workers, lower grade	
VIIa	Non-skilled manual workers	3
VIIb	Agricultural workers	

largely as the result of increasing upward mobility into the service class, or salariat, outweighing decreasing downward mobility from this class. But in some analyses there have also been indications that, in the case of men at least, these trends may be weakening somewhat (see esp. Goldthorpe 1987; Heath and Payne 2000). Do results from the GHS tell a similar story?

To try to answer this question, we have constructed both A series and B series tables on the basis of the nine-class version of the CASMIN schema already shown in Table 8.1. Further, though, in order to determine rates of upward and downward mobility, we need to specify an ordering of the class categories that we use, and this is given in Table 8.2.[96] While, then, total mobility refers to all cases where respondents are in a different class position to their fathers, upward mobility refers to all such cases where movement is from a lower-level to a higher-level class, and downward mobility to all such cases where movement is from a higher-level to a lower-level class. Other instances of mobility are treated as 'non-vertical' and rates of such mobility are not separately considered—that is, other than as a component of total mobility.

In Figs 8.1 and 8.2 we show graphs, for men and women respectively, that summarise our main findings on trends in absolute mobility rates. However, before commenting on these graphs in detail, there is one preliminary point that we should make. What are represented here are annual data for the same population, as viewed, so to speak, through a forty-year 'age-window' in the case of the A series tables or a thirty-year 'age-window' in the case of the B series tables. From year to year, just one annual birth cohort of individuals within this population will pass out of the window and one new annual cohort will come into view. Consequently, we should not expect any sharp changes in rates from one year to another; all changes should be quite gradual. Indeed, if we do observe a sharp change, we should become suspicious. On this basis, therefore, doubts must at once arise about the data for 1974, when,

[96] For the basic rationale of this ordering, see Erikson and Goldthorpe (1992: 44–6).

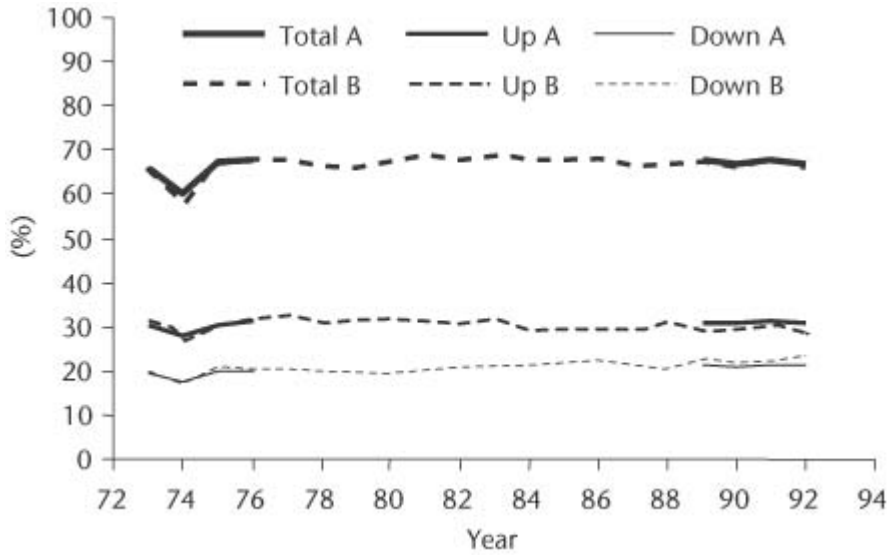
as can be seen, in mobility rates for men and women alike there is a relatively abrupt fall. In fact, further analyses of these data that we have carried out strongly indicate that some serious problem here exists with the GHS dataset as archived, and thus that results from the 1974 table should be discounted.[97]

With this reservation, what, then, are the main conclusions that we can draw from the graphs? To begin with Fig. 8.1, for men, the following three points may be made.

1. *Total mobility*. It is difficult to see evidence of a continuing increase in the total mobility rate post-1972. Ignoring the points for 1974, the graphs for both the A and B series tables indicate essentially a 'no change' situation.
2. *Upward mobility*. It is equally difficult to see a continuing increase in upward mobility. The A series graph is again rather flat, and if any trend is apparent in the B series graph, it is a declining one.
3. *Downward mobility*. Conversely, there is no evidence of a continuing decrease in downward mobility. In fact, both graphs show a slightly rising tendency.

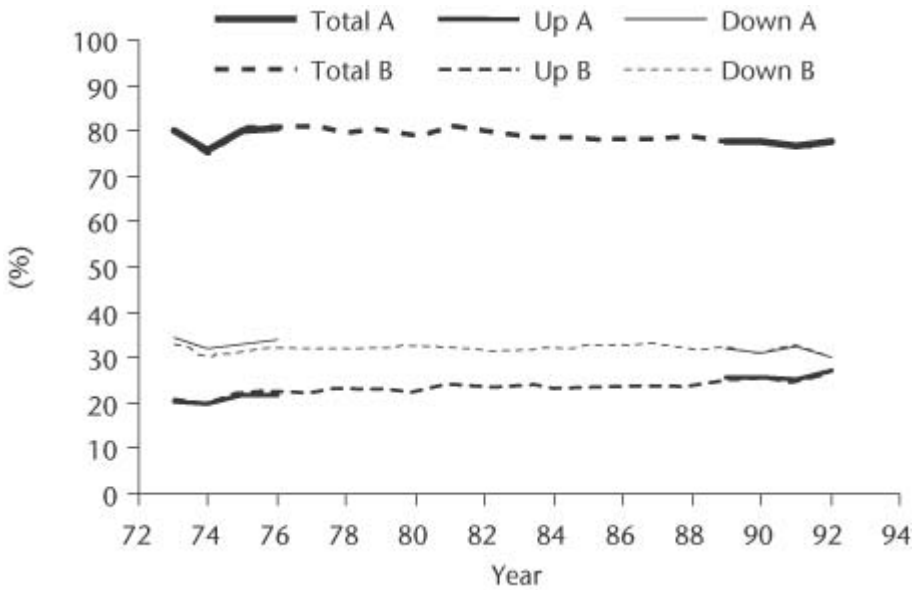
Taken together, then, the trends in absolute mobility rates for men recorded in Fig. 8.1 would suggest yet more strongly than those that have been derived from the BGES dataset that the generally optimistic picture obtained from the OMS is by now in need of revision. Over the later decades of the twentieth century, the previous tendency for rates of total, and especially of upward,

FIG. 8.1. *Absolute intergenerational class mobility rates, men*



[97] Our analyses show that the 'excess' immobility in the 1974 sample is not generalised but in fact confined to younger age groups. It is most marked in those aged 20–24 and disappears altogether among respondents aged thirty-five and over. We would suspect that in some, probably indirect, way a coding or recoding error is involved.

FIG. 8.2. *Absolute intergenerational class mobility rates, women*



mobility to rise has been halted, and, if anything, it is downward rather than upward mobility that has become more frequent.

The corresponding trends for women are shown in Fig. 8.2. In this case, what chiefly emerges is the following.

1. *Total mobility.* It is again evident, just as with men, that no increase in rates has occurred over the period covered. Rather, the graphs for both the A and B series tables indicate a slight decline.
2. *Upward mobility.* We do, however, find evidence, again from both graphs, of a slow but steady increase in the rate of upward mobility of women, although starting, it should be noted, from a lower level than for men. What would seem important here is not just the continuing growth of the service class but, further, the growing share of service-class positions that were held by women rather than by men. Inspection of the A series tables reveals that women's share of positions in class I + II + IVa rose from under two-fifths in the early 1970s to almost a half by the early 1990s.[98]
3. *Downward mobility.* Both graphs give some indication of a decreasing trend in downward mobility among women, although that for the B series remains flat over most of the period covered. From inspection of the A series tables, at least one source of such a decrease emerges: that is, growing intergenerational *im*mobility among women born into the more advantaged families of class I + II + IVa. In the early 1970s around a third of the daughters of fathers in this class were themselves found in similar positions; by the early 1990s this proportion had risen to over two-fifths.

[98] It may safely be assumed that this increase would be even more pronounced if a comparison on the basis of the service class alone—that is, classes I and II—were to be made.

The most obvious interpretation of these results overall would appear to be the following. In the 1970s, women's rates of downward mobility appear high, relative to those of men, chiefly because of the marked discrepancy between women's class distribution and that of the previous generation of men—that is, the generation of their fathers—with substantially more women than men holding lower-level class positions. However, by the 1990s this discrepancy was significantly reduced (cf. Table 8.1), and we correspondingly see more women showing upward mobility by reference to the class positions of their fathers and fewer showing downward mobility. In other words, over the period in question the opportunities for women and for men to enter more desirable, higher-level class positions became rather more equal and, in consequence, women's and men's rates of upward and downward mobility tended to converge.

Nonetheless, it is still the case that trends in these rates were dissimilar, and the question thus arises of what, if anything, can be said about trends in absolute rates overall. If one believes that all women in the labour force are appropriately allocated to class positions on the basis of their own employment, then little can indeed be added to the foregoing analysis. However, for those who would regard the validity of this 'individual' approach to class allocation as suspect so far as many married and cohabiting women are concerned, an alternative is available: that is, the approach through 'complete' mobility tables (Erikson and Goldthorpe 1992: ch. 7) in which the idea of the conjugal family rather than the individual as the unit of class analysis is preserved.

In complete tables, the class positions of single individuals of either sex are determined by their own employment, but those of individuals in conjugal or other cohabiting relationships are determined by the employment of *whichever* partner holds the 'dominant' labour market position as assessed in terms of working time and grade of employment (Erikson 1984). We have reconstructed our A series tables for men and women (omitting those for 1974) on the lines indicated and the results regarding absolute rates can be summarised as follows.[99]

First, total mobility rates calculated on this basis actually rise between the early 1970s and the early 1990s—from around 70 to 75 percent. Second, though, this increase is entirely the outcome of increasing rates of *downward* mobility, from around 22 percent in the earlier period to over 30 percent in the later, with rates of upward mobility in fact falling somewhat from 30 percent to around 25 percent. Third, the main source of these changes can be traced back to the massive decline of class VI, that of skilled manual workers,

[99] We take working time as the first criterion of dominance, so that partners in employment at time of interview dominate those not in employment, and those in full-time employment dominate those in part-time employment. Where partners still remain undifferentiated, we move to the second criterion of grade of employment. Here we use the following dominance ordering of our classes: I + II + IVa, IVb, IVc, V, IIIa, VI, IIIb, VIIa, VIIb. Full details of the results reported in the following paragraph are available on request.

or of families headed by such workers, which accounted for a quarter of the total destinations distribution at the beginning of the period covered but for less than a tenth at the end. Thus, intergenerational stability within this class falls off sharply, and those individuals of class VI origins who do not achieve upward mobility tend to be downwardly mobile, whether in virtue of their own employment or that of their partner, into non-skilled jobs in classes IIIb or VIIa; and, at the same time, upward mobility from class VIIa origins into class VI is much reduced.

In sum, the picture obtained from our complete mobility tables supports the more negative view of trends in absolute mobility rates that we formed from analysis of our tables for men rather than the somewhat more positive one suggested by analysis of our tables for women. If late twentieth-century Britain was in fact becoming a more mobile society, as some commentators have claimed (e.g. Giddens 1994: 143–4), then this was only in the sense of downward rather than upward movement within the class structure becoming more frequent.

Trends in relative mobility rates

We now move on to examine trends in relative mobility rates. To this end, we apply to our two series of mobility tables what has become the standard modelling procedure. First, we fit to each series the log-linear model that postulates unchanging relative rates as measured in terms of odds ratios—the 'constant social fluidity' (CnSF) model. Then, second, we see if we can gain any improvement on this model from the more refined, log-multiplicative uniform difference (Unidiff) model that tests specifically for the possibility of some movement from table to table—that is, in our case, from year to year—in the direction of generally greater or less fluidity.

We in fact follow this modelling sequence twice over—that is, for our A series and our B series tables. The former, it will be recalled, have the advantage of covering the wider age-range (20–59) but for a limited number of years, while the latter cover a narrower age range (20–49) in a more continuous manner.

In Table 8.3 we give the results of fitting the CnSF and Unidiff models to our mobility tables for men.[100] With the A series tables, it can be seen that while the CnSF model does not fit the data, the lack of fit, judged by the Δ of 2.8 percent, is rather small and, further, that the Unidiff model does not achieve any significant improvement on the CnSF model. In other words,

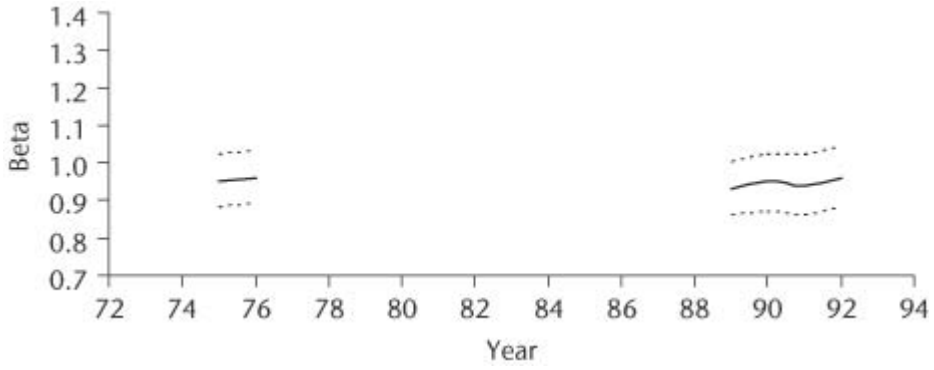
[100] In this and subsequent similar tables, our attention focuses on the dissimilarity index (D) as a measure of lack of fit and on the significance or otherwise of the difference in fit between the CnSF and Unidiff models. Although we report the Bayesian information criteria (bic) statistic for those who may be interested in it, we have ourselves strong reservations about it as a criterion of model choice (cf. Cox 1995; Weakliem 1999; Firth and Kuha 1999).

TABLE 8.3. *Fit of models to intergenerational class mobility tables for men*

	G^2	d.f.	p	Δ	bic
A series[a]					
CnSF	449.1	384	.012	2.8	−3666.1
Unidiff	445.2	378	.010	2.7	−3605.6
Difference	3.9	6	.690	—	—
B series[b]					
CnSF	934.3	896	.133	3.1	−9113.9
Unidiff	908.0	882	.265	3.0	−8983.2
Difference	26.3	14	.024	—	—

[a] N = 45,095 (weighted).
[b] N = 74,199 (weighted).

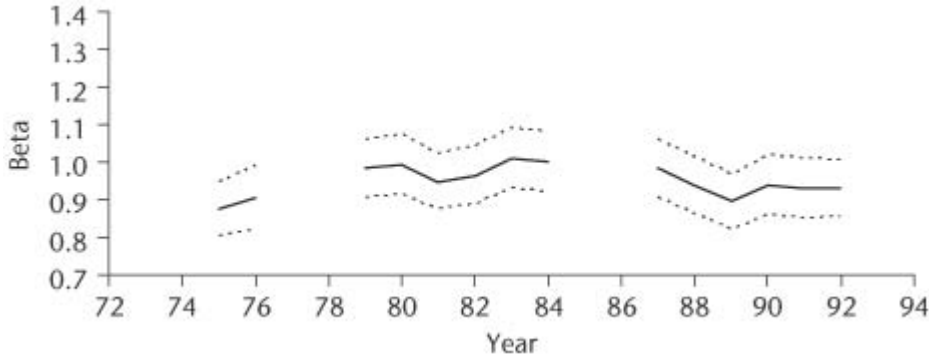
FIG. 8.3. *Men aged 20–59, A series tables. Beta parameters from Unidiff model and 95 percent confidence intervals*



although some slight shifts in relative rates of class mobility must be recognised over the years represented by the tables, these changes were not ones that implied year-to-year increases or decreases in fluidity overall. In Fig. 8.3 we plot the change parameters (βs) estimated under the Unidiff model, together with 95 percent confidence intervals. In this graph and the other similar ones that follow, the first year in the series, 1973, is taken as the reference year with β set at 1. Values for β for subsequent years that fall below 1 then indicate greater fluidity than in 1973 and values rising above 1, less fluidity. In Fig. 8.3 the statistical results referred to above are clearly reflected: year-to-year changes in the level of fluidity are slight and a horizontal line could readily be drawn within the confidence intervals shown.

With the B series tables, however, the lack of fit of the CnSF model is somewhat greater and the Unidiff model does perform significantly better: that is, year-to-year changes in the level of fluidity are here indicated. The further

FIG. 8.4.*Men 20–49, B series tables. Beta parameters from Unidiff model and 95 percent confidence intervals*



question that arises is then that of whether these changes are such as to display some trend towards greater or less fluidity over the period covered or, rather, merely 'trendless' fluctuation. In Fig. 8.4 the relevant β parameters are plotted and it is a conclusion of trendless fluctuation that is most obviously favoured. If any more regular tendency is suggested, it would be a movement of a curvilinear kind, with fluidity decreasing up to the mid-1980s but then increasing again into the 1990s. However, we would not ourselves be inclined to indulge in curve-fitting of this kind.

We would in fact regard the results we obtain for men, from the A and B series tables together, as serving in general to confirm, and to extend into the later twentieth century, one of the major findings of the OMS: that is, that relative rates of class mobility, rather than displaying any kind of long-term trend, are characterised by a high degree of temporal stability, with such shifts as do occur being not only very slight but also quite variable in direction. Viewed in this way, our results are not then readily compatible with those recently reported by Heath and Payne (2000) on the basis of the BGES dataset which point to a rather clear, even if not entirely regular, movement towards greater fluidity across successive birth cohorts of men distinguished within the pooled data of all election surveys from that of 1964 through to that of 1997. The reasons for these divergent findings would merit further investigation, but we would here wish to argue for the greater reliability of our own analyses on the grounds of the superiority of the GHS dataset over that of the BGES in terms of sample size, sampling frame, and, above all, response rates, that we have already noted.[101]

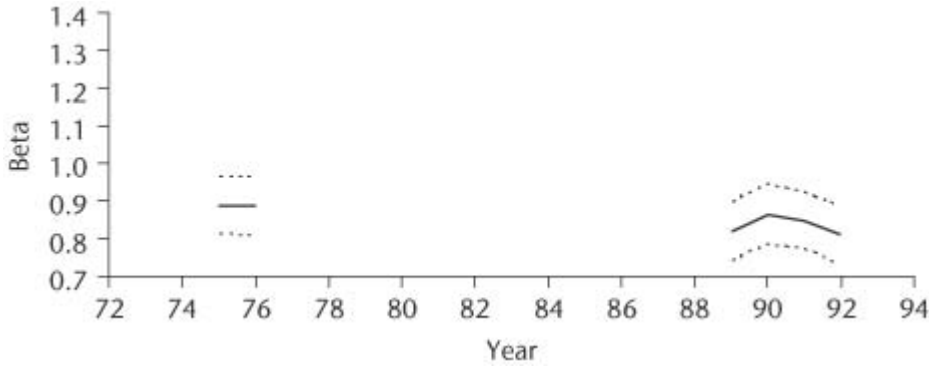
[101] One possibility that we are able to exclude is that the differences between Heath and Payne's results and our own stem from the fact that their analysis is based on (quasi-) birth-cohorts while ours has a repeated cross-sectional design. We have reorganised the data provided by our A series tables onto a birth-cohort basis similar to that used by Heath and Payne but are again unable to find any evidence of a trend in fluidity. We would further note that with birth-cohort analyses of the kind in question the dating of the 'destination' positions of respondents in the same cohort will of course be highly variable, and that in turn no true population estimates of the level of fluidity at a particular date are possible.

TABLE 8.4. *Fit of models to intergenerational class mobility tables for women*

	G^2	d.f.	p	Δ	bic
A series[a]					
CnSF	445.6	384	.016	2.8	−3680.6
Unidiff	429.4	378	.035	2.6	−3632.3
Difference	16.2	6	.013	—	—
B series[b]					
CnSF	982.4	896	.023	3.1	−9086.2
Unidiff	969.2	882	.021	3.0	−8942.1
Difference	13.2	14	.511	—	—

[a] N = 46,414 (weighted).
[b] N = 75,913 (weighted).

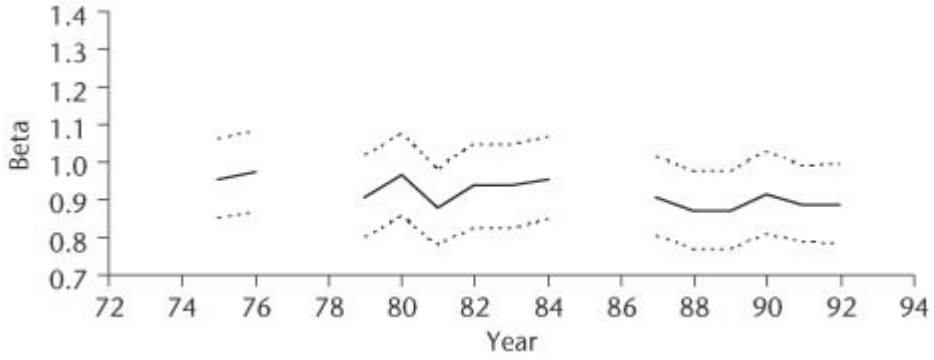
FIG. 8.5. *Women 20–59, A series. Beta parameters for Unidiff model and 95 percent confidence intervals*



Turning now to women, the results of our modelling are given in Table 8.4. From this it can be seen, first of all, that with the A series tables we have a different outcome than for men in that, while the CnSF model shows no greater lack of fit, the Unidiff model does none the less mark a significant improvement on it. Moreover, in the plot of β parameters estimated under the Unidiff model, a generally downward if not entirely regular trend is apparent. On this evidence, then, social fluidity among women did show some tendency to increase between the early 1970s and the early 1990s (see Fig. 8.5).

However, the contrast with men continues when we consider the B series tables. The lack of fit of the CnSF model is in this case somewhat greater (the Δ rises from 2.8 to 3.1) but now the Unidiff model achieves no significantly better fit: that is, the idea of year-to-year changes in the overall level of fluidity is on this basis rejected. The β parameters plotted in Fig. 8.6 do, it is true, suggest something of a downward trend with, as in the A series, those for the

FIG. 8.6.*Women 20–49, B series tables. Beta parameters from Unidiff model and 95 percent confidence intervals*



early 1990s generally falling below those for the early 1970s. But an eye to the confidence intervals would suggest that it might well be dangerous to make too much of this.

For women, then, our results are somewhat uncertain and also stand in a rather ambivalent relationship to those that have been previously reported by analysts working with the BGES dataset. Heath and Payne (2000) find indications, though scarcely significant ones, of a trend towards increasing fluidity across successive birth cohorts of women, and the results we obtain from our A series tables might therefore be regarded as confirming, on the basis of our much larger sample sizes, that this tendency is indeed real. But, on the other hand, the findings reported by Macdonald and Ridge (1988) and by Jonsson and Mills (1993) of little change in women's relative rates from the 1970s onwards could be seen as corroborated by the results from our B series tables.

Moreover, matters are further complicated in that, just as with the analysis of absolute rates, the issue can be raised of the degree of validity of the 'individual' approach to the class allocation of women that we have followed in the above analyses. Thus, even if the result from the A rather than the B series of tables is favoured, an explanation for the trend revealed could still have little to do with steadily increasing fluidity within the class structure, at least as this idea is generally understood. For example, a tendency is well documented in the British case (e.g. Martin and Roberts 1984: ch. 10) for women returning to work, either for short periods between the birth of children or on completion of their period of 'active motherhood', to enter a lower grade of employment than that which they held prior to having children. And the weakening thus likely to result in the association between women's class origins and their current class positions, as indexed by their own employment—a form of 'perverse fluidity'—could then be taking on steadily greater weight in our analyses simply on account of women's rising rates of labour market participation. However, if apparently increasing fluidity in the case of women were to reflect nothing more than a compositional effect of this kind, it would

be highly debatable whether such a finding could in fact be taken as a serious indication of the emergence of a more 'open' form of society.

While an explanation on the lines in question for the trend that emerges from our A series tables cannot be tested in any decisive way with the data presently at our disposal, we do believe that grounds exist for regarding such an explanation as being, at all events, more plausible than any other on offer.[102]

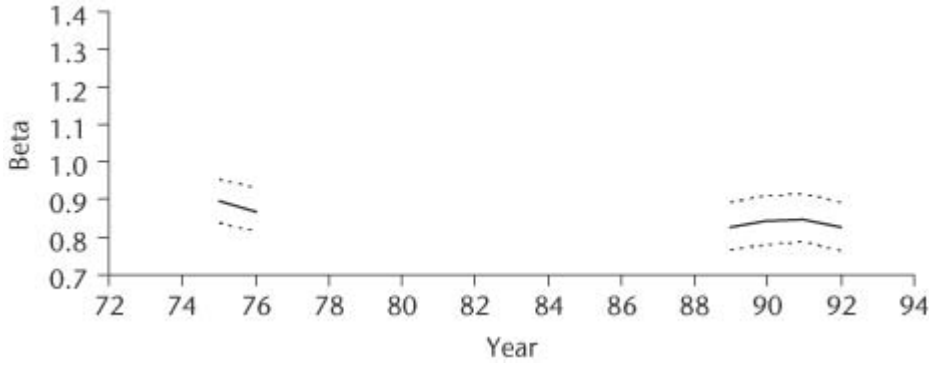
In turn, then, there is again, just as in our treatment of absolute rates, good reason for supplementing our separate analyses of men's and women's mobility with a further analysis based on complete tables. We construct these tables in the same way as before from the A series (omitting the table for 1974) and, following the same modelling procedures as were previously applied in this section, we arrive at the results that are reported in Table 8.5 and Fig. 8.7.

TABLE 8.5.*Fit of models to 'complete' intergenerational class mobility tables based on A series tables for men and women (omitting those for 1974)*[a]

	G^2	d.f.	*p*	Δ	bic
CnSf	474.3	384	.001	2.8	−3748.9
Unidiff	445.4	378	.010	2.6	−3524.8
Difference	28.9	6	.000	—	—

[a] *N* 5 59,740 (weighted).

FIG. 8.7.*Complete tables, A series. Beta parameters from the Unidiff model and 95 percent confidence intervals*



[102] Apart from anything else, it is difficult to suggest alternative explanations of any credibility. For example, it cannot be argued that what is here being revealed is women 'catching up' with an increase in fluidity experienced by men at some earlier time. Not only is there is no evidence of such an increase for men, but we can show that the association between class origins and destinations among women is weaker than among men *throughout* the period we cover, and indeed tending to become more so—which would in fact be in line with our own expectations. One other piece of evidence supporting our explanation is that under models postulating *common* social fluidity for men and women, the largest residuals that occur indicate that women of class I + II + IVa origins have a far stronger propensity than men of such origins to be downwardly mobile into class IIIb positions.

From Table 8.5 it can be seen that the Unidiff model does give a significant improvement in fit over the CnSF model. At the same time, though, the plot of the β parameters in Fig. 8.7 is rather ambivalent. There is an evident increase in fluidity between 1973 and 1976 but the further indication is that, rather than being sustained, this trend subsequently levelled out. In so far, then, as the discrepant results for men and women deriving from our A series tables are seen as in need of resolution and that complete mobility tables are accepted as an appropriate way of achieving this, our verdict must be that a movement towards greater social fluidity, though possible, is 'not proven'. In our view, an alternative and safer conclusion would be that relative rates merely oscillate about a given level: that is, display change of only a slight and, in the long term, directionless kind.[103]

Social fluidity and education

It could be regarded as the conventional wisdom—which a number of sociologists have underwritten—that in modern societies education plays the crucial role in mediating and indeed in promoting social mobility between generations. However, the findings that we have already reported, and in the preceding section in particular, do not fit all that comfortably with this view. We have been unable to present any compelling evidence of a general increase in social fluidity within the British class structure over the last decades of the twentieth century, yet the whole of the second half of the century saw a steady expansion in educational provision that allowed children of all class backgrounds alike to raise their average levels of educational attainment. One possibility is that the importance of education increased specifically in 'channelling' though not in actually generating mobility—and, if so, the conventional wisdom would of course require some modification. But a tendency of this kind would in itself have to be recognised as carrying far from negligible implications. For one thing, the actual *incidence* of mobility (or immobility)—that is, the experience of particular individuals—would presumably be affected, even if mobility *rates* were not; and, for another, mobility processes might be seen as becoming in this way fairer and more legitimate than previously through taking on a more 'meritocratic' character.

Further analysis is obviously called for, and this we undertake by following the approach that has been advocated and developed by Breen and Goldthorpe (1999, 2001) and that comprises two main stages. First, we seek, through the application of topological log-linear models, to capture in a limited number of parameters the patterns of origin–destination association that underlie our

[103] This conclusion we would expect to be supported by the analysis of complete mobility tables based our B series, which would enable us to fill the gap in Fig. 8.7. However, we have not yet been able to undertake the considerable work involved in constructing such tables.

mobility tables. Then, second, we rewrite our preferred topological models as multinomial logit models so as to be able to introduce the individual attribute of educational attainment into our analyses (cf. Logan 1983; Breen 1994), and in turn to examine how far, when this is done—that is, when education is controlled—the origin–destination association parameters that were originally estimated are brought closer to zero. The greater any such movement, the more important would education appear to be as a factor in class mobility.

Since such an approach calls for relatively large Ns, we work here in the case of both men and women with collapses of our earlier and later A series tables.[104] On the one hand, we collapse our tables for 1973, 1975, and 1976 (i.e. we again discard the 1974 table) to give a single 'earlier period' table; and, on the other hand, we collapse our tables for 1989, 1990, 1991, and 1992 to give a single 'later period' table. In so doing, we advance the lower age limit for respondents from twenty to twenty five, so that almost all of those included in our analyses will have completed their full-time education; and we also move from the nine-class version of the CASMIN schema that we have used thus far to one that is as close as possible to the original seven-class version: that is, classes IIIa and IIIb and classes V and VI are combined.

The motivation for this latter change is the following. For the 7 × 7 mobility tables that result, we have an appropriate topological model already available: that is, the 'core model' that was developed in the course of the CASMIN project (Erikson and Goldthorpe 1992: ch. 4) and that aims to describe the generic pattern of social fluidity prevailing within the class structures of advanced societies in terms of four kinds of effect: 'hierarchy' effects relating to vertical class mobility (two levels); 'inheritance' effects relating to class immobility (three levels); a 'sectoral' effect relating to mobility between agricultural and non-agricultural classes; and two 'affinity' effects relating respectively to negative and positive influences on propensities for mobility between specific pairs of classes. Full details of the model are given in Chapter 2 of this volume, and will need to be consulted as the exposition of this section proceeds.[105]

In Table 8.6 we show the results of fitting the core model to our two mobility tables for men, first, in a version that allows the association parameters to vary from one table—that is from one period—to the other; and, second, in a version in which common parameters across the two periods are imposed.

The former version does of course fit the data better than the latter, although the difference in lack of fit, as indicated by Δ, is not large. In turn,

[104] A further consideration here is that the A series tables cover respondents up to age fifty-nine as against forty-nine for the B series. The importance of this consideration is increased by our decision, noted in the text, to omit respondents aged twenty to twenty-four.

[105] It should, however, be kept in mind that the version of the class schema we use does still differ from the CASMIN version in one respect: that is, we are unable to treat separately class IVa, that of small employers, and include it with classes I + II.

TABLE 8.6. *Fit of different versions of the CASMIN core model of social fluidity to collapsed A series tables for men for 1973, 1975, and 1976 (earlier period) and 1989–92 (later period) and parameter estimates (non-significant parameters in italic)*

Version	G^2	d.f.	*p*	Δ	bic
Varying parameters for earlier and later periods	273.3	56	.000	2.1	−319.4
Common parameters for both periods	304.4	64	.000	2.4	−373.4
Difference	31.1	8	.000		
N 5 39,474 (weighted)					

	Parameter estimates							
	HI1	HI2[a]	IN1	IN2[b]	IN3[b]	SE	AF1	AF2
Varying	−0.07	−0.39	0.53	0.47	1.21	−1.00	−0.59	0.39
earlier period	(0.03)	(0.04)	(0.03)	(0.05)	(0.18)	(0.06)	(0.12)	(0.02)
			20.46		1.00	2.21		
later period	*−0.01*	−0.27	0.50	0.58	1.92	−0.93	−0.52	0.34
	(0.03)	(0.04)	(0.03)	(0.05)	(0.21)	(0.07)	(0.11)	(0.02)
		−0.28		1.08	3.00			
Common	*−0.03*	−0.32	0.51	0.52	1.51	−0.98	−0.56	0.37
	(0.02)	(0.03)	(0.02)	(0.04)	(0.14)	(0.05)	(0.08)	(0.02)
		20.35		1.03	2.54			

[a] The HI2 parameter is estimated incrementally to HI1. The total HI2 parameter is also given.

[b] The IN2 parameter is estimated incrementally to IN1 and the IN3 parameter incrementally to IN2. The total IN2 and IN3 parameters are also given.

then, the parameter estimates for the two periods can be seen to be fairly similar in most cases. The main differences are that both hierarchy effects weaken from the earlier to the later period, thus indicating a increased propensity for vertical mobility, while the second- and especially the third-level inheritance effects strengthen, thus indicating an increased propensity for *im*mobility among the salariat and employers (class I + II + IVa), the self-employed (IVb), and farmers (IVc).[106] In other words, the implication here is that the degree of stability in levels of fluidity overall that we earlier found among men in fact

[106] It is of interest to compare the 'early period' parameter estimates shown in Table 8.6 with those estimated under this same model for England (and also—with a slightly modified model—for Scotland) in the CASMIN project, on the basis of quite independent data from the early 1970s (see Erikson and Goldthorpe 1992: 147, table 5.3). There is in fact a fairly close, and thus reassuring, similarity.

conceals two opposing tendencies. Moreover, these tendencies are such that one might add the following speculation: if any long-term trend in relative rates *is* in operation in the case of men, this is not one towards generally greater independence of class origins and destinations but rather towards what has been called 'quasi-independence'; that is, a situation in which the association between origins and destinations is concentrated on the main diagonal of the mobility table or, in other words, takes the specific form of class inheritance.

The main attraction of the 'common parameters' version of the core model is that, if we could accept it, the results from our second-stage analyses would be much simplified in form. However, since the improvement achieved by the 'variable parameters' version is clearly significant, there would be obvious dangers in disregarding it. We therefore take the pragmatic, if somewhat cumbersome, option of using *both* versions of the core model as starting points for our multinomial logit models.

In these models, class of destination is the dependent variable, the association parameters of the core model, in one version or the other, serve to capture the effects of class origin on destination, and we can then also include individuals' educational attainment as an additional explanatory variable.

This latter variable we have constructed from information available to us in the GHS dataset on respondents' highest educational qualification, and with the aim of achieving the closest approximation possible to the evolving CASMIN educational classification (König et al. 1988; Brauns and Steinmann 1999). We thus arrive at the seven-level classification shown in Table 8.7 which, as can be seen, ranges from no qualifications through to degree-level qualifications or higher, and which we treat as forming a seven-point, interval-level scale.

Table 8.8 presents the results that we obtain from the logit models that we apply in the case of men. Model 1 comprises only class origin effects in the form of the parameters of the 'common parameters' version of the core

TABLE 8.7. *The CASMIN-based educational attainment scale*

Level	GHS 'highest educational qualification'	CASMIN equivalent
1	None of the qualifications listed below	1a
2	CSE or lower-grade GCE O-level	1b
3	Clerical or commercial qualification, apprenticeship	1c
4	Some higher grade GCE O-level	2a, 2b
5	Some GCE A-level. ONC, OND.	2c
6	HNC, HND, non-graduate teaching or nursing qualification	3a
7	University degree or diploma, higher degree	3b

TABLE 8.8. *Core model parameters and coefficients for effects of education and for interaction of education with period on class of destinations of men 1973, 1975, and 1976 (earlier period) and 1989–92 (later period)*

Model	1	2	3	4
Log-likelihood	−54253.4	−54237.2	−50111.4	−50092.5
Number of parameters	26	34	38	46
N = 38,614 (unweighted)				
Modified core model parameters				
HI1	−0.03	−0.06	0.05	−0.00
	(0.02)	(0.03)	(0.02)	(0.03)
HI2	−0.33	−0.40	−0.13	−0.24
	(0.03)	(0.04)	(0.03)	(0.04)
IN1	0.51	0.56	0.49	0.50
	(0.02)	(0.03)	(0.02)	(0.03)
IN2	0.52	0.48	0.39	0.33
	(0.04)	(0.05)	(0.04)	(0.06)
IN3	1.48	1.17	1.59	1.30
	(0.14)	(0.17)	(0.14)	(0.17)
SE	−1.00	−1.04	−1.03	−1.06
	(0.05)	(0.06)	(0.05)	(0.06)
AF1	−0.54	−0.57	−0.23	0.25
	(0.08)	(0.12)	(0.09)	(0.12)
AF2	0.37	0.39	0.30	0.31
	(0.02)	(0.02)	(0.02)	(0.02)
*Modified core model parameters * period (reference, earlier period)*				
HI1 * period	—	*0.71*	—	0.10
	—	(0.04)	—	(0.04)
HI2 * period	—	0.14	—	0.20
	—	(0.05)	—	(0.06)
IN1 * period	—	*−0.03*	—	−0.01
	—	*(0.05)*	—	(0.05)
IN2 * period	—	*0.10*	—	*0.12*
	—	(0.07)	—	(0.08)
IN3 * period	—	0.82	—	0.77
	—	(0.28)	—	(0.29)
SE * period	—	*0.14*	—	*0.13*
	—	(0.10)	—	(0.10)
AF1 * period	—	*0.07*	—	*0.03*
	—	(0.17)	—	(0.18)
AF2 * period	—	*−0.05*	—	*−0.03*
	—	(0.03)	—	(0.03)
Education (reference, Class I + II + IVa)				
III	—	—	−0.33	0.33
	—	—	(0.01)	(0.01)
IVb	—	—	−0.48	−0.48
	—	—	(0.02)	(0.02)
IVc	—	—	20.39	20.40
	—	—	(0.04)	(0.04)
V + VI	—	—	−0.52	−0.52
	—	—	(0.01)	(0.01)
VIIa	—	—	−0.88	−0.87
	—	—	(0.02)	(0.02)
VIIb	—	—	−0.82	−0.81
	—	—	(0.08)	(0.08)
*Education*period*				
III	—	—	0.05	0.05
	—	—	(0.02)	(0.02)
IVb	—	—	0.06	0.05
	—	—	(0.03)	(0.03)
IVc	—	—	*0.03*	*0.05*
	—	—	(0.06)	(0.06)
V 1 VI	—	—	0.08	0.08
	—	—	(0.02)	(0.02)

VIIa	—	—	0.18	0.17
	—	—	(0.03)	(0.03)
VIIb	—	—	0.19	*0.16*
	—	—	(0.09)	(0.09)

model, as previously reported in Table 8.6.[107] Model 2 includes the equivalent parameters under the 'variable parameters' version together with a term for the interaction of these parameters with period. Model 3 then represents an extension of Model 1 in which education is introduced and also a term for the

[107] The values of these parameters are not in fact *exactly* the same as in Table 8.6 nor, in the case of women, are the corresponding parameters exactly the same in Tables 8.9 and 8.10. The reason for this is the following. The GHS sampling plan inflates the number of Scottish households in each year by a factor of two. In the early years of the survey individual-level information is available about the 'supplementary' Scots but in later years only household-level information has been collected. We deal with this problem in all our tabular analyses (including the estimation of log-linear models) by applying a weight of 0.5 to all respondents resident in Scotland in the years for which individual-level data are available. However, the results of the multinomial logistic regressions reported in Tables 8.8 and 8.10 are based on unweighted data. In these models the over-representation of Scots is handled by including a binary 'stratification' covariate taking a value of 0 for residents of England and Wales and 1 for residents of Scotland.

interaction effect of education with period. And finally Model 4 represents an analogous extension of Model 2.

The first observation that may be made from Table 8.8 is that the effects of education on men's class destinations, as shown in Models 3 and 4, prove to be significant and indeed quite substantial. This is of course in itself unsurprising. However, two further points also stand out. First, it can be seen that introducing education into the analysis still has only a limited impact on the parameters of the core model. If these parameters under Models 1 and 2 are compared with those under Models 3 and 4 respectively, the largest reductions show up in the case of the HI2 and AF1 parameters. This implies, then, that the effects of education on class mobility are strongest in weakening barriers to 'long-range' mobility as between the salariat and employers (class I + II + IVa), on the one hand, and the non-skilled working class (VIIa and VIIb), on the other. A smaller reduction is to be found in the IN2 parameter, indicating that education also serves to lessen somewhat the propensity for intergenerational immobility among the salariat and employers (I + II + IVa) and likewise among the self-employed (IVb). Otherwise, though, education appears of no major consequence, and, more generally, it is also worth noting that in only one instance—HI1 in the comparison between Models 2 and 4—is a previously significant core model parameter reduced to insignificance after taking education into account. One might then conclude that the part played by educational attainment in mediating class mobility, although important, is often exaggerated in expressions of the conventional wisdom.

Second, and of chief relevance here, Table 8.8 further reveals that the coefficients for the interaction effects between education and period, introduced in Models 3 and 4, are either non-significant or *positive*. This indicates, then, a reduction over time in the (negative) education coefficients shown in the panel above or, in other words, that from the earlier to the later of the two periods we consider, the effect of education on relative mobility chances tends actually *to decline*. This outcome appears most marked as regards the relative chances of men being found in the 'blue-collar' positions of classes V + VI and VIIa rather than in the more advantaged positions of the reference class, class I + II + IVa. Here, therefore, the conventional wisdom is yet more strongly impugned. The direction of change is, on this evidence, the opposite of that supposed—that is, away from rather than towards social selection on an increasingly 'meritocratic' basis.

Finally, it may also be noted from Table 8.8 that it makes little difference to the general pattern of results obtained whether we base our analyses on the 'common parameters' or 'variable parameters' version of the core model, as the generally small, if not insignificant, effects for the interaction of parameters with period under Models 2 and 4 would indeed suggest. In other words, the simpler form of the story told by Models 1 and 3 does not seriously

mislead—and, we may conveniently add, the same applies in the case of women, to which we now turn.

Here we face an initial problem in that we cannot assume that the core model of social fluidity, which was developed specifically for men, will give an adequate fit to mobility tables for women where their class of destination is determined by their own employment. Fortunately, though, it turns out that the lack of fit of the model is not all that large and, further, that it is concentrated in just two cells of the table: those relating to mobility between the class of the salariat and employers (I + II + IVa) and that of farmers (IVc). Once the core model is appropriately modified in the case of these cells, it then becomes generally adequate for our purposes.[108]

TABLE 8.9. *Fit of different versions of the modified CASMIN core model of social fluidity to collapsed A series tables for women for 1973, 1975, and 1976 (earlier period) and 1989–92 (later period) and parameter estimates (non-significant parameters in italic)*

Version	G^2	d.f.	Δ	bic
Varying parameters for earlier and later periods	300.3	56	2.3	−294.1
Common parameters for both periods	346.2	64	2.6	−331.1
Difference	45.9	8		
N = 40,676 (weighted).				

	Parameter estimates							
	HI1	HI2[a]	IN1	IN2[b]	IN3[b]	SE	AF1	AF2
Varying	−0.13	−0.36	0.35	0.69	*−0.14*	1.03	*0.04*	0.43
earlier period	(0.02)	(0.05)	(0.03)	(0.06)	(0.28)	(0.06)	(0.13)	(0.03)
		−0.49		1.04	0.90			
later period	−0.19	−0.50	0.24	0.45	1.99	−0.92	0.25	0.34
	(0.03)	(0.04)	(0.04)	(0.05)	(0.29)	(0.07)	(0.11)	(0.02)
		−0.69		0.69	2.68			
Common	−0.15	−0.43	0.30	0.54	0.91	−0.98	*0.16*	0.38
	(0.02)	(0.03)	(0.03)	(0.04)	(0.19)	(0.04)	(0.08)	(0.02)
		0.58		0.84	1.75			

Notes:

[a] The HI2 parameter is estimated incrementally to HI1. The total HI2 parameter is also given.

[b] The IN2 parameter is estimated incrementally to IN1 and the IN3 parameter incrementally to IN2. The total IN2 and IN3 parameters are also given.

[108] Specifically, daughters of farmers show a stronger propensity than sons to be found in class I + II + IVa positions, while daughters of members of this latter class show a stronger propensity than sons to be found in class IVc (presumably, through marrying farmers and becoming co-proprietors with their husbands). We therefore modify the core model in the case of women by treating the cells in question as ones characterised by 'neutral' fluidity.

In Table 8.9 we show the results of fitting the core model, as modified, to our mobility tables for women in its two different versions—following the same format as for men in Table 8.6. As with men, the lack of fit of the 'common parameters' version is not large but the 'variable parameters' version still achieves a significant, if slight, improvement. However, the shifts across the different effects from the earlier period to the later are on a different—in fact more or less opposite—pattern to those found with men. Both hierarchy effects and also the AF1 effect strengthen, while the first- and second-level inheritance effects weaken. That is to say, the propensity for mobility as opposed to immobility becomes somewhat greater but at the same time mobility tends to be more hierarchically constrained. This finding is consistent with the trend towards somewhat greater fluidity among women that was revealed by our earlier analysis of the A series tables, and also, we would believe, with our suggested explanation of this trend: that is, in terms of a larger proportion of women tending to become downwardly-mobile, relative to their class origins, through changes in their level of employment associated with their period of active motherhood.

In Table 8.10 we then proceed to our logit models for women, and present our results exactly as in Table 8.8 for men. It can be seen that the effects of education on class destinations under Models 3 and 4 are again significant and substantial; indeed they are, for the most part, stronger than for men. And, in turn, the results of introducing education on the parameters of the core model, while following broadly the same pattern as with men, are somewhat more marked, and especially in the weakening of the IN2 parameter—implying, that is, a particularly important role for education in mediating the class immobility of women raised within professional and managerial families or those of employers and self-employed workers.

At the same time, though, it is also the case with women just as with men that controlling for education by no means reduces the parameters of the core model—in either version—to insignificance. To a far from negligible degree, relative mobility chances appear *not* to be mediated via educational attainment. And further, the similarity with men persists in that, under Models 3 and 4 alike, the coefficients for interaction effects between education and period are, if significant, again all positive. That is to say, insofar as the part played by education in intergenerational class mobility is changing over time, then what is involved, for women as for men, is a reduction rather than an increase in its influence.

In sum, the conventional wisdom on the role of education in mobility processes must, in the British case at least, be quite radically challenged. Even when level of educational attainment is controlled, a clear association between class origins and class destinations persists. And, further, there are no signs that the importance of education even as a channel, let alone as a generator, of mobility is growing. To the contrary, the indications are that in the

TABLE 8.10. *Modified core model parameters and coefficients for effects of education and for interaction of education with period on class of destinations of women 1973, 1975, and 1976 (earlier period) and 1989–92 (later period)*

Model	1	2	3	4
Log-likelihood	−53661.2	−53638.7	−48644.3	−48624.3
Number of parameters	26	34	38	46
N = 41,811 (unweighted)				
Modified core model parameters				
HI1	−0.15	−0.13	−0.07	−0.06
	(0.02)	(0.02)	(0.02)	(0.02)
HI2	−0.44	−0.37	−0.26	−0.21
	(0.03)	(0.04)	(0.03)	(0.04)
IN1	0.30	0.35	0.27	0.32
	(0.03)	(0.03)	(0.03)	(0.03)
IN2	0.56	0.71	0.13	0.21
	(0.04)	(0.05)	(0.04)	(0.06)
IN3	0.86	*0.12*	1.53	0.55
	(0.19)	(0.27)	(0.19)	(0.27)
SE	−1.00	−1.04	−0.87	−0.95
	(0.04)	(0.06)	(0.05)	(0.06)
AF1	0.17	*0.07*	0.30	*0.24*
	(0.08)	(0.12)	(0.09)	(0.13)
AF2	0.38	0.43	0.25	0.30
	(0.02)	(0.02)	(0.02)	(0.03)
*Modified core model parameters*period (reference, earlier period)*				
HI1 * period	—	*−0.05*	—	*−0.02*
	—	(0.04)	—	(0.04)
HI2 * period	—	−0.13	—	−0.08
	—	(0.06)	—	(0.07)
IN1*period	—	−0.11	—	−0.11
	—	(0.05)	—	(0.05)
IN2 * period	—	−0.25	—	*−0.12*
	—	(0.07)	—	(0.08)
IN3 * period	—	−.06	—	−.11
	—	(0.40)	—	(0.40)
SE * period	—	*0.09*	—	0.20
	—	(0.09)	—	(0.09)
AF1 * period	—	*0.20*	—	*0.10*
	—	(0.16)	—	(0.17)
AF2 * period	—	−0.10	—	−0.11
	—	(0.03)	—	(0.04)
Education (reference class I + II + IVa)				
III	—	—	−0.52	−0.52
	—	—	(0.01)	(0.01)
IVb	—	—	−0.49	−0.49
	—	—	(0.04)	(0.04)
IVc	—	—	−0.50	−0.49
	—	—	(0.08)	(0.08)
V 1 VI	—	—	−1.05	−1.05
	—	—	(0.04)	(0.04)
VIIa	—	—	−1.22	−1.22
	—	—	(0.03)	(0.03)
VIIb	—	—	−0.89	−0.87
	—	—	(0.08)	(0.08)
*Education*period*				
III	—	—	0.06	0.05
	—	—	(0.02)	(0.02)
IVb	—	—	0.10	0.10
	—	—	(0.04)	(0.04)
IVc	—	—	*0.08*	*0.07*
	—	—	(0.10)	(0.11)
V + VI	—	—	0.28	0.27
	—	—	(0.05)	(0.05)
VIIa	—	—	0.32	0.31
	—	—	(0.03)	(0.03)
VIIb	—	—	0.27	0.24
	—	—	(0.09)	(0.09)

recent past social selection might have taken on a less rather than more meritocratic character, at all events insofar as educational attainment is regarded as the leading criterion of merit.

This latter finding especially may appear to some to be so counter-intuitive as to invite disbelief. It is, therefore, relevant to point out that it is in fact scarcely novel. It is at least foreshadowed by results presented by Mills and Payne (1989) and Heath et al. (1992) and is then closely paralleled by those reported by Breen and Goldthorpe (2001) using data from the National Child Development Study, referring to all children born in Britain in one week in 1958, and the British Cohort Study, referring to all children born in one week in 1970. The convergence of analyses that draw not only on different datasets but on datasets of quite different form—that is, repeated cross-sectional and longitudinal—can moreover be taken as providing encouraging assurance that the finding is sound.

Conclusions

In this chapter we have analysed trends in intergenerational class mobility in late twentieth-century Britain by exploiting an hitherto rather neglected data-source, the GHS. Our most important findings can be summarised as follows.

1. As regards absolute mobility rates, we find that the increase in the total mobility rate that was indicated for men by the OMS of 1972, and then apparently confirmed and extended to women by earlier BGES-based findings, has not in fact been sustained. Over the period covered by our analyses, the total mobility rate for men is remarkably flat and for women falls somewhat. Among men, the previously rising trend in upward mobility levelled out, and, if anything, started to decline, while the previously decreasing rate of downward mobility levelled out or, if anything, increased. Among women, and assuming their class destinations to be validly indexed by their own employment even when married, a continuing slight rise in upward mobility coexisted with a similarly slight decrease in downward mobility. However, the analysis of complete mobility tables, in which the conjugal family rather than the individual is taken as the basic unit, provides another perspective. In this case, total mobility does still rise somewhat between the early 1970s and the early 1990s—but on account entirely of increased downward movement. While, then, women's experience of mobility tended to be more favourable than men's in late twentieth-century Britain, the experience of men and women taken together must be reckoned as being, on average, less favourable than during the post-war decades.
2. As regards relative mobility rates, we find overall little compelling evidence of these rates changing in a way indicative of increased—or decreased—fluidity within the British class structure. For men, our results serve in fact to replicate and to extend forward in time those of the OMS that pointed to a high degree of temporal stability as a feature of relative rates. For women, it is true, our results are somewhat less clear-cut. Analyses based on the A series tables do suggest some trend towards greater fluidity but no strong confirmation of such a trend emerges from analyses based on the B series. Moreover, even if some increase in fluidity is discernible among women—though not among men—we would regard its interpretation as problematic. It could, we believe, be more plausibly seen as reflecting the exigencies of women's working lives rather than a greater openness of British society which, in some unexplained way, shows up in the experience of women but not of men. Finally, results from complete tables indicate that while some changes did occur in levels of social fluidity over the period of interest to us, these were still changes without any sustained direction.
3. As regards the role of education in mobility processes, we find that, while men's and women's levels of educational attainment clearly do exert an

important influence on their relative mobility chances, two further points need at the same time to be made. First, the influence of education is by no means totally dominant. Even when we control for educational attainment, a significant and generally quite strong association between class origins and class destinations remains. Second, and more pertinently in an analysis of mobility trends, there is no evidence for the period that we cover of the role of education in mobility processes increasing in importance: it would rather appear to decline.

So far as the explanation of these findings is concerned, we can, fortunately, be brief, since the theoretical position that we would take up has been spelled out in some detail elsewhere. The fact that no large or directional changes show up in relative rates of intergenerational class mobility means, of course, that the trends in absolute rates that we have described must be seen as the result overwhelmingly of changes in class structure per se and in labour supply of the kind that we indicated in our introductory section, and that have themselves to be understood more in historical than theoretical terms. As to the temporal stability that relative rates or the 'endogenous mobility regime' display, we would then seek an explanation essentially in terms of the unintended consequences of intended actions: that is, in terms of individuals of differing class origins pursuing 'mobility strategies' that, while rationally adaptive to the constraints typical of their class situations, tend in their aggregate outcome to maintain relative rates unaltered, at all events in the absence of any external modification of these constraints that would constitute a reduction—or an increase—in class-linked inequalities of condition (see further Goldthorpe 2000: esp. ch. 11). Such an explanatory approach, it may be added, stands in contrast to functionalist theories of social stratification and mobility that would envisage relative rates becoming progressively more equal, or, that is, a steady rise in social fluidity, in response to the economic and technological exigencies of modern societies, and primarily through the medium of declining class differentials in educational attainment and increasingly 'meritocratic'—that is, education-based—selection to different class positions.

The explanation that we would then offer for our further finding that, in the British case at least, no growth in the importance of education in mediating class mobility is in fact apparent is again one derived from the standpoint of rational action theory. In a free-market, capitalist economy, 'merit' can be nothing other than what employers deem it to be; and while educational attainment is clearly *one* important criterion according to which employers make decisions on hiring, retaining, and promoting employees, there is no very evident basis for supposing that it should be, or should become, the only or even the dominant criterion. To the contrary, various grounds exist, associated with the growth of the services sector of the economy and with the

expansion of education itself, for believing that employers may act quite rationally in applying a wide range of other criteria, and including, perhaps, ones that relate to individual characteristics that are as much of an 'ascribed' as an 'achieved' kind (see further Goldthorpe 1996a; Breen 1998; Breen and Goldthorpe 2001 Jackson et al. forthcoming). In short, far from there being any close affinity between capitalism and meritocracy, as conventionally understood, their relationship should be regarded as highly problematic (cf. Hayek 1960, 1976). Thus, even if class differentials in educational attainment are reduced over time, this in itself will provide no guarantee of a corresponding reduction in class inequalities in mobility chances.

9 Equality at a Halt? Social Mobility in Sweden, 1976–99

Jan O. Jonsson

Sweden ended the nineteenth century as a predominantly agrarian country. In the census of 1890 around 70 percent of the working population were engaged in agriculture, including forestry and fishing (Heckscher 1941). The occupational and class structures changed dramatically during the following decades. Agricultural work diminished rapidly and industrial manual work grew, soon followed by service work. The traditional industrial working class reached a peak in the mid-1960s, and then started to lose ground with the growth in non-manual jobs, particularly service jobs in the public sector. At the end of the twentieth century around 40 percent of the gainfully employed belong to the working class, less than 1 percent are farmers, and more than 30 percent have middle or higher level occupations, that is, traditional white-collar jobs.

These structural changes necessarily meant that intergenerational social mobility in an absolute sense increased during the twentieth century—many people ended up in a social class different from that of their parents, particularly the children of farmers (Erikson 1987; Jonsson and Erikson 1997). Whether social mobility in relative terms—social fluidity—increased or not during the first half of the century has not yet been investigated (and is difficult to study due to the lack of adequate datasets). More recent studies show that social fluidity increased during the post-war period up to the beginning of the 1980s (Erikson 1983, 1987). This trend towards increased openness in the social structure continued to 1991, especially for women (Jonsson and Mills 1993; Jonsson and Erikson 1997). This came about mainly because the initially very strong advantages of children from the highest social class declined, and because the intergenerational inheritance of social positions among farmers and other self-employed workers diminished.

The aim here is to continue the study of change in intergenerational social mobility in Sweden into and through the 1990s. Changes in absolute rates are

given as a background description, while the focus is on social fluidity, that is, on the relative chances of occupational success of children from different social origins. Gaining insight into the change in social fluidity during the 1990s is important because this decade was characterised by an extreme increase in unemployment—from 1.6 percent to 8.3 percent of the labour force between 1990 and 1993—and welfare state retrenchment (SOU 2001: 79). I focus on the last twenty-five years of the twentieth century, using nationally representative annual survey data from 1976–99. Separate analyses are carried out for men and women. To shed some light on the processes behind the parent-to-child association, I also investigate the role of educational attainment in social reproduction. I end with a discussion of what caused the changes—and the stability. Answers to the questions of change and stability must necessarily be tentative, given the rather short period of study and the multitude of potential explanatory factors.

Why would we expect a change in social fluidity?

Any hypotheses about change in social fluidity, here conceived in terms of individual movements in the class structure, should be founded in a micro-level theory of social fluidity in combination with a notion of structural change.[109] The key theoretical factors are the type and amount of resources in the family of origin, the preferences and aspirations of parents and children, and the arenas in which important actions and choices are carried out. For social fluidity the latter are predominantly constituted by the school (where organisational and other factors affecting class inequalities are important) and the labour market (in which the principles guiding employers' decisions on hiring and promoting are crucial).

There are two main routes to achieve an advantageous class position (and avoid a disadvantageous one), namely via higher education or by some more direct means, usually in the form of 'direct' inheritance (of wealth, land, or a business). Parental resources also come in two main forms (cf. Yamaguchi 1983). *General resources,* which are mainly educational and economic resources, promote social reproduction via educational attainment in particular. They do so by decreasing costs for higher education, by facilitating educational performance, by improving information about the educational system, and by reducing risks mostly for children from advantaged social origins (e.g. Jonsson and Erikson 2000). *Specific resources* promote inheritance because they are typically tied to parents' own occupation or class, and help their children to enter the same class. This may be because of social network

[109] Surprisingly little theoretical interest has been paid to the micro-foundations of social mobility, the study of which is dominated by empirical description and advanced statistical modelling. Two recent attempts to remedy this are Goux and Maurin (1997) and Goldthorpe (2000).

effects (e.g. for the self-employed this can be reflected in the 'inheritance' of a market or of customers), and because it is less costly to learn the parents' occupations (e.g. farmers and occupations which demand social skills) rather than alternative occupations.

The uneven distribution of general and specific resources and the process by which these take effect limit social mobility. In addition, there is likely to be a structural effect working in the same direction. This idea, developed by Boudon (1974*a*; see also Keller and Zavalloni 1964), maintains that the cost of experiencing social demotion of a given distance is perceived to be greater than the benefit of a corresponding social advancement. This produces class differences in absolute social aspirations, reflected in the urge of parents to use any possible resources to help their children reach at least the same social level as they themselves. The perception is culturally determined and may vary over time and between nations, although it is likely to prevail in modern societies—and be shared by all social classes—because upward mobility has been structurally induced for a fairly long period (Erikson and Jonsson 1996*b*).[110]

In general children want to get as advantageous a class position as possible (a wish that is shared by their parents). The dominant strategy for children of all social backgrounds is to attain higher education. Children who cannot make it to higher levels of education have to resort to the second best strategy. Arguably, here there are alternative strategies: to pursue as high an education as possible or to use specific resources for reaching positions in self-employment or positions with career advancement opportunities in corporate hierarchies. The choice of strategy depends on which type of resources children can draw upon. We can expect preferences to work in the same direction as specific resources for this second best strategy. There may also be rational reasons for children of less advantageous social backgrounds to 'play it safe' and aspire to rather modest upward mobility or to the same social standing as their parents; the alternative—in case of an educational failure—could be social marginalisation (Breen and Goldthorpe 1997; Goldthorpe 2000, ch. 11).

As a rule, employers hire and promote people who can contribute most to fulfilling the goals of the organisation. Because formal criteria are an easily available proxy for individuals' abilities in this respect, educational credentials are important in recruiting employees; but once in employment other characteristics (probably related to performance in the job) become more important for promotion (Bygren 2001). Thus, there is room for origin-related characteristics to be of importance not only through their influence on educational attainment, but also on job performance. Particularly for recruiting

[110] Note that although cultural factors come into play, the theory does not assume that some kind of class subcultures produce differences in aspirations: on the contrary, the presumption is that people in all social classes share the view that avoiding social declassement is the most pressing goal.

to higher positions, employers look for additional types of information (e.g. via interviews) about personal characteristics such as cultural and social skills and these may be associated with social background. Whatever the mechanisms, there are origin effects on the odds of ending up in the higher service class also controlling for level and type of education, resulting in a 'wage gain' of 4–8 percent—growing over job careers—for having a high social origin (Erikson and Jonsson 1998).

What is the consequence of this theoretical view of social mobility for hypotheses of change in social fluidity in Sweden during the last twenty-five years? Presumably, class differences in aspirations and preferences change slowly, if at all.[111] Has the distribution of resources across classes changed? Income has been equalised in Sweden, notably during the 1960s and 1970s, and this may have affected the youngest cohorts in our sample. Assuming that this has had an equalising impact on educational choices, the cohorts born in the 1950s and 1960s may have experienced a lower degree of social reproduction than older cohorts. Welfare state support has also been improved during the period 1960–90, which has benefited the less advantaged social groups the most (Esping-Andersen 1990; Björklund et al. 1995; Fritzell and Henz 2001). Empirical studies show, however, that equalisation of educational attainment has not taken place after the beginning of the 1970s (Jonsson and Erikson 2000). The latter part of the period, the 1990s, has witnessed a different development, with a severe recession, high unemployment rates, and an increase in income inequality (SOU 2001: 79; Fritzell 2001*a*). The general downturn in the economy is likely to have hit disadvantaged classes harder than others when it comes to their children's educational attainment. This is because their greater economic vulnerability makes their decisions on long-term educational investments more dependent on optimistic views about future living conditions. Evidence for this comes from the finding that the historical decrease in overall unemployment rates was partly behind the equalisation of educational attainment in Sweden in the period 1930–70 (Erikson 1996). It is a moot point whether the recession had some instantaneous effect on social fluidity, or whether an impact, if any, will appear later. Recent studies call into question whether parents' unemployment during the 1990s in Sweden has (yet) had any influence on children's educational aspirations and actual choices (Gustafsson et al. 2000; Jonsson and Östberg 2001).

Specific resources may become less important for going into self-employment if, for example, industrial branches are restructured. The growth of the IT sector

[111] It is possible that the equalisation in material circumstances between social classes has made it more important for those of advantaged backgrounds to reach even higher social classes in order to maintain a social status equal to that of their parents. This, in combination with an expansion of the upper service class, may have meant that aspirations have been undergoing an inflationary trend, particularly among the higher classes. It is thus possible that an equalisation in the distribution of resources in the parental generation has offsetting effects: equalising educational and occupational opportunity while increasing class differences in absolute social aspirations.

relative to industrial work may for instance have decreased the value of parental skills and social networks among those of petty bourgeois origins.

Is it likely that employers have changed their strategy for hiring employees during the 1980s and 1990s? One hypothesis holds that there is an ongoing trend towards decreasing weight on 'social origin factors' in the labour market, partly because universalistic values become more important (Ganzeboom and Treiman 1993). A quite different hypothesis holds that the importance of specific resources for labour market positions (working over and above any effects of origin on destination via educational attainment) increases in times of economic growth. This could be so because a certain amount of 'organisational slack' associated with growth makes room for non-meritocratic employment and promotion decisions (Heath and Ridge 1983). Finally, two opposing assumptions relate to structural changes in the labour market. One is that the number of jobs that demand formal qualifications increases and that specific resources therefore lose importance. The other claims that service sector expansion increases the demands for 'social skills', a specific resource presumably attained to a large extent through childhood socialisation. Overall, however, it is perhaps not so likely that changes in employers' principles of hiring and promoting employees, or the structural changes alluded to here, have been particularly great during the relatively short time period of twenty-five years. The same goes for changes in school organisation, though reforms during the 1990s, initiating more private schooling and promoting decentralisation, may affect class inequality in the longer term.

Obviously, in predicting changes in social fluidity we have to consider both cohort and period effects; and it is the latter that have the potential for changing levels of fluidity in a short time interval, because they affect a wide range of cohorts (a typical period effect would be changes in employers' hiring practices). However, at least in Sweden, education is the main channel of social reproduction (Jonsson 1993, 1996), and changes in class positions are unusual after the age of thirty-five (Jonsson and Erikson 1997). This suggests that it is rather unlikely that we would find any sizeable period changes in rates of social fluidity when we consider the whole working population. It is beyond the scope of this chapter to analyse the relation between cohort and period effects on fluidity. This is however done in a separate study on the same data (Breen and Jonsson 2003), and I will return to the results in the concluding discussion.

In sum, it is not possible to derive any clear hypothesis about changes in social fluidity during the period 1976–99. The intergenerational reproduction of the class structure is deeply founded in inequalities of resources and differences in educational opportunities stemming from this, suggesting that stability dominates. Changes may of course occur but, in trying to predict these, offsetting trends are plausible and there is no strong argument for assuming that social fluidity either increased or decreased in the period under study.

Data and variables

The dataset is a compilation of the annual surveys of living conditions (ULF) conducted by Statistics Sweden since 1975 (Vogel et al. 1988). In the first survey no information was collected on father's class, so I use the surveys 1976–99. Each survey is (with a few exceptions) representative of the adult Swedish population, aged 15–84. The sample fraction is around 1/1,000 and the yearly net sample sizes around 6,000 respondents.[112] Non-response rates vary between 15 percent in the early surveys to around 22 percent in the later ones. Generally, the data quality is high and relevant variables such as social class and education are coded to national standards.

Social origin class is based on information on father's main occupation and employment status during the respondent's childhood (0–16 years of age). Father's and respondent's social class are coded into the same class schema (SEI: see SCB 1982) developed in collaboration with sociologists (Carlsson et al. 1974). Overall, it is very similar to the classification developed by Goldthorpe (1980), and later elaborated and commonly known as the EGP class schema (Erikson and Goldthorpe 1992: ch. 2). Therefore, I use the abbreviations of that schema. There are, however, some differences that should be noted.

First, there is no discernable class V (foremen, supervisors of manual workers, lower grade technicians); instead some more qualified supervisors (such as *verkmästare*) go into class II, foremen in general are classified in class III, and technicians with manual jobs (a group that is relatively uncommon in Sweden) go mostly into class VI. Second, the manual–non-manual division in the class schema is based on typical trade union organisation. In Sweden, this is a dominant feature of the labour market, and trade union membership is indicative of the type of employment relationship, salary, and other employment conditions (partly because of the collective bargaining system). Occupations normally organised in the manual workers' trade union (LO) are classified into classes VI and VII, and these include some occupations that in the EGP coding schema are found in the unqualified strata of the non-manual classes (IIIb). Among these are lower grade salespersons and shop assistants as well as lower grade service workers (employed, *inter alia,* in

[112] In the 1976–79 surveys, Statistics Sweden used a household approach. Respondents whose partner has been interviewed have been down-weighted by 1/2 (as have their partners). The surveys contain, from 1979 onwards, a panel element consisting of half the sample, which makes it possible to follow individuals over their career every eighth year. This also makes it necessary to down-weight the sample with (1/number of responses)—this, however, has not been done for the years 1984–5 and 1992–3 (due to initial problems with the panel variable) nor for the surveys of 1998–9 (for which years the panel variable was not constructed at the time of the analysis). In practice, parameter estimates for those years will be unbiased, but standard errors slightly underestimated. Given the rather large sample sizes, this is probably not such a great problem.

hotels, restaurants, and offices) and nurses' aids. Third, large employers (with more than twenty employees) cannot be identified in the data. It is thus not possible to put them in class I, as in the EGP schema: instead they are placed with the self-employed and employers with smaller establishments in class IVab.

The class coding is made to the same schema for all survey years, but the schema has changed somewhat due to the occasional need to revise the coding of occupations to classes. The most noteworthy change was made in 1981, affecting the surveys starting in 1982: a more restricted definition of the upper service class was put in use and this is reflected in the sudden downturn in the percentage of the population in class I. For this reason, classes I and II are merged in some analyses below. In others, I have kept them apart, though the effect of the change in classification does show up in mobility estimates. Unfortunately, Statistics Sweden did not collect any information on mother's occupation and class until the 1984 survey. In order to study trends over time, therefore, I have been compelled to use father's class only.

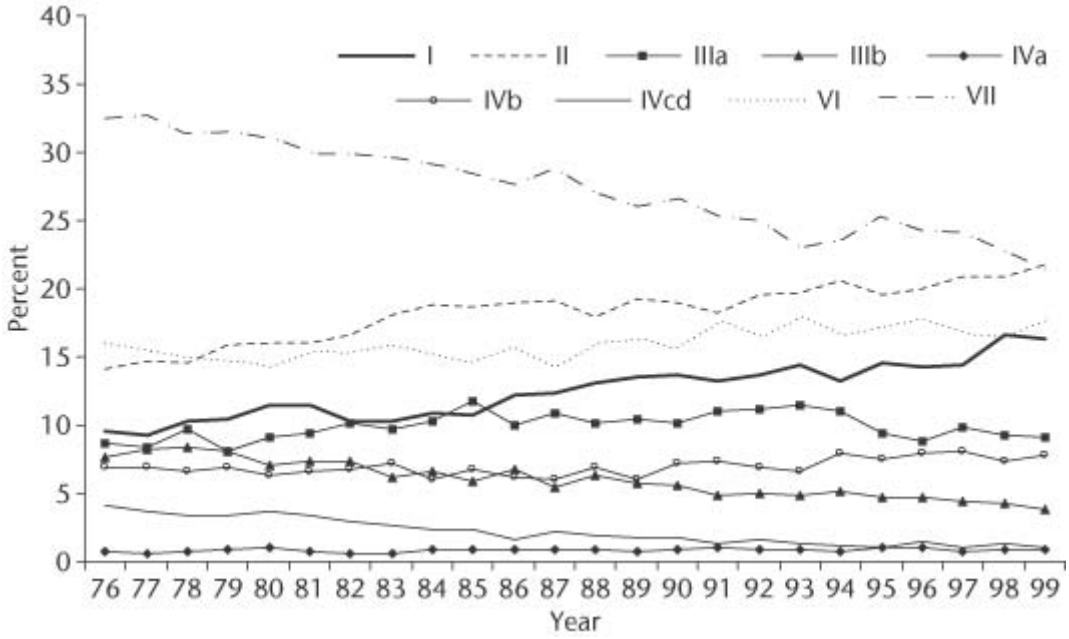
Respondent's level of education is based on the standard coding in Swedish official statistics (SUN: see SCB 1988). This schema, with eight different levels, has been transformed to the Comparative Analysis of Social Mobility in Industrial Nations (CASMIN) educational classification (Müller and Shavit 1998), and is used in a six-category version that identifies those with compulsory education (1ab); lower vocational (1c); lower secondary (2a); upper secondary (2b); lower tertiary (2c,3a); and university education (3b).

Changes in the class structure 1976–1999

The changes in the Swedish class structure (using nine classes) for all the gainfully employed[113] between 25–64 years of age are shown in Fig. 9.1. The results echo the theme of previous studies for the post-war period, namely an increase in qualified non-manual jobs (classes I and II) and a decrease in unqualified manual work (class VII). These changes were quite rapid: classes I and II each grew by seven percentage points during the 1976–99 period, while class VII lost around ten. Lower-grade non-manual work also became less common, the more unqualified of these groups (IIIb) reflecting the decline. The contraction in farming occupations continued to the extent that the farm class at the beginning of the new century has almost vanished—this is a rather dramatic change in a country like Sweden where, only thirty years ago, around one in

[113] 'Gainfully employed' means all those in work (employed or self-employed) or those currently unemployed or in a work-related training programmes.

FIG. 9.1. *Changes in the Swedish class structure 1976–99. Men and women in the labour force, aged 25–64*



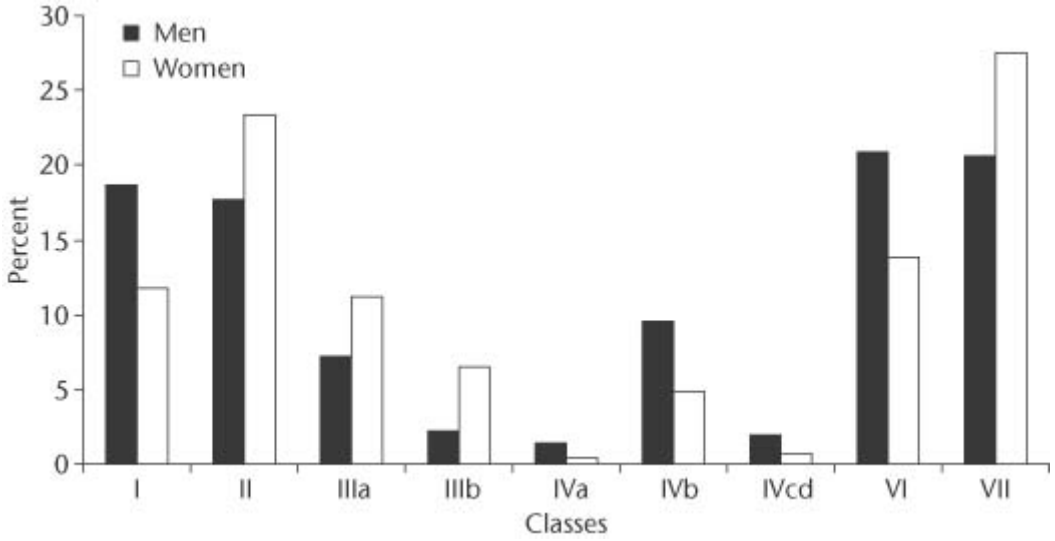
three of the adult population had their roots in the agricultural classes (Jonsson and Erikson 1997). These trends constitute the noteworthy changes in the class structure and reflect the gradual upskilling of the occupational structure visible at least since the late 1960s (Szulkin and Tåhlin 1994; Jonsson 1998).

There is also a change in the sectoral division of the class structure. Sweden follows the well-known pattern of a growth in the service sector of the economy and a decline in primary production and industrial work. It is interesting to note, for example, that the working class employed in 'goods and production' (roughly the traditional 'industrial working class') shrank from 20 to 15 percent between 1982 and 1999 (the unskilled part from 9 to 6 percent). However, unskilled manual work in service occupations also declined (from 20 to 16 percent) so the major trend is that unskilled labour in general, and not just 'traditional industrial work', decreased, contrary to what many believe.

As is well known, the occupational and class structures are different for gainfully employed men and women. Figure 9.2, based on figures from 1998–9, shows that the upper service class, the petty bourgeoisie, and the skilled working class are dominated by men, while all other non-manual classes and the unskilled working class are predominantly female in composition.[114] The trend

[114] It should be noted that female labour market participation in Sweden was very high in 1998–9, in fact somewhat higher than for men if we discount women temporarily on parental leave. It has increased during the period under study, which is one explanation for the changing class structure.

FIG. 9.2. *The class distribution among Swedish men and women, aged 25–64, in the labour force in 1998–9*



is for gender differences in class positions to decrease. Calculating the index of dissimilarity (Δ) for men and women for eight classes (I, II, IIIa, IIIb, IVab, IVcd, VI, VII) shows that, in the mid 1970s, almost one third of gainfully employed men and women would have had to 'change places with each other' in order to get a gender-equal class distribution—at the end of the 1990s, this is true for around a quarter.[115] The gender equalisation mainly concerns classes IIIb, VI, and VII, and is due to the fact that women have undergone a more rapid increase than men in access to qualified occupations. Women's initially very high shares of unqualified positions in IIIb and VII have decreased more than men's, and women have increased their representation in class VI, the skilled working class, while men have a rather stable percentage in skilled work.

Absolute mobility rates: a slight increase in upward mobility

Obviously, the change in the class structure over time will necessarily produce intergenerational social mobility. Previous studies show that we can expect mobility out of the farming class, and upward mobility from manual to

[115] The dissimilarity indices are, from 1976 to 1999 (%): 31.5, 34.2, 32.8, 32.4, 29.5, 29.1, 27.7, 25.5, 27.5, 26.0, 30.1, 25.0, 24.1, 24.6, 25.4, 26.4, 23.3, 21.8, 24.2, 22.5, 24.3, 25.4, 22.2, 21.4.

non-manual classes, as this is the predominant pattern in industrialised countries (e.g. Erikson and Goldthorpe 1992: ch. 6). Total mobility also includes quite a lot of 'sideways' moves, such as mobility between the lower non-manual (IIIa) and skilled manual (VI) classes, or moves involving the self-employed and all other classes except the service class.

To give a simple description of the changes in absolute mobility, the total mobility rates (TMR) can be decomposed into vertical (TV) and non-vertical (TNV) mobility, and the vertical, in turn, into upward (TU) and downward (TD) mobility. In the cross-tabulation of father's class (seven classes) by respondent's (seven classes) all cases that do not fall in the main upper-left to lower-right diagonal are considered mobile.[116] All who are themselves in the service class (I or II) but whose father had another class position are classified as upwardly mobile (as are those who make a II-to-I move). Those who have left the unskilled working class (VII) for any other destination class are also considered upwardly mobile, as are those of farm origin who reach class IIIa or VI. Pretty much the other way around, those from class I–II who ended up anywhere else are considered downwardly mobile, as are those who are currently in class VII but came from other non-farm origins. The rest of the origin–destination combinations that fall into the mobile category are considered non-vertical moves.

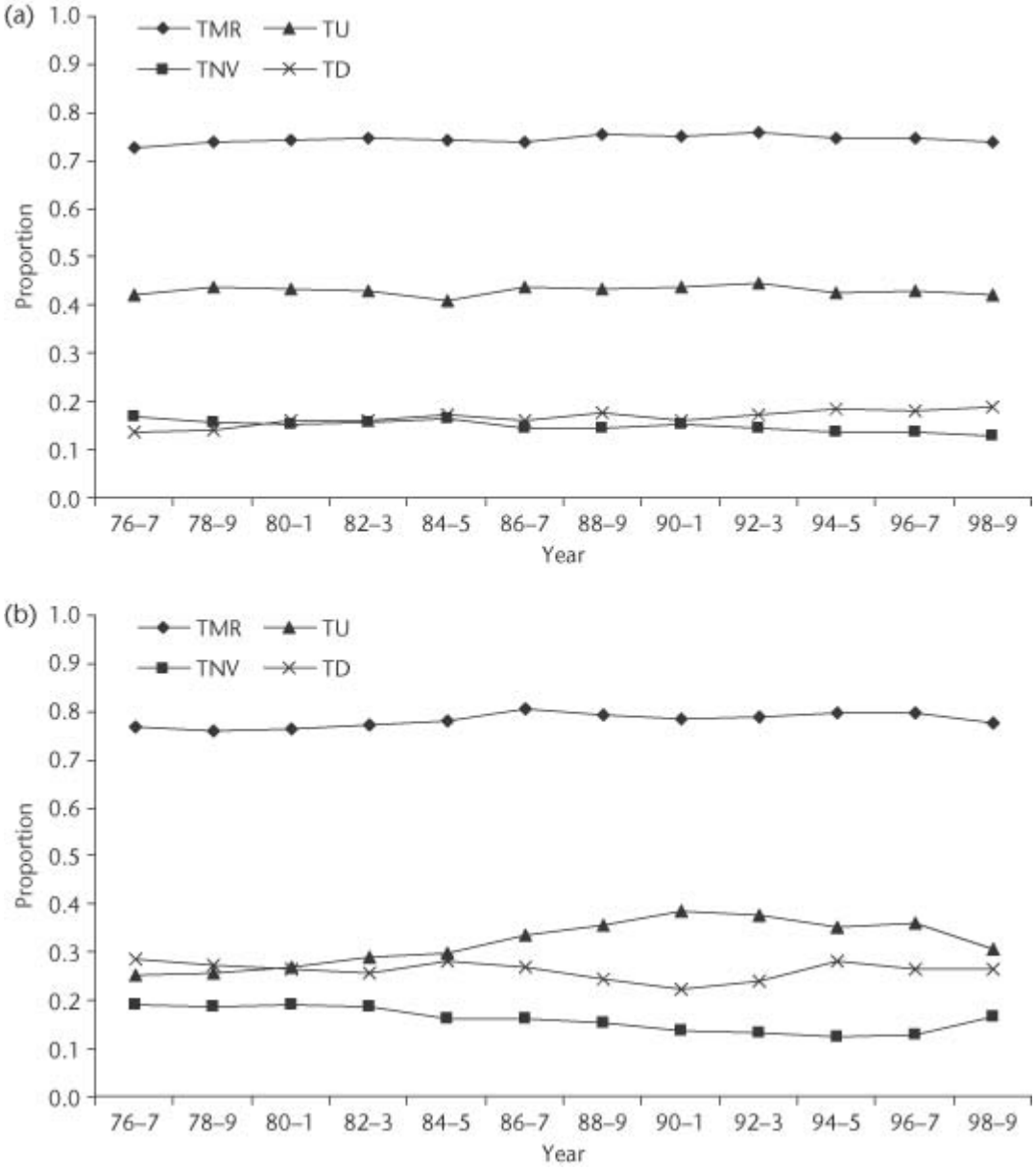
Figure 9.3(a) (men) and 9.3(b) (women) show how these mobility rates changed during the last quarter of a century in Sweden.[117] As defined by the seven-class schema, slightly more than 70 percent of those in the labour force were intergenerationally mobile during the period under study.[118] This proportion is very stable. Most of this absolute mobility is vertical—around 55–64 percentage points—and most of this is upward mobility. Here, however, there is a substantial gender difference in that around 40 percent of men are upwardly mobile as compared with their fathers' class position, but only 25–35 percent of women. On the other hand, for women's upward mobility we do find change over time: there was a fairly substantial increase in such mobility between the late 1970s and the 1990s (the proportion drops in 1998–9, but it would be unwise to interpret that as a trend until more samples can be studied). This means that for women, too, upward mobility is nowadays a more common experience than downward, though the difference is much more pronounced for men.

[116] The classes are I, II, IIIa, IVab, IVcd, VI, and IIIb/VII.

[117] Yearly figures, including the ratios between vertical and non-vertical and upward and downward mobility, are given in appendix A to this chapter.

[118] The question 'How many are mobile?' has of course no definite answer because it depends on how many social classes one conceives the class structure to consist of. A definition founded in eight classes returns, in 1991, a mobility rate of around 78 percent, while a simple trichotomy— non-manual; employers/self-employed; workers—leads to a 55 percent mobility rate (figures are slightly higher for women than for men) (Jonsson and Erikson 1997).

FIG. 9.3. *Total intergenerational mobility (upper curve), divided into non-vertical, upward, and downward mobility. (a) Men, gainfully employed, 25–64 years of age in 1976–99. (b) Women, gainfully employed, 25–64 years of age in 1976–99*



In sum, there is little change in intergenerational class mobility rates between 1976 and 1999. The clearest trend that can be discerned is that the share of vertical to non-vertical moves has increased over time because both upward and downward moves became somewhat more common (see appendix A). In particular, there has been an increase in women's upward mobility.

Changes in social fluidity: equalisation at a halt?

While changes in the absolute mobility rates convey important information on the real experiences of consecutive Swedish birth-cohorts—thus bearing on issues like social cohesion and the demographic composition of social classes—it is the relative mobility rates that bring to bear on the question of the openness of society, or inequality of opportunity. One way of modelling this is via log-linear models of social fluidity patterns, particularly in the form of 'topological models' (Hauser 1978; Hout 1983; Erikson and Goldthorpe 1992).

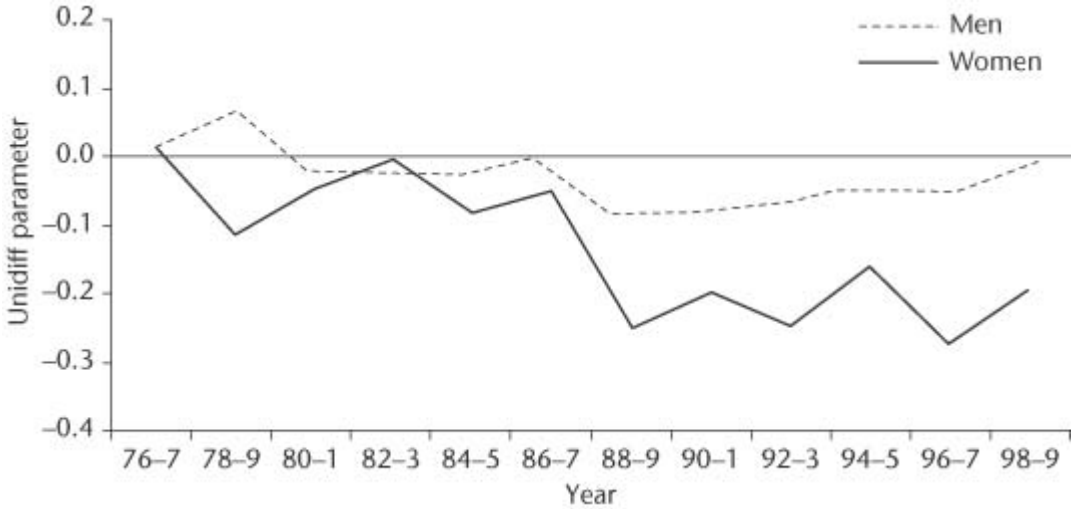
My strategy here follows the by now common practice of fitting a model of common social fluidity (CnSF)—that is, common to the years 1976–99—and then applying the model of uniform change (Unidiff) to investigate the contours of the overall change in social fluidity, if any. The Unidiff model fits change with one degree of freedom (d.f.) per table under the assumption that the underlying association pattern in the tables is constant over years (Erikson and Goldthorpe 1992; Xie 1992). By using annual and fairly large surveys it is possible to address the question of whether there is a discernable trend in social fluidity without running into problems of inferring such a trend from a small number of observations. To keep reasonable sample sizes I merge two adjacent surveys (1976–7… 1998–9). In the analyses, I separate men and women and I use a class schema that identifies six classes (I/II, IIIa, IVab, IVcd, VI, and IIIb/VII).

Applying the model of 'common social fluidity'—positing that the relation between origin (*O*) and destination (*D*) classes is the same across survey period (*Y*)—yields a very good fit both for men and women (Table 9.1). With sample sizes of more than 30,000, 3–4 percent misclassified is remarkably good, and the model for men fits the data according to the conventional goodness-of-fit test ($p > .05$). This indicates that any modeling of change over time is unlikely to lead to an improvement in fit, and this is in fact what we see for men, with a reduction of the G^2 of 9 for 11 d.f. when adding the Unidiff parameters. For women, however, there is a significant improvement in model fit: G^2 is reduced by 31 for 11 d.f. and the percentage misclassified decreases to 3 percent.

TABLE 9.1. *Log-linear models of intergenerational social fluidity, and its changes over time*

Model	Men (N = 36,026)			Women (N = 32,235)		
	G^2	d.f.	D (%)	G^2	d.f.	D (%)
A. Independence (*OY*)(*DY*)	5,728	300	14.65	3,829	300	13.28
B. CnSF (*OY*)(*DY*)(*OD*)	266	275	2.89	302	275	3.82
C. Uniform difference	257	264	2.80	271	264	3.03

FIG. 9.4. *Changes in intergenerational social fluidity in Sweden for men and women 1976/7–1998/9. Unidiff Parameters*



In Fig. 9.4, the parameters from the Unidiff model (C in Table 9.1) are plotted for men and women for the twelve time-points, covering the period 1976–7 (reference year, set to zero) to 1998–9. As expected, the yearly variations in social fluidity for men are very small (though the parameters for 1988–9, 1990–1, and 1992–3 are significantly lower than the one for 1976–7). It is quite clear, however, that the association between origin and destination has weakened for women. This happened in particular in 1988–9, almost as a threshold effect, and we can talk about two different periods, 1976–89 and 1990–9. That social fluidity increased in Sweden in the 1970s and possibly also during the 1980s for women (but not for men) has been shown in earlier studies, partly based on the same data as this (Jonsson and Mills 1993).[119]

A model of social reproduction: changes in mobility patterns

The next step is to find a more parsimonious model of the association between origin and destination classes, using a limited number of theoretically derived characteristics of the social structure. I first test a model of social reproduction, developed and more fully described by Jonsson and Mills (1993), to parameterise this association. This model combines the topological 'core model' introduced by Erikson and Goldthorpe (1987*a*)—here including only four levels parameters, however—with a parameter of scaled association (Goodman 1979*a*; Hout 1989). The model uses one parameter for hierarchy, one for reproduction, two for

[119] Though it should be said that the increase in fluidity among women (as analysed with data from the Swedish level-of-living surveys) was more clear in the period 1968–1974–1981 than for the period 1981–91.

inheritance, one for affinity, and one to delineate the manual-nonmanual division in the class structure.

The most intuitive dimension of social fluidity refers to *hierarchy,* that is, vertical stratification. This is often conceptualised by scaling social classes according to occupational prestige, socio–economic status, or the like (Hout 1984; Yamaguchi 1987). This dimension is intended to capture resources in the family of origin and the degree of attraction of the class of destination (Goldthorpe 1980). Because a relevant and available indicator of resources and attractiveness is income, hierarchy (HI) is measured by the mean income of each social class (in which the income for the service class is fixed at 100 and the scores for other classes are expressed as a proportion of this).[120] The values are displayed in appendix B to this chapter.

The second most common dimension of social mobility is 'inheritance', identified in the mobility table with the top-left to bottom-right main diagonal. It simply describes the propensity for people to end up in their class of origin, a phenomenon often called 'immobility'. The general effect is here called *reproduction,* thus indicating the process behind it.

Inheritance is a more appropriate expression for the effects typically found among farmers and the petty bourgeoisie. I use three levels of reproduction/inheritance. RPR—the general reproduction effect—fits a single term to all of the cells on the main diagonal. INH1 gives an additional level of 'inheritance' to all class stable IVab and IVcd pairs. This represents the special tendency for the self-employed to pass on their businesses and their farms to their offspring. INH2 gives a further level of 'inheritance' to IVcd, recognising a special 'tie to the land' amongst the children of farmers. Note that each inheritance effect is incremental to the others.

A third dimension of social reproduction is the notion of barriers to fluidity. The model fits one term that represents the manual-nonmanual (MAN) divide. This effect is supposed to work over and above the hierarchical effect and captures socio-cultural as well as economic barriers. The term groups together the traditional white-collar classes—I/II and III—and the classes for which manual labour is typical, namely farmers (IVcd) and workers (VI/VII). It is between these two groups that we expect the barrier to exist, whereas the urban petty bourgeoisie (IVab) are 'left out' because their work contains elements of both 'intellectual' and 'manual' labour.

A fourth dimension of the association between origin and destination is affinities and disaffinities between particular pairs of origin–destination classes. These dimensions often seem ad hoc, and one might come up with numerous more or less well-founded arguments for assuming relatively high or low associations between particular pairs of classes. Thus, affinity parameters should be a last resort, unless there are unusually strong theoretical

[120] Income is mean income for men in each current class averaged across the 1968 and 1981 Level of Living surveys.

TABLE 9.2.*Fit statistics of topological log-linear models of social fluidity for men and women in Sweden, 1976–99. Parameter estimates for the social reproduction Model B in the lower panel of the table*

Model	Men (N = 36,026)			Women (N = 32,235)		
	G^2	d.f.	Δ (%)	G^2	d.f.	D (%)
A. CnSF (*OY*)(-*DY*)(*OD*)	266	275	2.89	302	275	3.82
B. Social reproduction (*OY* + *DY* + HI + RPR + INH1 + INH2 + MAN + AFF)	451	294	4.02	762	294	5.81
C. Social reproduction + change (B. + Y * HI + Y * RPR + … Y * AFF)	356	228	3.41	664	228	5.32
Parameters from Model B	*B*	s.e		*B*	s.e	
HI	0.331	*0.023*		0.377	*0.023*	
RPR	0.160	*0.018*		0.140	*0.020*	
INH1	0.923	*0.050*		0.406	*0.074*	
INH2	1.810	*0.095*		1.180	*0.112*	
MAN	−0.384	*0.019*		−0.373	*0.018*	
AFF	0.371	*0.047*		0.086	*0.070*	

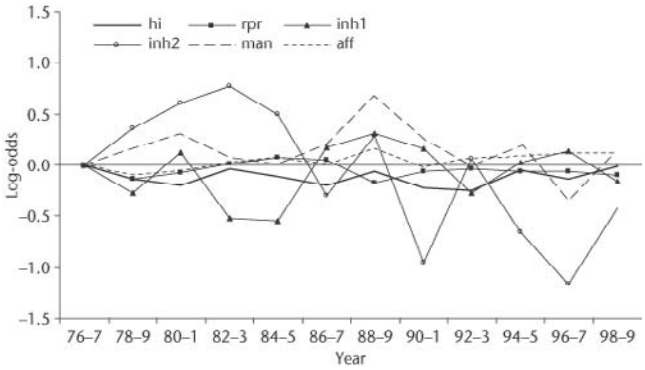
Note: bic: Men—Model B = −2634; Model C = −2036. bic: Women—Model B = −2290; Model C = −1703.

arguments for incorporating them into the model. I add an effect (AFF) singling out a special *affinity* between the two self-employed classes, which, as it turns out, is necessary to reach an acceptable fit for men.

The resulting 'hybrid' model—containing one linear by linear term for hierarchy and five additional 'levels' parameters representing reproduction/inheritance, barriers, and affinity (the terms are described in appendix B)—uses only 6 d.f. for the thirty-six cell tables. The next step is to fit this parsimonious model to our data, for men and women separately. The results are shown in Table 9.2.

The CnSF model is taken as a point of departure (Model A in Table 9.2). Fitting the social reproduction model for men returns a G^2 of 451 for 294 d.f. The fit is rather poor, but the sample size is large and the percentage misclassified only around four percent, which suggests that this model provides one reasonable summary of the pattern of association between class origin and class destination (other, equally reasonable, models may show a similarly good or even better fit).[121] The parameters are all clearly significant, as shown

FIG. 9.5.*Changes in reproduction parameters for women. Log-odds with 1976–7 as reference category*



[121] To try to benchmark the model, I replaced it with Erikson and Goldthorpe's (1992) core model, but that showed a much worse fit, both for men and women. (It should be mentioned that the core model included class VIIb, farm labourers, which is not distinguished in my data—there are simply too few people in this class in Sweden nowadays.)

in the lower panel of Table 9.2. The next step is to fit the interaction between these and year to test whether there is any change over time in any of the social reproduction dimensions identified. As expected from Table 9.1, there is no change. The parameters oscillate trendlessly, and only a few are significantly different from the reference year, 1976–7 (results not shown).

It is more interesting to fit the social reproduction model for women, because we know that here there is a decline in the overall association between origin and destination classes. The model does not fit so well for women, however. This is a well-known problem that may stem from the fact that women are slightly more mobile or that their class distribution differs from that of their fathers because they are of different sexes (or, perhaps, that the models are constructed to capture mobility among men). As is evident from the parameter estimates in Table 9.2, social fluidity is slightly higher for women, that is, the association parameters are weaker. This is mostly due to the fact that inheritance among the self-employed and farmers, and the affinity between these two classes, are stronger among men.

The inclusion of interaction effects between survey year and the six reproduction parameters does not improve on the fit, though this is of course mainly due to the fact that year is fitted using twelve dummy variables in order not to impose any linear restriction on parameters. The results are shown graphically for women in Fig. 9.5. The curves represent each of the reproduction * year interactions with their strength (in log-odds) on the *y*-axis (taking 1976–7 as the reference category with the value 0), and year along the *x*-axis. The only parameter that appears to change is INH2—that is, social inheritance among

farmers—which is a very small category, meaning that the standard errors are quite large (there is in fact not a single estimate that is significantly different from the 1976–7 value). In short, the social reproduction model does not reveal anything about what process lies behind the decreasing association between origin and destination among women. This is in itself an interesting finding because it means that several of the most likely explanations do not receive support. Though we cannot rule out that it is the inappropriateness of the model that generates the result, a tentative conclusion is that social fluidity increased across the board for women.

Next, I test the hypothesis of an across-the-board decrease in the origin–destination association for women, using a multinomial logistic regression model with class destination (seven classes: I, II, IIIa, IVab, IVcd, VI, and IIIb/VII) as the dependent variable and class origin (four classes: I, II/IIIa, IV, and IIIb/VI/VII) and year (six periods: 76–9… 96–9) as the independent. Model A in Table 9.3 includes the main effects of origin and year, and the interaction between the two. The interaction term is fitted with year being divided into two periods, namely those that showed to be of significance for trends in social mobility for women above (1976–87 versus 1988–99). There are no restrictions on origin * destination parameters which means that the model yields a large number of parameters; but what we lose in parsimony we now gain in detail, and with a large sample size it proves possible to make some sense out of the resulting pattern.

The results support the hypothesis of an across-the-board change (as does the good fit of the Unidiff model which, as noted earlier, assumes a common pattern of association between origins and destinations which then weakens or strengthens over time). As compared with the odds of daughters from the unskilled working class, the advantages of those from the upper service class in reaching any non-manual class (I, II, or IIIa), rather than ending up in an unskilled position (either in class IIIb or VII), declined between the two periods. The advantages of those from class II/IIIa backgrounds for attaining positions in class IIIa decreased as well, as did the chances of daughters of the petty bourgeoisie ending up in the skilled rather than unskilled working class. Two parameters go in the other direction—towards increasing social reproduction—but these involve the petty bourgeoisie which is an unusual class destination for women.

For men, there are only four significant changes and they go in different directions, which probably explains why we do not find any overall change in mobility in Fig. 9.4 (these results are not shown). It is worth noting that there is a decreasing association between origins in the upper service class and both of the service class destinations. Thus, during the last twenty-five years of the twentieth century, the advantages of an upper service class origin for class destination opportunities appear to have diminished for both men and women.

TABLE 9.3. *Multinomial logistic regressions of women's class destination (D, seven classes) on class origin (O, four classes), survey year (six periods), the interaction between origin and period (two periods), and (in Model B) also controlling for respondents' education*

	Model A			Model B		
	B	s.e.	*p*	*B*	s.e.	*p*
Destination class = I						
Intercept	−1.84	0.06	.00	−4.74	0.17	.00
Class origins						
I	**2.70**	0.10	.00	**0.77**	0.13	.00
II/IIIa	**1.61**	0.07	.00	**0.56**	0.09	.00
IV	**0.72**	0.07	.00	**0.22**	0.09	.01
VII	0.00	0.00	—	0.00	0.00	—
Period						
1976–9	−1.06	0.09	.00	−0.43	0.12	.00
1980–3	−0.84	0.09	.00	−0.45	0.12	.00
1984–7	−0.69	0.09	.00	−0.35	0.12	.00
1988–91	−0.36	0.06	.00	−0.04	0.09	.67
1992–5	−0.13	0.06	.04	0.01	0.08	.87
1996–9	0.00	0.00	—	0.00	0.00	—
Class origins * period interactions						
I * 76–87	**0.30**	0.14	.03	0.12	0.19	.52
II/IIIa * 76–87	0.10	0.11	.35	0.04	0.14	.78
IV * 76–87	−0.11	0.10	.30	−0.11	0.13	.40
Education						
University (3b)	—	—	—	7.49	0.17	.00
Lower tertiary (2c/3a)	—	—	—	4.67	0.16	.00
Upper secondary (2b)	—	—	—	2.40	0.18	.00
Lower secondary (2a)	—	—	—	1.61	0.21	.00
Lower vocational (1c)	—	—	—	1.06	0.17	.00
Compulsory only (1ab)	—	—	—	0.00	0.00	—
Destination class = II						
Intercept	−0.71	0.04	.00	−2.91	0.08	.00
Class Origins						
I	**1.58**	0.09	.00	**0.15**	0.11	.18
II/IIIa	**1.00**	0.06	.00	**0.27**	0.07	.00
IV	**0.36**	0.05	.00	**0.06**	0.06	.33
VII	0.00	0.00	—	0.00	0.00	—
Period						
1976–9	−1.14	0.06	.00	−0.60	0.08	.00
1980–3	−0.86	0.06	.00	−0.46	0.08	.00
1984–7	−0.55	0.06	.00	−0.27	0.07	.00
1988–91	−0.37	0.05	.00	−0.21	0.06	.00
1992–5	−0.12	0.05	.02	−0.07	0.06	.25
1996–9	0.00	0.00	—	0.00	0.00	—
Class origins * period interactions						
I * 76–87	**0.32**	0.13	.01	0.13	0.16	.42
II/IIIa * 76–87	0.14	0.08	.08	0.08	0.10	.42

IV * 76–87	0.13	0.07	.07	0.12	0.09	.18
Education						
University (3b)	—	—	—	5.51	0.11	.00
Lower tertiary (2c/3a)	—	—	—	4.92	0.08	.00
Upper secondary (2b)	—	—	—	2.31	0.09	.00
Lower secondary (2a)	—	—	—	1.58	0.09	.00
Lower vocational (1c)	—	—	—	1.18	0.07	.00
Compulsory only (1ab)	—	—	—	0.00	0.00	—
Destination class = IIIa						
Intercept	−1.25	0.05	.00	−2.53	0.07	.00
Class origins						
I	**1.01**	0.11	.00	**0.38**	0.11	.00
II/IIIa	**0.76**	0.06	.00	**0.45**	0.07	.00
IV	**0.10**	0.06	.10	**0.01**	0.06	.89
VII	0.00	0.00	—	**0.00**	0.00	—
Period						
1976–9	−0.50	0.07	.00	−0.18	0.07	.01
1980–3	−0.36	0.07	.00	−0.10	0.07	.15
1984–7	−0.19	0.07	.00	−0.01	0.07	.91
1988–91	−0.03	0.06	.64	0.09	0.06	.14
1992–5	0.07	0.06	.25	0.12	0.06	.05
1996–9	0.00	0.00	—	0.00	0.00	—
Class Origins * Period interactions						
I * 76–87	**0.57**	0.15	.00	**0.47**	0.15	.00
II/IIIa * 76–87	**0.19**	0.09	.03	0.16	0.09	.08
IV * 76–87	0.05	0.08	.54	0.07	0.08	.41
Education						
University (3b)	—	—	—	2.88	0.12	.00
Lower tertiary (2c/3a)	—	—	—	2.75	0.07	.00
Upper secondary (2b)	—	—	—	1.94	0.07	.00
Lower secondary (2a)	—	—	—	1.40	0.07	.00
Lower vocational (1c)	—	—	—	1.23	0.05	.00
Compulsory only (1ab)	—	—	—	0.00	0.00	—
Destination class = IVab						
Intercept	−2.17	0.07	.00	−2.50	0.09	.00
Class Origins						
I	**1.05**	0.16	.00	**0.54**	0.17	.00
II/IIIa	**0.80**	0.10	.00	**0.57**	0.11	.00
IV	**0.68**	0.09	.00	**0.62**	0.09	.00
VII	**0.00**	0.00	—	0.00	0.00	—
Period						
1976–9	−0.47	0.10	.00	−0.31	0.10	.00
1980–3	−0.46	0.10	.00	−0.32	0.11	.00

1984–7	−0.49	0.11	.00	−0.38	0.11	.00
1988–91	−0.55	0.09	.00	−0.46	0.09	.00
1992–5	−0.41	0.09	.00	−0.36	0.09	.00
1996–9	0.00	0.00	—	0.00	0.00	—
Class origins * period interactions						
I * 76–87	−0.05	0.24	.83	−0.02	0.24	.94
II/IIIa * 76–87	**−0.36**	0.15	.02	**−0.31**	0.16	.05
IV * 76–87	**−0.30**	0.12	.01	**−0.28**	0.12	.02
Education						
University (3b)	—	—	—	1.50	0.17	.00
Lower tertiary (2c/3a)	—	—	—	1.54	0.10	.00
Upper secondary (2b)	—	—	—	1.23	0.09	.00
Lower secondary (2a)	—	—	—	0.34	0.10	.00
Lower vocational (1c)	—	—	—	−0.02	0.07	.82
Compulsory only (1ab)	—	—	—	0.00	0.00	—
Destination class = IVcd						
Intercept	−4.69	0.21	.00	−4.49	0.22	.00
Class Origins						
I	**1.41**	0.36	.00	**1.49**	0.36	.00
II/IIIa	**0.39**	0.30	.19	**0.45**	0.30	.14
IV	**1.43**	0.19	.00	**1.43**	0.19	.00
VII	0.00	0.00	—	0.00	0.00	—
Period						
1976–9	0.97	0.24	.00	0.89	0.24	.00
1980–3	0.88	0.24	.00	0.81	0.24	.00
1984–7	0.30	0.25	.24	0.25	0.25	.32
1988–91	0.45	0.20	.02	0.42	0.20	.04
1992–5	0.10	0.22	.64	0.10	0.22	.66
1996–9	0.00	0.00	—	0.00	0.00	—
Class origins * period interactions						
I * 76–87	−0.96	0.52	.07	−0.93	0.53	.80
II/IIIa * 76–87	−0.59	0.41	.14	−0.59	0.41	.14
IV * 76–87	0.33	0.22	.13	0.32	0.22	.14
Education						
University (3b)	—	—	—	0.47	0.33	.15
Lower tertiary (2c/3a)	—	—	—	−0.18	0.24	.45
Upper secondary (2b)	—	—	—	−0.75	0.24	.00
Lower secondary (2a)	—	—	—	−0.09	0.15	.58
Lower vocational (1c)	—	—	—	−0.28	0.09	.00
Compulsory only (1ab)	—	—	—	0.00	0.00	—
Destination class = VI						
Intercept	−1.00	0.05	.00	−2.18	0.07	.00
Class Origins						

I	**0.12**	0.14	.39	**−0.10**	0.14	.49
II/IIIa	**0.25**	0.07	.00	**0.12**	0.07	.10
IV	**−0.05**	0.06	.36	**−0.08**	0.06	.15
VII	0.00	0.00	—	0.00	0.00	—
Period						
1976–9	−1.24	0.08	.00	−0.93	0.08	.00
1980–3	−0.98	0.07	.00	−0.72	0.08	.00
1984–7	−0.80	0.07	.00	−0.63	0.08	.00
1988–91	−0.30	0.06	.00	−0.22	0.06	.00
1992–5	−0.11	0.06	.07	−0.07	0.06	.27
1996–9	0.00	0.00	—	0.00	0.00	—
Class Origins * Period interactions						
I * 76–87	0.32	0.21	.13	0.15	0.21	.48
II/IIIa * 76–87	0.08	0.11	.49	0.01	0.12	.94
IV * 76–87	**0.18**	0.09	.04	**0.17**	0.09	.05
Education						
University (3b)	—	—	—	1.02	0.21	.00
Lower tertiary (2c/3a)	—	—	—	1.50	0.10	.00
Upper secondary (2b)	—	—	—	1.29	0.08	.00
Lower secondary (2a)	—	—	—	−0.30	0.14	.03
Lower vocational (1c)	—	—	—	1.53	0.06	.00
Compulsory only (1ab)	—	—	—	0.00	0.00	—

Source: ULF, weighted for sample probability.

The role of education in the reproduction process

From the important studies by Carlsson (1958) and Duncan and Hodge (1963) and onwards, sociologists have analysed the mediating role of education in the status attainment and/or social mobility process. Traditionally, this has been done in a path-analytical framework (in the tradition of Blau and Duncan 1967). More akin to the study of class mobility, the importance of education for the social reproduction process has been studied using log-linear techniques (for a comparative perspective, see Ishida et al. 1995; for Sweden, Jonsson 1988, 1993). These studies have shown that education is the major vehicle for social reproduction among the service class and lies behind much of the disadvantage of children of manual workers, but that it is unimportant for intergenerational inheritance among farmers and the petty bourgeoisie. The main question here is whether there is any change in the origin–destination association once we control for education. This is an especially interesting question to ask for women because their social fluidity has increased, as shown in Fig. 9.4.

In Table 9.3, Model B, respondent's level of education (six levels) is added to Model A. Formal qualifications, particularly a university degree, but also lower tertiary education, have a great impact on access to service class positions. Origin effects decrease substantially when level of education is included in the model—education is indeed an important transmitter of class positions across generations. However, for destination class I, there are fairly strong effects of class origins I, II and IIIa that are not transmitted via education (and for destinations II and IIIa there are also origin effects net of education, though these are not particularly strong).[122] In line with previous studies, class origin affects the odds of entering self-employment even among those with the same level of education.[123]

Our major concern with the analysis in Table 9.3 is the interaction between origin class and period, and as can be seen from Model B most—but certainly not all—of the changes registered in Model A diminish when education is included. This suggests that either the changing distribution of education or the decrease in the effect of origin on educational attainment accounts for a part of the increasing fluidity among women.

[122] This corresponds to a finding on a much larger dataset (around 350,000 respondents 25–45 years of age), where the log-odds of reaching the service class (I/II) were around 1 for children of class I origin, and around 0.5 for children of other non-manual backgrounds, as compared to children of unskilled workers (VII) at the same level and with the same type of education (Erikson and Jonsson 1998, table 2).

[123] Note that, contrary to previous studies, there is a decline in the effect of coming from the upper service class on the propensity of ending up in self-employment when controlling for education—which is reflected in the positive effect of higher education on having class IVab as destination. This is probably explained by the classification of large employers (more than twenty employees) who are normally put in class I, but who cannot be discerned in the data here and therefore have to be merged with class IVab.

Conclusion: changes in class structure rather than in class mobility

The last twenty-five years of the twentieth century witnessed rather minor changes in intergenerational social mobility in Sweden. The class structure continued to change as unqualified jobs were replaced by more qualified; in particular, the proportion of service class jobs increased. But these structural changes did not produce any substantial changes in absolute mobility rates, which are close to 70 percent when calculated on the basis of the seven-class schema. Vertical mobility increased somewhat, however, particularly women's upward mobility.

Relative mobility rates, or social fluidity, did not change overall for men between 1976 and 1999. This stability hides offsetting trends, one being a decrease in the advantage of an upper service class background relative to unskilled working class origins. Women experienced increased overall social fluidity, however. The association between origin and destination class decreased at the end of the 1980s and stabilised at that lower level. Equalisation occurred across the board, though it is worth noting that the advantages to an upper service class origin decreased for women, just as they did for men. A model which controls for educational attainment suggests that changes in the distribution of education or a declining importance of social origin for educational attainment was partly but not entirely behind the increased social fluidity among women. Further analyses show that the increase in fluidity among women may have been due to cohort replacement—in particular, the cohorts born between 1916 and 1920 show a low degree of social fluidity (Breen and Jonsson 2003). This is in line with the finding that class inequality in educational attainment was relatively strong for cohorts born before the 1930s as compared to cohorts born in the late 1930s and onwards (Jonsson and Erikson 2000).

As mentioned above, Swedish society became more open after the 1940s, and educational inequality continued to decrease up until the mid-1970s. This development meant that Sweden was probably one of the countries in the world where equality of opportunity was greatest. This may still be the case, but not because the trends towards equalisation have continued into the 1980s and 1990s (with the exception of increasing fluidity among women and a diminishing advantage for men with an upper service class background). To put it in cohort terms: while class background clearly meant less for the attainment of higher education among those born in the late 1940s as compared to older cohorts, a similar change is not observed among children born in the 1950s, 1960s, and 1970s (Jonsson and Erikson 2000: Fig. 3). It is implausible that these cohorts will show any significant change in the association between origin and destination class either: at least, this would

demand that allocation principles in the labour market changed to an unusually great extent (and systematically in favour of those from a less privileged background).

In sum, the trend towards increasing openness in Sweden can now be seen as a phenomenon of the mid-twentieth century. In, say, the early 1980s we should have concluded that there was an impressive ongoing trend towards greater equality; twenty years later we are certainly unimpressed with its continuation. It would be an exaggeration to claim that the equalisation of opportunities has come to a halt, but it has certainly lost speed, and a challenging task for future research is to find an explanation for that. Provisional explanations should turn to the fact that the generic pattern as well as the level of social fluidity and social reproduction is resistant to change because the processes behind it are stable and dominant. As was spelled out earlier in the chapter, many forceful societal conditions and processes speak in favour of stability. Early socialisation, resulting in class differences in educational achievement; inequality in resources in the family of origin; and class differences in absolute aspirations, are just some of these. To counteract these factors, rather radical changes may be needed in the distribution of relative resources or in the way education is organised (Erikson and Jonsson 1996*b*)—and such changes were certainly more radical in Sweden in the period between the mid-1940s and the mid-1970s than later.

Appendix A

TABLE 9.A1. *Absolute mobility rates (upward, downward, non-vertical) for men aged 25–64 in the Swedish labour force, 1976/7–1998/9*

Year	TMR	TV	TNV	TV/TNV	TU	TD	TU/TD
1976–7	0.73	0.56	0.17	3.32	0.42	0.14	3.10
1978–9	0.74	0.58	0.16	3.66	0.44	0.14	3.08
1980–1	0.74	0.59	0.15	3.92	0.43	0.16	2.73
1982–3	0.75	0.59	0.16	3.83	0.43	0.16	2.66
1984–5	0.74	0.58	0.16	3.57	0.41	0.17	2.38
1986–7	0.74	0.60	0.14	4.14	0.44	0.16	2.72
1988–9	0.75	0.61	0.15	4.20	0.43	0.18	2.47
1990–1	0.75	0.60	0.15	3.96	0.44	0.16	2.70
1992–3	0.76	0.62	0.14	4.33	0.45	0.17	2.60
1994–5	0.75	0.61	0.14	4.46	0.43	0.18	2.32
1996–7	0.75	0.61	0.14	4.48	0.43	0.18	2.39
1998–9	0.74	0.61	0.13	4.79	0.42	0.19	2.25
Total	0.74	0.60	0.15	4.05	0.43	0.17	2.62

TABLE 9.A2.*Absolute mobility rates (upward, downward, non-vertical) for women aged 25–64 in the Swedish labour force, 1976/7–1998/9*

Year	TMR	TV	TNV	TV/TNV	TU	TD	TU/TD
1976–7	0.74	0.55	0.19	2.93	0.26	0.29	0.89
1978–9	0.73	0.54	0.19	2.90	0.26	0.28	0.95
1980–1	0.73	0.55	0.19	2.92	0.28	0.27	1.01
1982–3	0.74	0.56	0.18	3.02	0.29	0.26	1.13
1984–5	0.75	0.59	0.16	3.57	0.30	0.29	1.05
1986–7	0.77	0.61	0.16	3.72	0.33	0.27	1.23
1988–9	0.76	0.61	0.15	3.95	0.36	0.25	1.41
1990–1	0.75	0.62	0.14	4.41	0.38	0.23	1.64
1992–3	0.76	0.62	0.14	4.56	0.37	0.25	1.51
1994–5	0.77	0.64	0.13	4.94	0.35	0.29	1.23
1996–7	0.76	0.63	0.13	4.77	0.36	0.27	1.33
1998–9	0.74	0.58	0.17	3.50	0.31	0.27	1.15
Total	0.75	0.59	0.16	3.77	0.32	0.27	1.21

Appendix B

TABLE 9.A3.*The class reproduction model—values of Hierarchy (HI)*

	Origin class	Origin	Destination
I/II	Service class	100.0	100.0
III	Non-manual routine workers	66.5	62.0
IVab	Petty bourgeoisie	62.5	79.0
IVcd	Farmers	30.7	69.0
V/VI	Skilled workers	64.5	62.0
VII	Unskilled workers	55.0	53.0

Note: Class of origin merges IIIa and IIIb; destination merges class IIIb with VII.

TABLE 9.A4.*The class reproduction model—definition of levels matrices*

	Reproduction (RPR)						Inheritance 1 (INH1)					
	I/II	III	IVab	IVcd	VI	VII	I/II	III	IVab	IVcd	VI	VII
I/II	2	1	1	1	1	1	1	1	1	1	1	1
III	1	2	1	1	1	1	1	1	1	1	1	1
IVab	1	1	2	1	1	1	1	1	2	1	1	1
IVcd	1	1	1	2	1	1	1	1	1	2	1	1
VI	1	1	1	1	2	1	1	1	1	1	1	1
VII	1	1	1	1	1	2	1	1	1	1	1	1

	Inheritance 2 (INH2)						Manual–non-manual (MAN)					
	I/II	III	IVab	IVcd	VI	VII	I/II	III	IVab	IVcd	VI	VII
I/II	1	1	1	1	1	1	1	1	1	2	2	2
III	1	1	1	1	1	1	1	1	1	2	2	2
IVab	1	1	1	1	1	1	1	1	1	1	1	1
IVcd	1	1	1	2	1	1	2	2	1	1	1	1
VI	1	1	1	1	1	1	2	2	1	1	1	1
VII	1	1	1	1	1	1	2	2	1	1	1	1

Affinity (AFF)

	I/II	III	IVab	IVcd	VI	VII
I/II	1	1	1	1	1	1
III	1	1	1	1	1	1
IVab	1	1	1	2	1	1
IVcd	1	1	2	1	1	1
VI	1	1	1	1	1	1
VII	1	1	1	1	1	1

Note: Class of origin merges IIIa and IIIb; destination merges class IIIb with VII.

10 Social Mobility in Norway 1973–95

Kristen Ringdal

Norwegian research on social mobility may be classified into two broad categories: studies of recruitment to elites or elite occupations, and studies of social mobility in the general population. Only the latter type of studies will be reviewed here.

Most of the analyses of social mobility in the general population stem from two major mobility projects from the early 1970s, both based on a cohort design: the Trøndelag project (Lindbekk 1983) and the Norwegian Occupational Life History Study (Rogoff Ramsøy 1977). The Trøndelag project was based on a regional dataset consisting of the complete cohorts of men born in Trøndelag in 1912 and 1932. The data were compiled partly from military enrolment records covering social background, and partly from various archival sources used to update information on education and present occupation. The occupations were coded directly into one of nine classes with professionals and businessmen at the one end, and smallholders, fishermen, and farm-workers at the other. The mobility tables were based on father's class when the respondents were nineteen years of age, and the class of the respondent at 36–7 years. Early results on observed (absolute) mobility in the 1912 cohort are reported in Galgerud (1973). Galgerud's main interpretation was that the structural changes of the economy reflected in the class structure were the main driving force behind social mobility in Trøndelag. The major publication from the Trøndelag project is Lindbekk (1983), which has a much broader scope than Galgerud's work, covering both cohorts and also themes such as mortality and criminal behaviour in a social perspective. Lindbekk's analysis is based on both mobility tables and correlation techniques. His main finding on mobility trends is that the correlation between origin and destination classes for the 1912 cohort is lower than the correlation reported in Rogoff Ramsøy (1977) for her earliest cohort (born 1921). This finding seems to break the pattern of a weak decline in the origin by destination correlation across cohorts observed by Rogoff Ramsøy. In a reanalysis of the Trøndelag cohorts, where relative mobility was captured by means of class-specific

immobility parameters and a scaled association parameter, no trend in the former was found, but the origin by destination association declined significantly between the two cohorts (Ringdal 1990).

The Norwegian Occupational Life History Study was based on representative samples of three cohorts of men born in 1921, 1931, and 1941. The main publication is Rogoff Ramsøy (1977), with a broad coverage of social mobility including educational, occupational, and income mobility. It was one of the first studies of changes in relative social mobility, or social fluidity, by means of log-linear models. Rogoff Ramsøy's main conclusion was in line with the international findings of the time; the life chances of Norwegian men at thirty years of age remained unchanged across her three cohorts, once changes in the class structure were controlled for. This conclusion was based upon an acceptance of the constant social fluidity model, in which the origin by destination association does not change across cohorts. In a reanalysis of the 1921 and 1931 cohorts at the age of thirty-five, Ringdal (1990) added the 1945 cohort from the National Census Sample. Using the EGP class schema (Erikson and Goldthorpe 1992), the question of changes in relative mobility was approached by means of explicit trend parameters in the models. Still, both the immobility and the scaled association parameters seemed to be rather constant across the three cohorts. These results strengthened Rogoff Ramsøy's earlier conclusion.

Ringdal (1994) analysed seven intergenerational social mobility tables for Norwegian men from the election surveys covering more than thirty years from 1957 to 1989 by means of log-multiplicative and log-linear models. The preferred model indicates stable immobility parameters, but a linear downward trend in the scaled association since 1965, with a deviant low value for 1957. These conflicting results, together with the relatively good fit of a model of constant social fluidity, may perhaps best be interpreted as 'trendless fluctuations' in relative mobility.

Norway was not included in the CASMIN project (Erikson and Goldthorpe 1992) and is also otherwise poorly represented in international comparative research. The exceptions are Pöntinen's (1983) study of social mobility in the Scandinavian countries, the Ganzeboom et al.'s (1989) comprehensive study of trends in social mobility, and Western and Wright (1994).

Pöntinen's (1983) main findings on observed mobility may be summarised as follows: in all Scandinavian countries, a large proportion of mobility is related to the modernisation of the occupational structure. Inequality of opportunity as reflected in the outflow distributions was also similar in all Scandinavian countries. The chances of moving into the upper white-collar class were higher in Norway and Sweden than in Denmark and Finland. The low rate of female participation in paid work in Norway meant that the intergenerational class structure of Norwegian women, to a greater extent

than in the other Scandinavian countries, was determined by marital mobility. Pöntinen's (1983: 108) main conclusion from his log-linear analysis is that the structure of relative mobility in the early 1970s in the Scandinavian countries was very similar. This implies that the differences found from the outflow analysis may be mainly explained by differences in occupational structure, resulting from different timing of the industrialization process. This conclusion seems to fit into the accumulated evidence at that time of similarities and stabilities in mobility patterns.

Norway is no exception to the general pattern of a trend towards increased social fluidity described in Ganzeboom et al. (1989). In the first model applied to the six Norwegian mobility tables, with parameters for immobility and scaled association, no trend parameter was statistically significant, but in the second one, a negative linear trend in the scaled association parameter was found. This is only a weak indication of increased social fluidity because of two problematic aspects of the study. First, the six tables used to simulate the Erikson and Goldthorpe (EGP) class schema came from quite different types of surveys with major differences in the ways the occupational information was recorded. Second, only two models were presented. Given the indeterminacy of log-linear models, other models without trend parameters should have been included for comparison (Jones 1992). The one model with a significant trend is clearly biased because it contains no 'competing' components of relative mobility in addition to the parameter for scaled association.

Western and Wright (1994) compared social mobility in the United States, Canada, Norway, and Sweden. Their approach is quite different from mainstream mobility research and addresses different questions. They focus on cross-national differences and do not cover trends in social mobility. A main finding is that the property boundary is a stronger barrier to social mobility than the expertise boundary in the purest capitalist countries, that is, the United States and Canada, but that is not so in the two Scandinavian countries. They interpret this difference as stemming from national differences in welfare regimes and public policy. Also, Erikson and Goldthorpe (1992) in their comparative study of social mobility discuss the effects of political intervention on mobility regimes. The mobility regimes for former socialist countries and Sweden may have been influenced by political intervention. Jonsson and Mills (1993) adopt a similar explanation for the observed differences in mobility patterns between England and Sweden.

This review shows that the available analyses of the Norwegian case are not conclusive as to the existence of trends in components of relative mobility, that is, social fluidity. Also, the social mobility of Norwegian women is poorly covered in the major projects. In this chapter we seek to update the picture of levels and trends in social mobility in Norway for both men and women.

A social description of Norway

Between 1945 and 1963 Norwegian governments were exclusively social democratic. Since then Norway has seen shifting governments: social democratic, conservative and centre, and centre minority governments. The social democrats laid the basis for an extensive welfare system of a Swedish type with the purpose of reducing inequality in living conditions and life chances. The following description shows that this has succeeded to some extent.

Industrialisation in Norway, based on the three natural resources—hydro-electric power, wood, and fish—may be divided into two stages. In the first, starting around 1900, some strongholds of manufacturing industry were established mainly in rural areas, either close to raw materials or close to the sources of electricity. Widespread industrialisation in Norway was very late and much of the expansion happened after 1945. The transition from a primary to a secondary and tertiary sector economy happened relatively late compared to other Nordic countries, with the exception of Finland. From the early 1960s to the early 1990s, the percentage of the workforce in primary employment dropped from around twenty to six. Also the manufacturing industries experienced a reduction from 24 to 14 percent of the workforce in the same period. Most of this decline took place in the periods of economic stagnation in the 1980s. The percentage working in private and public services rose sharply in the period; private services showed the strongest expansion in the 1970s, whereas the public services have shown a stable growth, apparently not influenced by the periods of economic stagnation. Public services expanded from around 14 to 29 percent of those employed from 1962 to 1992; the strongest growth is related to the expansion of health and social services (Fredriksen 1993).

In the post-Second World War period Norway may be described as having a 'mixed' economic system, capitalism being coupled with strong elements of central planning and control of the economy, although state control has been diminishing since the late 1980s due to a continuing policy of deregulation and privatisation of public enterprises. Norway has a very open economy, relying heavily on the import and export of goods and services. The Norwegian industrial structure may be described as bipolar with a few large firms involved in the production of oil, metals, pulp, and paper. Since the 1970s, oil production has become important and given rise to Statoil, a new multinational company entirely state owned (until 2001). Most Norwegian production units are, however, rather small, a majority having ten or fewer employees.

The economic conditions may be seen as the background to individual opportunities. Up to the beginning of the 1970s, Norway experienced a period of strong economic growth, but with increasing problems of inflation, which peaked at 13.7 percent in 1981. In most of the post-Second World War period,

unemployment rates were very low, at 1–2 percent of the workforce. In 1983 the unemployment rate showed a temporary peak at 3.4 percent, returning to a normal level within a couple of years. At the end of the eighties, unemployment rose rapidly to levels of 5–6 percent during the longest period of economic stagnation in the post-war period. This continued until unemployment rates again declined towards the end of the 1990s. Nevertheless the highest Norwegian rates of unemployment are among the lowest in the OECD countries.

Employment rates for men have been high throughout the period, whereas female employment rates have been rising rapidly from about 45 percent in the early seventies to a temporary peak of 63.7 percent in 1987. Towards the end of the nineties, female employment rates showed further increases (Kjeldstad and Lyngstad 1993; Statistics Norway 1994, 2000). While female employment rates were far below the Finnish and Swedish rates in the 1970s, the differences have declined in the 1990s. Still, a major difference exists: female employment in Norway is dominated by part-time employment rather than full-time employment as in the Swedish case. This rapid growth in female employment has done little to change strong sex segregation in work. Sex segregation is surprisingly high in a comparative perspective, and does seem to persist to the middle of the 1990s (Hansen 1995).

Norway occupies favourable positions on most social indicators, from GNP per capita to measures of inequality. An example is the Human Development Index (HDI) published by the UNDP (2000). The HDI captures average national achievements in three basic dimensions of human development: longevity, knowledge, and a decent standard of living, and in the 1990s Norway has been among the top five in the HDI. Absolute poverty is non-existent due to the well-developed welfare regime. Rates of relative poverty have been low by international standards, and the percentage of rich persons has also been low. This picture of low income inequality is further supported by measures such as the Gini index, where Norway, and the other Nordic countries fare extremely well (Fritzell 2001*b*). However, towards the end of the 1990s, a trend towards increasing income inequality is observed, partly due to capital income from stocks and inherited fortunes.

Norway has experienced strong educational expansion during the second half of the twentieth century. The percentage with their highest education at the upper secondary level has doubled among women, from 21 percent in 1970 to 42 percent in 1995. For men the change is somewhat smaller, from 27 to 48 percent. The increase in university level education is even stronger, from 9 to 21 percent for men and from less than 5 to 18 percent for women. As a consequence, the absolute levels of education have risen in all social groups, but the relative advantage of privileged social groups shows only a minor decline (Hansen 1997, 1999; Lindbekk 1993, 1998; Ringdal and Birkelund 2001).

Data and methods

The dataset used here comprises four surveys representative of the Norwegian population: the 1982 survey for the comparative class analysis project headed by Erik Olin Wright (Colbjørnsen et al. 1987); the 1973 and the 1995 Level of Living Surveys (Vårdal 1978; Rommetveit 1997); and the 1994 survey on the EU referendum (Moen et al. 1996). The Norwegian Gallup Institute carried out the fieldwork for the 1982 survey, and Statistics Norway was responsible for the remaining ones. The two surveys from 1994–5 were fielded only six months apart, and they have been combined to represent the Norwegian population at the start of 1995.

The starting point for developing categories of social class is the widely applied EGP class schema (Erikson and Goldthorpe 1992). The occupational information in the Level of Living Surveys is registered according to the Norwegian version of the Nordic Occupational Codes (Arbeidsdirektoratet 1989). A computer program written by this author was used to generate the EGP class schema for Norway (Gooderham et al. 1994).[124] In developing the Norwegian version, all occupational codes at the three-digit level were compared to the coding of the similar Swedish occupational codes to ensure cross-national comparability. Still, the results are far from perfect, mostly due to differences in categories, especially where the five-digit version of the Swedish classification is needed.

There are also some smaller problems in each data file. In the EU survey, only the class of the main provider, and not those of the parents separately, is available for coding class origins. The information on the identity of the main provider shows that it was the father in most instances (88 percent), but in this version, the class of the main provider is used. The alternative would be to exclude the 12 percent who reported another main provider than their father.[125] In the 1973 Level of Living Survey, the employed/self employed distinction is not recorded for father's occupation. This is a more serious omission from our perspective. Self-employed farmers have their own occupational code, but outside farming, only occupational codes 301 and 302 are homogeneously self-employed.[126] In all cases class origins refer to the time at which the respondents were in their mid-teens.

[124] The computer program was originally based upon Harry Ganzeboom's program for converting ISCO codes into EGP classes. This was later updated by implementing as far as possible the decisions from the computer program for Sweden written by Erikson, Jonsson, and Thålin for the same purpose.

[125] Furthermore, the size of the work organisation or firm is not registered for the main provider in the EU survey of 1994 and for the father in the 1973 survey. The alternative adopted is to move the main providers with the occupational codes 111 (managers in the private sector), 112 (managing directors), and 113 (other top managers) to class I.

[126] These codes are: 301 Wholesale dealer (Grossist), 302 Shopkeeper (Detaljist).

The changing class structure

Changes in the class structure across or within generations will necessarily generate social mobility. The class structures for men and women in 1973, 1982, and 1995 are described in Table 10.1, along with the distributions of the classes of origin, that is, father's class. The table is based on the full version of the EGP classes with the exception of the merging of classes IVa and IVb (the self-employed with and without employees).

The service classes have expanded strongly in the period from 20 to 36 percent for men and from 16 to 34 percent for women. For women this expansion is mainly due to the increase in the percentage in the lower service class. In 1995 less than 6 percent of the women were classified in the upper service class, whereas 10.5 percent of men were found in that class. For men, the routine non-manual class is evenly divided between the upper and lower levels, and showed a weak expansion over the period from about 10 to 13 percent. Around half of the women were located in class III in 1973, most of them in the lower level (IIIb). This is the most apparent sign of the pervasive sex segregation in work in Norway. Over time the percentage in class IIIb has declined from 40 percent in 1973 to 35 percent in 1995. On the other

TABLE 10.1.*The Norwegian class structure 1973–95, men and women aged 20–67*

	Current Class						Class Origins		
Men			Women						
	1973	1982	1995	1973	1982	1995	1973	1982	1995
I Upper service class	4.0	14.5	10.5	1.4	3.4	5.6	2.2	9.9	10.9
II Lower service class	16.0	17.6	25.4	15.5	22.3	28.0	9.0	7.8	12.6
IIIa Routine non-manual, upper	4.1	7.0	5.9	7.5	22.7	11.2	3.3	4.0	4.1
IIIb Routine non-manual, lower	5.4	5.6	7.2	40.4	21.1	34.5	2.2	2.9	4.3
IVab Self-employed	10.8	9.4	7.8	3.3	4.1	4.0	2.2	15.0	15.5
IVc Farmers	8.2	4.3	4.3	1.2	0.5	1.4	23.5	16.8	13.4
V, VI Skilled manual	24.7	21.8	21.1	1.5	4.0	2.3	22.8	16.1	18.9
VIIa Unskilled manual	25.0	18.9	16.0	22.5	20.7	11.9	29.5	25.1	18.4
VIIb Unskilled primary	1.8	0.9	1.8	6.8	1.3	1.2	5.3	2.5	2.0
Sum	100.0	100.0	100.0	100.1	100.1	100.1	100.0	100.0	100.0
N	1,072	1,119	2,493	737	997	2,278	2,327	2,335	5,136
Δ: 1973–95	—	—	19.5	—	—	22.1	—	—	28.6
Δ: Men–-women	—	—	—	43.4	38.1	35.2	—	—	—
Δ: Origin–-destination	23.4	25.8	19.7	51.5	51.4	52.6	—	—	—

hand the percentage of women in class IIIa has increased weakly over the period studied.[127]

The percentage in self-employment is lower for women than for men, but this class remains rather stable at 8–10 percent among men and about half that size for women. Farmers (class IVc) have declined from around 8 to 4 percent among men. Only about 1 percent of the women are recorded as farmers. Sex segregation in work is also visible in the distribution of the working classes, V–VI and VIIa. The skilled manual class has declined from about 25 percent to about 21 percent among men. However, almost no women are found to be skilled workers. The unskilled manual class (VIIa) has declined for both men and women; from about 25 to 16 percent for men, and from 23 to 12 percent for women. We also note that men are more spread out across the class categories than women, among whom the large majority are found in the two classes, IIIb (routine non-manual lower) and II (the lower service class). The latter contains most of the middle echelons of the professions in the welfare state such as registered nurses.

The decline of the working class and the expansion of the service class are also visible in the distribution of origin classes. The percentage self-employed is higher for 1982 and 1995 than for the respondents. The low value for 1973 is artificially due to the omission of the question about self-employment.

At the bottom of Table 10.1, dissimilarity indices describing differences in the class distributions are found. The first line shows the changes from 1973 to 1995. The class distributions of both men and women have changed almost to the same extent indicated by Δs around 20. The changes in the period are stronger for class origins (Δ = 29). The strong sex segregation returns the high Δs in the second row. The differences between the class structures for men and women have diminished, as shown by the decline in the Δs from 43 in 1973 to 35 in 1995. In the bottom line, the Δs comparing classes of origin and destination are shown for men and women separately. The differences are much larger for women (Δs around 50) than for men (Δs around 20).

A description of absolute (observed) social mobility in Norway

Table 10.2 presents outflow percentages for men and women in 1995, the end point in our datasets. For each origin, the percentages are shown in each destination class. In a completely fluid society, where class of origin did not matter for destinations, the row percentages would be identical. As we can see

[127] The high percentage in this class in 1982 is hard to explain. My only suggestion is that this may have to do with the fact that the Norwegian Gallup Institute fielded this survey and coded the occupations.

TABLE 10.2. *Outflow percentages for tables of intergenerational social mobility for men and women in Norway 1995*

Class of origin	Class of destination									
	I	II	IIIa	IIIb	IVab	IVc	V–VI	VIIa	VIIb	*n*
Men										
I Upper service class	28.6	34.7	5.8	7.7	6.6	0.8	8.5	5.8	1.5	259
II Lower service class	17.8	33.9	7.9	12.0	4.8	0.3	11.0	11.3	1.0	292
IIIa Routine non-manual upper	6.5	27.8	10.2	8.3	0.9	1.9	26.9	17.6	0.0	108
IIIb Routine non-manual lower	8.8	29.7	7.7	12.1	7.7	0.0	19.8	14.3	0.0	91
IVab Self-employed	9.5	26.8	4.7	6.7	15.4	1.4	18.4	15.9	1.1	358
IVc Farmers	7.0	17.9	2.7	3.3	8.2	24.9	18.8	12.2	4.9	329
V–VI Skilled manual	5.9	25.0	5.7	5.9	7.2	1.1	33.3	15.4	0.7	460
VIIa Unskilled manual	5.8	18.8	7.4	8.0	7.4	1.5	23.4	25.3	2.4	462
VIIb Unskilled primary	8.2	18.4	6.1	4.1	4.1	2.0	24.5	24.5	8.2	49
										2,408
Women										
I Upper service class	12.8	46.5	6.2	23.5	4.9	0.4	0.4	5.3	0.0	226
II Lower service class	9.2	37.7	10.8	31.9	4.2	0.4	0.8	3.5	1.5	260
IIIa Routine non-manual upper	7.1	28.2	10.6	27.1	3.5	0.0	2.4	20.0	1.2	85
IIIb Routine non-manual lower	8.9	22.8	12.9	39.6	2.0	0.0	3.0	10.9	0.0	101
IVab Self-employed	4.5	29.6	8.9	37.7	4.5	1.1	2.0	10.3	1.4	358
IVc Farmers	1.7	23.5	14.9	32.8	3.3	6.3	2.0	13.6	2.0	302
V–VI Skilled manual	4.5	24.6	13.5	35.5	4.3	0.5	3.3	13.0	0.7	422
VIIa Unskilled manual	3.8	20.4	11.1	37.4	4.3	1.0	2.8	17.8	1.5	398
VIIb Unskilled primary	2.2	15.6	15.6	37.8	0.0	2.2	4.4	20.0	2.2	45
										2,197

from the table this is not the case for Norway. The chances of a destination in the two most privileged classes are much better than average if the respondents had fathers in these classes. This advantage holds for both male and female respondents for the service classes combined. Distinguishing between class I and II destinations reveals a clear male advantage. Men with service class backgrounds have about equal chances of being in class I and II, whereas the majority of female respondents with similar backgrounds are in class II.

For men, the tendency to immobility is strongest at the top, in the service class. There is also substantial self-recruitment in the working class. Self-recruitment among farmers is also evident but blurred in the outflow percentages by the substantial decline of that class across generations. For women the lower service class (II) and class IIIb, routine non-manual work, absorb a large share of the outflow from all origins, though this tendency is weaker for women with a father in the service class.

TABLE 10.3. *Absolute Norwegian social mobility in summary statistics (percent), EGP seven-class version*

Mobility statistics	Men			Women		
	1973	1982	1995	1973	1982	1995
Immobility rate	33.5	27.7	31.8	30.4	24.0	26.7
Long distance up (working to service class)	9.1	11.5	11.1	7.5	7.8	11.8
Long distance down (service to working class)	2.9	3.6	4.5	5.1	5.6	7.4
Short distance up	17.9	20.8	20.5	11.6	23.4	17.9
Short distance down	16.1	17.4	18.7	22.7	21.8	20.2
Non-vertical mobility	20.5	18.9	13.3	22.8	17.5	15.9
Sum upward mobility	27.0	32.4	31.7	19.1	31.2	29.7
Sum downward mobility	19.0	21.0	23.2	27.8	27.4	27.7
Sum vertical	46.0	53.4	54.9	46.8	58.6	57.4
Total mobility rate	66.5	72.3	68.2	69.6	76.0	73.3

Absolute social mobility may be more conveniently described by some mobility statistics such as those found in Table 10.3 for all three time-points. They are based on the seven-class version of the EGP classes, described in Erikson and Goldthorpe (1992), where classes I and II, and IIIa and IIIb are joined for men. For women the latter class is merged with VIIa.

The total mobility rates may have increased a little since 1973 (66.5 to 72.3 to 68.2), but the low value for 1995 speaks against a continuing upward trend. Short distance and non-vertical mobility dominates over long distance mobility for both men and women. Long distance upward mobility, that is, from the working class to the service class, is far more frequent than long distance downward mobility for men. Among women, long-distance downward mobility is more frequent than among men. This follows from the tendency for women to enter class IIIb irrespective of origins, and in this version of the EGP class schema women in IIIb are included in the working class. The sum of upward mobility for men has risen weakly in the period from 27 percent in 1973 to 32 percent in 1993. For women the increase is stronger, from 19 to around 30 percent.

Models of relative mobility

Models of relative mobility may be used to test for overall changes or changes in specific components of social fluidity, that is, the mobility chances net of changes in the occupational structure. In Table 10.4 and 10.5 fit statistics for three series of social fluidity models for both men and women are presented.

TABLE 10.4.*Fit statistics for ten social fluidity models for Norwegian men for various versions of EGP classes*[a]

	G^2	d.f.	p	?	rG^2	bic
Men nine classes (as in Table10.1)						
1 (*O* +*D*) * *Y* (*O* and*D* independent)	1,194.0	192	.000	17.9	—	-423.9
2 1+*O* * *D* (constant social fluidity)	149.6	128	.093	5.4	87.5	-929.0
3 (*O* + *D*) * *Y* + $ß_Y$ (uniform change)	138.1	126	.218	5.0	88.4	-923.7
4 (*O* + *D*) * *Y* + IMM + *U* (constant IMM,*U*)	242.9	168	.000	6.8	79.7	-1,172.8
5 (*O* + *D*) * *Y* + IMM * *U* + *Y* (varying IMM, constant*U*)	217.8	150	.000	5.8	81.8	-1,046.2
6 (*O* + *D*) * *Y* + IMM + *U* * *Y* (constant IMM, varying*U*)	233.5	166	.000	6.7	80.4	-1,165.3
Men seven classes, Norwegian version						
1 (*O* + *D*) * *Y* (*O* and*D* independent)	1,025.2	108	.000	16.9	—	115.1
2 1+*O* * *D* (constant social fluidity)	85.0	72	.149	4.5	91.7	-521.7
3 (*O* + *D*) * *Y* + $ß_Y$ (uniform change)	77.8	70	.244	4.2	92.4	-512.0
4 (*O* ± *D*) * *Y* + IMM +*U* (constant IMM,*U*)	120.8	90	.017	5.5	88.2	-637.6
5 (*O* + *D*) * *Y* + IMM * *U* + *Y* (varying IMM, constant*U*)	106.3	76	.012	4.6	89.6	-519.6
6 (*O* + *D*) * *Y* + IMM + *U* * *Y* (constant IMM, varying*U*)	114.8	88	.029	5.4	88.8	-626.7
Men seven classes, CASMIN version						
1 (*O* + *D*) * *Y* (*O* and*D* independent)	1,062.6	108	.000	17.0	—	-52.6
2 1+*O* * *D* (constant social fluidity)	78.8	72	.273	3.9	92.6	-527.9
3 (*O* + *D*) * *Y* + $ß_Y$ (uniform change)	72.5	70	.396	3.7	93.2	-517.4
4 (*O* + *D*) * *Y* + IMM + *U* (constant IMM,*U*)	147.0	90	.000	5.8	86.2	-611.4
5 (*O* + *D*) * *Y* + IMM * *U* + *Y* (varying IMM, constant*U*)	130.1	76	.000	5.0	87.8	-510.3
6 (*O* + *D*) * *Y* + IMM + *U* * *Y* (constant IMM, varying*U*)	134.8	88	.001	5.5	87.3	-606.7
7 (*O* + *D*) * *Y* + HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 + AF2 (core model, constant effects)	156.5	100	.000	6.0	85.3	-686.1
8 (*O* + *D* + HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 + AF2) * *Y* (core model, varying effects)	129.7	84	.001	5.1	87.8	-578.1
9 (*O* +*D* + HI1 + HI2) * *Y* + IN1 + IN2 + IN3 + SE + AF1 + AF2 (core model, HI1, HI2 varies)	143.5	96	.001	5.7	86.5	-665.4
10 (*O* + *D* + HI1) * Y + HI2 + IN1 + IN2 + IN3 + SE + AF1 + AF2 (core model, HI1 varies)	147.2	98	.001	5.8	86.1	-678.6

[a] *O*: Class of origin,*D*: class of destination,*Y*: year,rG^2: The percentage of the deviation of the conditional independence model that is explained by the current model.

TABLE 10.5. *Fit statistics for ten social fluidity models for Norwegian women for various versions of EGP classes*[a]

		G^2	d.f.	p	?	rG^2	bic
Women nine classes, (as in Table10.1)							
1	(*O* + *D*) * *Y* (*O* and *D* independent)	561.5	192	.000	12.6	—	-1,026-.4
2	1 + *O* * *D* (constant social fluidity)	152.4	128	.070	5.4	72.9	-906.2
3	(*O* + *D*) * *Y* + $ß_Y$ (uniform change)	146.9	126	.098	5.3	73.8	-895.1
4	(*O* + *D*) * *Y* + IMM + *U* (constant IMM, *U*)	236.9	168	.000	7.2	57.8	-1,152-.5
5	(*O* + *D*) * *Y* + IMM * *U* + *Y* (varying IMM, constant*U*)	217.0	150	.000	6.2	61.4	-1,023-.5
6	(*O* + *D*) * *Y* + IMM + *U* * *Y* (constant IMM, varying*U*)	222.5	166	.002	6.9	60.4	-1,150-.4
Women seven classes, Norwegian version							
1	(*O* + *D*) * *Y* (*O* and *D* independent)	408.5	108	.000	11.0	—	-484.6
2	1 + *O* * *D* (constant social fluidity)	89.6	72	.078	4.4	78.1	-505.8
3	(*O* + *D*) * *Y* + $ß_Y$ (uniform change)	83.5	70	.129	4.1	79.6	-495.4
4	(*O* + *D*) * *Y* + IMM + *U* (constant IMM,*U*)	111.3	90	.064	4.8	73.3	-633.0
5	(*O* + *D*) * *Y* + IMM * *U* + *Y* (varying IMM, constant*U*)	95.7	76	.063	3.9	77.2	-532.8
6	(*O* + *D*) * *Y* + IMM + *U* * *Y* (constant IMM, varying *U*)	106.5	88	.087	4.4	74.5	-621.2
Women seven classes							
1	(*O* + *D*) * *Y* (*O* and *D* independent)	405.2	108	.000	10.9	—	-488.0
2	1 + *O* * *D* (constant social fluidity)	89.6	72	.078	4.1	77.9	-505.9
3	(*O* + *D*) * *Y* + $ß_Y$ (uniform change)	85.4	70	.115	3.7	78.9	-494.5
4	(*O* + *D*) * *Y* + IMM + *U* (constant IMM, *U*)	129.2	90	.004	4.9	68.0	-615.2
5	(*O* + *D*) * *Y* + IMM * *U* + *Y* (varying IMM, constant*U*)	107.7	76	.010	3.7	73.4	-520.9
6	(*O* + *D*) * *Y* + IMM + *U* * *Y* (constant IMM, varying*U*)	114.1	88	.032	4.3	71.8	-613.7
7	(*O* + *D*) * *Y* + HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 + AF2 (core model, constant effects)	142.8	100	.003	5.2	67.8	-684.2
8	(*O* + *D* + HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 + AF2) * *Y* (core model, varying effects)	113.9	84	.017	4.2	71.9	-580.8
9	(*O* + *D* + HI1 + HI2) * *Y* + IN1 + IN2 + IN3 + SE + AF1 + AF2 (core model, HI1, HI2 varies)	132.1	96	.009	4.7	67.4	-661.9
10	(*O* + *D* + HI1) * Y + HI2 + IN1 + IN2 + IN3 + SE + AF1 + AF2 (core model, HI1 varies)	132.3	98	.012	4.8	67.3	-678.2

[a] *O*: Class of origin,*D*: class of destination,*Y*: year,rG^2: The percentage of the deviation of the conditional independence model that is explained by the current model.

The first model is the conditional independence model, where origins and destinations are statistically independent, but the marginal distributions of the mobility tables are allowed to change. The second is the constant social fluidity model, where a common pattern of social fluidity is adopted to all tables. Both these models are based on stability in the mobility patterns across time. The third model is the model of uniform change, or the Uniform difference (Unidiff) model (Eriksen and Goldthorpe 1992; Xie 1992). This model captures a uniform increase or decline in the odds-ratios of the mobility table, that is, it allows the mobility patterns to change over time in a uniform way.

Then follow three variations of Goodman's log-multiplicative association model (Goodman 1979*a*; Ganzeboom et al. 1989). Central to this model is the scaled association parameter (*U*) based on optimal scaling of the origin and destination classes.[128] In addition a set of immobility parameters are defined, IMM_i, one for each class. In Model 4 both the *U* and the immobility parameters are constant; in Model 5, IMM_i may vary over the time-points; and in Model 6, *U* may vary.

The last set of models (7–10) contains variations of the core model of Erikson and Goldthorpe (1992). In Model 7, all eight core-parameters are constrained to be constant across the three time-points. In Model 8, all core-parameters are allowed to vary, in Model 9 the two hierarchy parameters are allowed to vary, and in Model 10, only HI1, the first hierarchy parameter may vary across time-points.

The first six models will be estimated for three versions of the EGP class schema: the nine-class version in Table 10.1, the Norwegian seven-class version, and the standard seven-class version of EGP (Erikson and Goldthorpe 1992). The core models (7–10) will only be estimated for the latter class schema.

There are two reasons to adopt a separate Norwegian seven-class version. First, classes I and II are kept separate because combined they are not very exclusive, containing about one third of the net sample in 1995. Second, class VIIb (workers in primary sector) is almost non-existent in Norway, and it is merged with class IVc. In both seven-class versions, classes IIIa and IIIb (routine non-manual) are merged for men, while IIIb is merged with VIIa for the women.

Let us start by commenting on the fit statistics for the models for men in Table 10.4.[129] The first panel contains the results from analysing mobility tables based on the nine-class version. The various fit statistics suggest different best fitting models. G^2 singles out Model 3 with a uniform change in social mobility as the best fitting one. On the other hand, the bic statistic favours Model 4, the scaled association model with constant fluidity parameters, with Model 6,

[128] The origin and destination classes are scaled differently, but the class scores are constant across the three time-points.

[129] The models are estimated by means of GLIM (core models), and by means of LEM developed by J. K. Vermunt, using a set of macros written by Louis-André Vallet, who kindly provided me with them.

where the scaled association parameter is allowed to vary, close at its heels. Therefore, my strategy is to test the differences in G^2 (or $-2 \times$ log likelihood) between models of each type where social fluidity parameters are constrained to be constant in one model, and allowed to vary in another. The results of these tests are that Model 3 is a significant improvement over Model 2 and Model 6 represents a significant improvement upon Model 4. The probability levels are actually reported in Table 10.4 together with some parameter estimates. On the other hand, the test is negative as regards the immobility parameters. I take this as an indication that the immobility parameters are largely constant in the period, but that the parameters tapping vertical social mobility may have changed in the direction of increasing social fluidity.

A short description of the results, based upon both seven-class versions of the EGP class schema, is that the first six models largely parallel those for the nine-class version already described. Let us therefore comment only on the core models (7–10). None of the core models fit satisfactorily in terms of the probability value of the G^2 statistic. The two best ones in terms of the bic statistic are Model 7 with constant core parameters (bic = −686.1), and Model 10 where HI1 may vary across the three time-points (bic = −678.6). Applying the same reasoning as above, the test of the differences in the G^2 statistic for the two models indicates that Model 10 is to be preferred over Model 7, that is, that HI1 varies across the time-points. Other models fitted (but not displayed here) would have revealed that the remaining core parameters are largely constant.

Table 10.5 has an identical structure to Table 10.4 and describes the results for women. The pattern in the fit statistics is largely as for men. Among models 1–6, Model 3 is best in terms of the G^2 statistic, and Model 4, closely followed by Model 6, is the favourite in terms of the lowest bic-value.

In terms of the probability value of the G^2 statistic, the core models do only marginally better for women than for men. Among the core models, the one with constant parameters (7) has the best bic-value, followed by Model 10 where the first hierarchy parameter is allowed to vary from 1973 to 1995. We will return to tests of differences between pairs of models below, but the evidence for change in social fluidity is weaker for women than for men.

The results in Table 10.4 and 10.5 are not open to an unambiguous interpretation. There are pieces of evidence for both constancy as well as changes in social fluidity in the direction of more openness. To help decide between them Table 10.6 presents parameters that may have changed in the period studied. Each row shows the parameter values across time, with a final entry which reports the probability value of the difference in G^2. The note at the bottom of the table shows which models are compared in each test.

In the first panel, the Unidiff parameters are presented. The parameter for 1973, the reference year, is set to 1. The Unidiff parameters for the mobility tables based on the three versions of EGP-classes tell the same story: in all

TABLE 10.6.*Parameter estimates for some of the models in Tables10.4–10.5*[a]

	1973	1982	1995	*p*[b]
Unidiff parameters (Model 4)				
Men nine classes	1.000	0.696	0.846	.003
Men seven classes, Norwegian	1.000	0.741	0.861	.027
Men seven classes	1.000	0.765	0.879	.043
Women nine classes	1.000	0.720	0.699	.064
Women seven classes, Norwegian	1.000	0.735	0.665	.047
Women seven classes	1.000	0.834	0.705	.123
Uniform association parameters (Model 12)				
Men nine classes	4.546	2.410	2.929	.009
Men seven classes, Norwegian	2.622	1.522	1.897	.049
Men seven classes	5.544	2.899	2.979	.002
Women nine classes	7.254	3.081	3.917	.001
Women seven classes, Norwegian	3.180	2.270	2.037	.091
Women seven classes	5.043	2.294	1.080	.001
HI1 core parameter (Model 10)				
Men seven classes	−0.295	−0.043	−0.043	.009
Women seven classes	−0.321	−0.023	0.019	.005
Constant core-parameters (Model 7)[c]	Men		Women	
	B	s.e.	B	s.e.
HI1—Hierarchy effect +	−0.103**	0.051	−0.050	0.057
HI2—Hierarchy effect 2	−0.145**	0.070	−0.259****	0.078
IN1—Inheritance effect +	0.518****	0.063	0.128	0.090
IN2—Inheritance effect 2	0.327****	0.097	0.462****	0.119
IN3—Inheritance effect 3	0.932****	0.273	0.091	0.386
SE—Sector effect	−0.697****	0.108	−0.660****	0.110
AF1—Affinity +	−0.265	0.214	−0.151	0.233
AF2—Affinity 2	0.280****	0.043	0.092*	0.051

[a] The models are defined in Tables + 0.4–10.5.

[b] *p*: overall probability value computed from differences in −2 × log likelihood between the following models:*Unidiff,* Models 2 and 3;*uniform association,* Models 4 and 6;*core model,* Models 7 and + 0.

[c] Probability values are indicated in this way: $^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$, $^{****}p < .001$.

versions, each set of parameters is statistically significant, and each shows a decline. Compared to 1 in 1973, the typical value for 1982 is around 0.74 and around 0.85 in 1995. Since, 1982 has the lowest value, the pattern does not seem linear, but it definitely indicates a decline from 1973.

For women, the argument for change in the first set of models is weaker. The probability values for the nine-class, the Norwegian seven-class, and

the standard seven-class mobility tables are: 0.064, 0.049, and 0.123. The actual changes in the parameter estimates are, however, even stronger for women than for men, and the estimates decline in a more linear fashion. Since the number of cases is much smaller for women than for men, the marginal statistical significance may be due to lack of statistical power.

Let us turn to the scaled association parameters in panel 2 of Table 10.6. We first note that all three sets of parameters are statistically significant at the 0.05 level for men, and for two out of the three sets for women. The parameter estimates for all three time-points are given in the table. 1973 has the highest value in all sets and, for men, 1982 has the lowest value with a weak rise from 1982 to 1995. The latter difference is too small to be statistically significant. For women the reduction in the origin by destination association is more gradual. The actual levels of the association differ somewhat, depending upon the version of the class schema.

The next panel contains estimates of HI1, the first hierarchy core-parameter. For both men and women the results are similar: the changes across time are significant, and the negative coefficients in 1973 are reduced to almost zero in 1982 and 1995.

The final panel of the table presents the estimates from Model 7, where the core-parameters are constrained to be constant across the three time-points. There are some sex differences: the second hierarchy effect is stronger for women than for men, whereas the opposite is the case for the first and the third inheritance effect.

Discussion

I will start by summarising the main findings. The class structure has changed in the period from 1973 to 1995. The service class has expanded at the expense of farmers and the working class, especially unskilled workers. Whereas men are more spread among the classes, women are concentrated in the lower service class and in class IIIb, routine non-manual work. This is also an indication of pervasive sex segregation in work, which shows few signs of weakening.

The analysis of absolute intergenerational social mobility by means of mobility tables showed that advantaged origins still mattered in 1995. The chances of entering the service classes were much higher for respondents with a background in the service class than for respondents having working class fathers. For women two destinations dominate, irrespective of origins: classes II and IIIb. The mobility statistics showed that the changes in social mobility in Norway over the period 1973–95 are small. Total social mobility has been constant or weakly rising over the period studied, and the sex differences in total mobility are small. Most social mobility is short range, and long-range downward mobility is rare, especially among men.

The fit statistics do not unequivocally favour the sets of models with stability in social fluidity or the sets of models where social fluidity is allowed to change over time. The tests of differences in fit statistics (G^2) between models with and without change parameters, are, however, relatively unanimous in supporting an interpretation in the direction of increased social fluidity, especially for Norwegian men. The main tendencies are largely independent of the version of the class schema adopted, and show a decline in the hierarchical barriers, whether measured by the Unidiff parameters, the scaled association parameter, or the HI1 parameter from the core model. These results support the finding in Ringdal (1994), from another set of surveys, of an increase in social fluidity since the middle of the 1960s based on a decline in the scaled association parameter.

I will end by discussing the relevance of the findings in a normative perspective (Swift 2000). A main motivation for studying social mobility is to address the question of inequalities in rewards. One may distinguish between inequalities in access to positions and inequalities in rewards from positions. Both types of inequalities may be described in absolute or relative terms. Analyses of observed or absolute social mobility in Norway show a weak improvement, mainly due to the expansion at the top of the occupational structure. If inequalities of access are to be defined in relative terms, the analyses reported here show increasing social fluidity. Another way to describe class inequalities is in terms of material rewards such as income. In this respect, Norway, along with the other Scandinavian welfare states, displays a very low level of inequality compared to other western societies, although there are signs of increasing income inequality in the 1990s.

In conclusion, Norway is a country with relatively small inequalities in rewards from positions. The access to rewarded positions has become easier for all due to the expansion of the service class. However the analyses of both absolute and relative social mobility show that, despite educational expansion, privileged social background is still important in Norway, although this study points to a weakening of the association between origins and destinations between 1973 and 1995.

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11 Intergenerational Mobility in Poland: 1972–88–94

Bogdan W. Mach

Social mobility has always been a problem in post-war state-socialist Poland—sensitive socially as well as politically. In an influential paper, 'Social Mobility Brought about by Social Revolution',[130] Stanislaw Ossowski suggested that the high amount of intergenerational mobility characteristic of post-war state-socialist Poland could have as well been achieved had the country participated in the Marshall Plan and entered the western trajectory of economic development in the mid-1940s. The remark by Ossowski was cited by Lipset and Bendix (1959: 282) but disappeared in the 1964 Polish edition of their book and cannot be found in Ossowski's Collected Works published in Poland in 1967. Irrespective of whether it was 'Marshall Plan' or 'social mobility' that caught the eye of a censorship clerk, this story illustrates that, to a large extent, the upward intergenerational social mobility found in post-war Poland cannot be understood without being placed in the context of the ideology-driven 'socialist industrialisation' project. Although we do not know what would have happened to mobility had the Marshall Plan covered Poland, many studies of social mobility carried out in Poland document what actually happened to mobility there under state socialism. These studies have resulted in the following main findings.

First, 'socialist industrialisation' sponsored by vigorous state social policies induced, in the late 1940s and the 1950s, a very substantial amount of upward mobility and led to very high rates of absolute mobility. Among men this did not persist into later periods (Andorka and

[130] The paper was presented at the Fourth Working Conference of the Research Committee on Social Stratification and Mobility of the International Sociological Association in Geneva in December 1957.

Zagórski 1980; Pohoski and Mach 1988) but female mobility continued to increase in the 1970s and 1980s (Zagórski 1976; Pohoski and Mach 1988). Second, most of the mobility found in Polish society thus far has been structural mobility. Andorka and Zagórski (1980) stress the role of structural factors as the most important in explaining high levels of mobility under state socialism.[131] Structural changes in the occupational distributions of women have been especially singled out as the most important source of female mobility and of its continuous increase over the long span of state-socialist development in Poland (Pohoski 1984; Zagórski 1978). Third, an array of studies documents the temporal stability of relative mobility rates in state-socialist Poland. Analysing nine countries, Erikson and Goldthorpe (1992) have found that in the 1970s the constant social fluidity model performed best in Poland. Temporal stability of relative rates was also reported by Haller and Mach (1984), Pohoski and Mach (1988), Pohoski (1984), and Domanski (1989) in their analyses of various Polish datasets.

In comparison to western patterns, relative mobility in state-socialist Poland was characterised by extremely low effects of the hierarchy of occupational categories, relatively weak effects of the divide between agricultural and non-agricultural classes, and very strong inheritance effects—in the case of the service class and owners outside agriculture (Erikson and Goldthorpe 1992: 161).[132] It was also different from the west in displaying low affinity between higher and lower non-manual workers and high affinity between the service class and both the skilled and non-skilled divisions of the working class—features which invited Erikson and Goldthorpe to modify the design matrix for their 'core' affinity effects when working with Polish data from the early 1970s (1992: 160).

Fourth, many studies show that the effects of social background on educational attainment have remained relatively stable over extended periods in Poland with a slight increase in inequality of educational opportunity taking place in the 1990s (Mach and Peschar 1990; Heyns and Bialecki 1993; Ganzeboom and Nieuwbeerta 1999; Domanski 2000). Consequently, in Poland education, in its function as an individually owned mobility-relevant asset, was not a factor capable of producing a significant temporal change in patterns of relative intergenerational mobility. The stability of these patterns, mentioned earlier, can be at least partially explained by that.

Trying to systematise further our knowledge of temporal patterns of mobility in Poland, in this chapter we investigate changes in intergenerational mobility in the long period including post-state-socialist developments, defined by three time-points: 1972, 1988, and 1994. Although the choice of time-points has been dictated by the availability of high-quality datasets, they

[131] Referring to the outflow from the group of manual workers into the category of managers and specialists, they state for example '… the highest social mobility from the working class to the group of managers took place at the time [in the 50s] of the greatest tendency to inherit social status to be observed among the latter group. It would mean that shaping of the processes of social mobility from and to the group of managers and specialists was greatly influenced by the structural mobility connected with a growth of the demand for certain occupations.' (1980: 92–4)

[132] Results summarised in this paragraph refer to the intergenerational mobility of men.

nevertheless represent a meaningful time triad. The period 1971–2 can be justifiably described as the end of ideology-driven state socialism. With the pragmatically oriented Edward Gierek coming to power late in 1970, the Polish economy and society started to be rather freely exposed to western economic, political, and cultural developments—the state-socialist modernization project embarked on limited market-type economic reforms and more pluralism in politics and culture. While 1971–2 represents the end of a particular 'classical' or ideological form of state socialism, 1988 represents simply the end of state socialism in Poland. This happened seven years after the bitter experience of Martial Law, imposed on the society in December 1981, which only temporarily and ineffectively slowed the demise of state socialism. The year 1994, in turn, can be best described as the end of the first phase of post-state-socialist transition to the market and democracy. Macroeconomic and social indicators clearly separate the 1988–93 'creative destruction' period from the more consolidated development characteristic of later years.[133]

Research hypotheses

Although the main research findings summarised in the first section suggest a number of general factors shaping mobility in Poland, it would be difficult to formulate hypotheses about mobility in the period 1972–94 without a systematic discussion of societal long-term, mobility-related trends. Most sociological discourse on these trends concentrates on (1) economic growth; (2) changes in occupational and sectoral structures; (3) educational expansion; (4) increasing rates of labour force participation by women; and (5) direct and indirect political interventions, as factors possibly influencing both absolute and relative mobility rates (Erikson and Goldthorpe 1992). How, thus, were these factors operating in Poland in the period 1972–98?

To begin with, it must be noted that the above period was characterised by constant ups and downs in Polish economic development with a miserable start-to-end balance (see Fig. 11.A1 in the appendix to this chapter, based on our own calculations using data from Statistical Yearbooks). How economic change of that type affects occupational structure and intergenerational mobility is not clear. Related theorising on the positive impact of economic development deals with long-lasting periods of stabilised (even if moderate) growth. Is it possible to argue that under long-lasting conditions of multiple, reoccurring economic breakdowns, even short periods of recovery can significantly influence mobility? We do not know, but it seems that the observed 1972–88–94 changes in occupational structure (which we document below)

[133] Because 1972, 1988, and 1994 so clearly refer to distinct socio-political environments, no attempt will be made in this chapter to introduce linear trends in the models employed here.

as well as changes in the shares of particular industries in the total labour force (Mach and Slomczynski 1995) can hardly be described as trends that systematically make room for upward mobility and more equality of opportunity in Poland.

The period 1972–94 in Poland does not fit the idea of a general educational shift. University enrollment rates which, after a long period of stagnation and decline, started to grow only recently (see Fig. 11.A2 in the appendix, based on our own calculations using data from Statistical Yearbooks) and inequality of educational opportunities at the level of tertiary education, which had not reduced over more than thirty years, cannot be seen as factors capable of leading to positive mobility outcomes.[134]

Changes in income inequality and wage differentials could have influenced mobility patterns—especially through the very narrow manual–non-manual labour wage differentials and via growing income and wealth inequality in the 1990s. It is too early to document possible effects of the latter. As far as the former is concerned, it has been argued (Wesolowski and Mach 1986) that low wage differentials resulted less in improving the working class's assets to 'conquer' the professional world for their children and more in making mobility into this world unattractive for working class sons—both in terms of possible income gains and possible losses of cultural identity (Wesolowski and Mach 1986).

As far as specific, mobility-oriented, and mobility-enhancing social policies are concerned, the record of subsequent Polish governments (or regimes) in the 1970s, 1980s, and 1990s is rather unimpressive. The practical withdrawal of the government from all effective measures imposing quota systems favouring children of manual and farm backgrounds among university students may be an example (Bialecki 1996).[135]

Labour force participation indices[136] have long been declining in Poland for both men and women. In 1970 the participation rate for men was 76.4 percent: this declined to 73.7 in 1980, 72.5 in 1988, and 57.8 percent in 1995. The comparable figures for women are 61.1, 58.4, 54.4, and 45.4 percent. In contrast to

[134] For this reason education will be paid only lip service in the analyses presented in this chapter and, in order not to make analyses too complex, will not be introduced into the models employed here. We are of the opinion that education should be brought into any modeling exercise only after class I has been separated from class II, especially among women. This is not possible with the data at hand but will be done on another occasion.

[135] One illustration of how powerful political action can be in influencing mobility patterns is given by Andorka and Zagórski (1980). They report that among sons of managers and specialists who entered the labour market in 1945–9, in Hungary 68 percent had become managers or specialists by the early 1970s compared with 53 percent in Poland. But the comparable percentages for those entering the labour force in the years 1950–4 were 25 percent and 45 percent in Hungary and Poland respectively. There is no doubt that, faced with very heavy war losses among the intelligentsia, the Polish Communist government which consolidated its rule only by the late 1940s was not able or willing to act as radically against the 'old class' of the intelligentsia as was the Hungarian Communist government.

[136] Defined here as the number of persons in the labour force divided by the number of persons aged fifteen and over.

western developments in which increases in labour force participation led to increases in mobility (female mobility in particular), Polish developments leave, thus, no hope for positive mobility outcomes usually associated with changing levels of labor force participation.

In sum, we cannot expect to find a consistent trend toward rising upward mobility and an increase in equality of social opportunity. We expect rather that the 1970s and the 1980s did not change much with respect to mobility, and that the trial-and-error transformations of the 1990s resulted in negative mobility outcomes—these being an increase in downward mobility and possibly inequality-prone changes in relative mobility rates.[137] We also expect, however, that the Polish post-1970s pattern of intergenerational mobility has come to resemble more and more the patterns characteristic of western Europe. Even if processes affecting intergenerational mobility need a long time to unfold in their consequences, the radicalism of social change in eastern and central Europe in the 1990s must have already affected mobility there and these effects possibly brought Poland, and other post-socialist countries, closer to western patterns. Such a 'bringing back' of hierarchical effects into eastern and central Europe could be considered one of the most spectacular effects of the reintroduction of capitalism to that part of the continent. It may also be that the opening to the west in the 1970s and the ineffectiveness of attempts to halt this in the 1980s (such as the imposition of Martial Law) worked in the same direction. The 1990s may, thus, have seen only a strengthening of what happened in the 1970s and 1980s.

Taking the above into account, in the analysis we operate in a framework which is both exploratory and confirmatory. While mobility patterns under late state socialism in Poland are still uncharted waters inviting exploration, the confirmatory component of this analysis builds on the expectation that both the late developments in Polish state socialism and the early developments in the transition to capitalism brought Polish mobility patterns closer to the west European core described by Erikson and Goldthorpe (1992).

Data and measurements

The 1972 data are from Zagórski (1976). In the current analysis, we use the 1972 data as prepared by Erikson and Goldthorpe (1992). The 1988 data are from the study 'Social Structure II' carried out at the Institute of Philosophy and Sociology (Polish Academy of Sciences) by a team of researchers headed by Kazimierz M. Slomczynki (Slomczynski et al. 1989). The 1994 data are from the project 'Social Stratification in Eastern Europe' headed by Donald J. Treiman and Ivan Szelenyi.

[137] First results from the 1990s suggest a decline in both male and female total absolute mobility between the late 1980s and the late 1990s and stability of relative mobility rates between these dates (Domanski 2000).

All three surveys provide high-quality datasets collected with strong emphasis on quality control.[138] Analysing them in this chapter we use the seven-class Erikson–Goldthorpe class schema: I + II, III, IVab, IVc, V + VI, VIIa, VIIb.[139] In the analysis we include only men and women in the age bracket 20–64. In 1972 only individuals having a job were included in the sample. In the 1988 data, economically inactive persons were included (though no one was unemployed in Poland under state socialism) but we have omitted them from our analyses in order to preserve comparability with the 1972 data. In the 1994 data (which includes economically inactive and unemployed people) we do the analyses twice: excluding the unemployed and those not working (results marked with A), and with the unemployed classified according to their last occupation (results marked with B).[140]

Class of origin is indexed by the respondent's father's class position, though this refers to different points in the respondent's life. In the 1988 and 1994 data it relates to when the respondent was aged fourteen, but in the 1972 data to the point at which the respondent began his or her first job.

In the LEM input data, the Ns for Zagórski's tables (the 1972 data containing more than 70,000 cases) were standardised (separately for men and women) to the Ns from the second large dataset (1988 data). A few zero cells in the LEM input data were replaced with ones. Absolute rates and distributions for 1972 (Table 11.1–11.6) relate, however, to the original mobility tables.

Analysis

We start with absolute rates and distributions in order to get a basic sense of aggregated changes. Next, moving to relative mobility, we test the constant fluidity model CnSF and the uniform difference (Unidiff) model. In the last step we check if the results of previous analyses can be meaningfully supplemented with results from fitting the core topological mobility models of Erikson and Goldthorpe (1992).

[138] Response rates were 90 percent in 1972 (Zagórski 1976: 23), 76 percent in 1988, and 72 percent in 1994.

[139] Three different occupational classifications were used in the data analysed in this chapter. All are very detailed with several hundreds of occupational titles—but they are different. Zagórski (the 1972 study) used the GUS (Central Statistical Office) classification which since then has never been used in sociological studies in Poland. The 1988 study employed SKZ (Social Classification of Occupations) which is a national standard in academic sociological studies. The 1994 Treiman and Szelenyi study coded occupations into ISCO codes. Erikson and Goldthorpe recoded the 1972 data into EGP categories. Mach did the same job for the 1988 data using 1988 occupational titles. Recoding of 1994 ISCO-codes was done by Ganzeboom and Treiman. The problem of comparability of datasets is thus important in the Polish data. In our opinion the coding of the skilled/unskilled worker distinction may not be wholly comparable across studies. Making a comparable class I/class II distinction (especially among women) in these three datasets raises problems too.

[140] The differences between both series of results proved to be negligible and will not be described in detail later.

TABLE 11.1.*Class origins of men (M) and women (W) (percentages by row)*

Year	I + II		III		IVa + b		IVc		V + VI		VIIa		VIIb	
M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Class and Gender														
1972	7	9	2	3	3	3	53	56	18	16	12	11	4	3
1988	14	14	3	3	4	4	38	38	22	21	16	17	3	4
1994—A	14	13	3	4	6	6	31	31	21	23	22	20	4	4
1994—B	14	13	3	4	6	6	30	30	21	24	22	20	4	4

TABLE 11.2.*Class destinations of men (M) and women (W) (percentages by row)*

Year	I + II	III	IVa + b	IVc	V + VI	VIIa	VIIb							
	M	W	M	W	M	W	M	W	M	W	M	W	M	W
Distributions by Class and Gender														
1972	18	19	3	15	2	2	25	40	31	7	19	15	3	1
1988	22	32	3	18	5	2	18	22	32	9	17	17	2	1
1994—A	19	26	5	30	13	6	12	13	29	10	20	13	3	2
1994—B	18	24	5	31	12	6	11	11	30	11	22	15	3	2

1972–88		1988–94		1972–94	
A table, 1994		B table, 1994		A table, 1994	B table, 1994
Dissimilarity Indices between origins and destinations					
Men	9	15	13	15	16
Women	20	21	19	29	29

Table 11.1 and 11.2 present changes in the temporal distributions of origins and destinations.[141] For 1994 we present two percentages: with the unemployed left out of the analysis (A), and with the unemployed classified according to their last occupation (B).[142]

The most spectacular change as far as class origins are concerned is a very pronounced decline in the representation of farm backgrounds (from more than 50 percent to some 30 percent). All other changes in the distribution of origins seem to be modest in comparison to this one.

Changes in the distribution of destinations are more interesting. Among men the share of the skilled working class remained stable during the last 15–16 years of state socialism before it started to decrease in the early 1990s after the

[141] Based on actual mobility tables.

[142] On the condition they had a job in the period 1989 to 1994.

socio-political change. This change increased the share of the unskilled segment of that class (which diminished only slightly between 1972 and 1988). The continuous rise of the class of owners, the decrease of the class of farmers, and a post-1988 drop in the share of the service class (which had already reached its maximum in the early 1970s with the growing bureaucratisation of the economy and public life) are very noticeable. The two most important differences between men and women are found in the steeper decline in the class of female farmers between 1972 and 1988, and a profound increase in female class III employment between 1988 and 1994. Both these changes should be interpreted as indicating more room for (structural) mobility for women than for men.

The male–female dissimilarity in destination distributions was 30 percent in 1972, it dropped slightly to 28 percent in 1988, and rose again to 34 percent in 1994 (A). In time, thus, these two distributions diverge rather than come together, implying an increase rather than a decrease in occupational sex segregation. Temporal changes in the destination distributions of men were at the same time less pronounced than among women. The dissimilarity indices reported in Table 11.2 illustrate this.

Moving to absolute mobility rates, in Table 11.3 and 11.4 we note some marked differences between the mobility of men and women. Except for an increase in downward mobility[143] (from 8 to 12 percent), there were no significant changes in the absolute rates of male mobility between the end of 'pure'

TABLE 11.3.*Total, non-vertical, vertical, upward, and downward mobility rates among men (percentages)*

Year	Total	Non-vertical	Vertical	Upward	Downward
1972	59	16	43	35	8
1988	61	13	48	36	12
1994—A	67	16	51	38	14
1994—B	68	16	52	37	15

TABLE 11.4.*Total, non-vertical, vertical, upward, and downward mobility rates among women (percentages)*

Year	Total	Non-vertical	Vertical	Upward	Downward
1972	53	15	38	30	8
1988	67	17	50	40	10
1994—A	77	20	56	45	12
1994—B	77	20	57	44	13

[143] Downward and upward mobility are defined using the following hierarchy: 3 = Class I + II, 1 = Classes VIIa and VIIb, 2 = the rest. Moving from the lower to higher number defines upward mobility and vice versa for downward. Vertical mobility is the sum of upward and downward mobility. Vertical and non-vertical mobility are added to give the total mobility rate.

state socialism and the end of state socialism (Table 11.3). As expected, mobility rose solidly during the turmoil period of dismantling state socialism and implementing post-state-socialist capitalism. Total mobility increased from 59 percent in 1972 and 61 percent in 1988 to 67 percent (68 percent if the unemployed in 1994 are classified according to their last job). A further increase in the rate of downward mobility (to 14–15 percent in 1994) and no change in upward mobility were the most pronounced developments of the early 1990s. The state socialism of the 1970s and the 1980s not only did not increase the amount of upward mobility—it pushed up the rate of downward mobility. Early capitalism did the same.

The temporal pattern of female mobility differs from that of men. Rates of total and of upward mobility were increasing under conditions of late state socialism between 1972 and 1988 as well as after the socio-political change of 1989. Female total mobility increased from 54 percent in 1972 (lagging at that time firmly behind the male ratio) to 67 percent in 1988 and 77 percent in 1994—the last two dates being significantly higher than among men. Female changes in upward mobility perfectly mirror the above tendency. Only a continuous increase in downward mobility is what makes the trend in female mobility resemble the male one. This increase is, nevertheless, somewhat less pronounced among women.

Such changes are documented in greater detail in male and female outflow mobility tables (Table 11.5 and 11.6).

Among men, the outflow from the working class into the service class, which remained unchanged between 1972 and 1988, had shrunk visibly in 1994, suggesting a possible increase in inequality of opportunity during the first phase of post-state-socialist development. The continuous 1972–1988–1994 decrease in intergenerational outflows from the service class into the class of skilled workers—which, among men, had been a characteristic feature of the state-socialist mobility pattern for many years—may even imply that at least among men one important mobility route for achieving greater equality had already started getting clogged under state socialism.[144] Interestingly enough, with the outflow from the category of farmers into the service class being constant over time, the hint at the hardening of the divide between the service class and the world of manual labor seems to apply solely to non-agricultural classes.

Inspecting detailed outflows in Table 11.6 we see that among women the working class outflow into the service class also shows a different pattern from the male one. It increased between 1972 and 1988 then started to drop after the end of state socialism. The same pattern is even more visibly reproduced in the outflow from the lower non-manual category into the service class. It seems that in the case of women, state socialism until its very end

[144] A decrease in male mobility between the service class and the working class occurred in spite of steadily declining immobility in the two classes—this decline being absorbed in both of them mostly by an increasing outflow into self-employment.

TABLE 11.5.*Intergenerational mobility of men in 1972 (first row), in 1988 (second row), in 1994 with unemployed left out of the analysis (third row), and in 1994 with unemployed classified according to their last job (fourth row), outflow percentages*

Origin	Destination							
	I + II	III	IVa + b	IVc	V + VI	VIIa	VIIb	N
I + II	60.0	1.4	1.4	1.1	25.2	10.0	0.8	2,370
	52.5	5.7	5.7	5.3	20.1	10.4	0.3	318
	41.5	8.9	18.5	1.5	16.3	11.1	2.2	135
	40.9	9.4	18.1	1.3	17.4	10.7	2.0	149
III	21.1	3.3	1.8	3.0	41.2	25.7	3.9	738
	31.7	8.3	3.3	3.3	38.3	11.7	3.3	60
	37.0	3.7	18.5	0.0	29.6	11.1	0.0	27
	34.5	3.4	17.2	0.0	31.0	13.8	0.0	29
IVa + b	27.2	2.9	11.7	8.3	29.6	19.2	1.1	882
	28.0	3.2	16.1	10.8	21.5	20.4	0.0	93
	28.1	3.5	22.8	5.3	22.8	12.3	5.3	57
	27.0	3.2	20.6	4.8	22.2	17.5	4.8	63
IVc	10.8	2.5	1.5	42.5	21.3	18.2	3.3	17,059
	11.5	1.4	3.3	40.3	25.5	15.4	2.5	838
	11.6	3.3	8.3	32.0	25.7	15.5	3.6	30
	10.9	3.4	8.4	30.8	26.2	15.9	4.4	321
V + VI	21.6	2.3	1.6	2.8	51.5	19.0	1.2	5,793
	21.7	4.2	5.4	3.3	48.6	15.4	1.3	479
	16.7	5.7	12.9	1.0	42.1	20.6	1.0	209
	15.6	6.1	12.6	0.9	39.8	23.8	1.3	231
VIIa	19.0	2.6	1.6	3.9	44.3	26.6	2.0	3,843
	20.8	2.2	4.2	5.3	38.5	27.7	1.4	361
	14.2	3.8	13.3	3.3	32.2	30.8	2.4	211
	12.6	4.2	12.2	2.9	34.5	31.5	2.1	238
VIIb	9.4	4.3	1.2	14.8	29.1	25.2	15.9	1,315
	9.6	5.5	5.5	8.2	35.6	17.8	17.8	73
	2.4	2.4	2.4	12.2	24.4	43.9	12.2	41
	2.2	2.2	2.2	10.9	28.3	43.4	10.9	46

made room for increases in equality of opportunity. A significant 1972–88 increase in the outflow of farmers' daughters into the service class tells the same story. Interestingly, this outflow did not drop after the socio-political change. Considering the 1972–88–94 stability of this outflow in the male population mentioned in the preceding paragraph, one is tempted to conclude that, unlike the case of working class children, the outflow of farmers'

TABLE 11.6.*Intergenerational mobility of women in 1972 (first row), in 1988 (second row), in 1994 with unemployed left out of the analysis (third row), and in 1994 with unemployed classified according to their last job (fourth row), outflow percentages*

Origin	Destination							
	I + II	III	IVa + b	IVc	V + VI	VIIa	VIIb	N
I + II	61.0	23.8	2.1	3.2	3.6	6.2	0.1	2,485
	64.1	17.6	2.8	3.9	4.6	7.0	0.0	284
	48.6	32.4	8.6	1.0	4.8	4.8	0.0	105
	47.1	34.5	7.6	0.8	5.0	5.0	0.0	119
III	32.1	22.4	2.6	8.7	10.5	22.3	1.4	732
	50.8	25.4	1.6	3.2	3.2	15.9	0.0	63
	27.0	48.6	8.1	0.0	2.7	13.5	0.0	37
	25.0	47.5	7.5	0.0	2.5	17.5	0.0	40
IVa + b	31.0	21.5	6.1	17.6	7.4	15.8	0.6	726
	35.4	17.7	5.1	11.4	10.1	20.3	0.0	79
	17.0	44.7	8.5	4.3	14.9	10.6	0.0	47
	14.0	43.9	8.8	3.5	17.5	12.3	0.0	57
IVc	8.8	8.6	1.8	63.3	5.4	10.7	1.3	16,483
	18.6	13.1	0.9	42.9	6.5	17.1	0.9	779
	22.0	18.5	5.4	27.4	11.6	10.8	4.2	259
	20.6	20.6	5.3	25.2	12.6	12.8	3.9	282
V + VI	28.0	23.7	3.0	10.1	12.2	22.3	0.8	4,821
	33.3	25.4	2.6	7.5	13.8	17.1	0.2	426
	25.5	32.4	5.9	6.4	12.2	17.0	0.5	188
	22.7	32.0	5.3	5.3	15.1	18.2	1.3	225
VIIa	24.3	22.1	2.4	10.9	12.2	26.9	1.2	3,189
	31.4	19.8	1.5	9.2	13.6	24.3	0.3	338
	22.1	37.4	4.9	6.7	8.0	17.2	3.7	163
	20.6	37.6	5.3	5.8	9.0	18.5	3.2	189
VIIb	9.1	14.0	2.1	36.1	7.9	23.9	6.9	913
	23.3	11.0	0.0	27.4	11.0	23.3	4.1	73
	19.4	19.4	5.6	27.8	5.6	19.4	2.8	36
	17.5	20.0	5.0	25.0	7.5	22.5	2.5	40

children into the service class was increasing or at least not deteriorating both under state socialism and on the way out of it.[145]

Let us examine the relative mobility rates, controlling for structural changes which might have caused most of the trends described thus far.

[145] It must be remembered however that expansion of class I + II among women increased all outflows into that class. Structural change seems, thus, to be behind most of the positive mobility outcomes referred to here.

Can CnSF models be accepted? Do the Unidiff models improve the fit? What insights do the core-type topological models of Erikson and Goldthorpe (1992) bring? We answer these questions in Table 11.7 to 11.10 and in the appendix.

Men 1972–88–94 Constant fluidity over the three time points accounts for 95.3 percent of the baseline G^2 and misclassifies 3.7 percent of cases. The Unidiff model does not improve the fit (2.80, 2 d.f.). The CnSF model is, thus, preferred over the Unidiff one.

In the next rows of Table 11.7 we present the fit of various versions of core models. The idea behind this exercise is twofold. First, we want to ascertain the extent to which 'the return to the core' tendency can be found in the

TABLE 11.7. *Results of fitting the CnSF, the Unidiff, and various core models with temporally changing parameters, in 1994, unemployed classified according to their last occupation, sample size* = 5,526, *men*

	G^2	d.f.	*p*	rG^2	Δ	bic
Conditional independence	1777.16	108	.00		21.5	846.50
Constant social fluidity	83.78	72	.16	95.3	3.7	−536.66
Uniform difference	80.98	70	.17	95.4	3.5	−522.22
Core: EG Polish design in 1972, 1988, and 1994	128.95	84	.00	92.7	4.0	−594.89
Core: EG Polish design in 1972 and 1988, return to the core in 1994	116.26	84	.01	93.5	3.9	−607.58
Core: EG Polish design in 1972, no more service class–working class affinity in 1988, return to the core in 1994	113.31	84	.02	93.6	4.0	−610.54
Core: EG Polish design in 1972, emerging affinity between higher and lower non-manual classes in 1988,return to the core in 1994	111.52	84	.02	93.7	3.8	−612.32
Core: EG Polish design in 1972, return to the corealready in 1988	109.10	84	.03	93.9	3.9	−614.75
Core: EG Polish design in 1972, return to the core alreadyin 1988, reestimated	109.37	87	.05	93.9	3.9	−640.33

Note: Betas for Unidiff model (with reference parameter for 1972 = 1.000) are: 0.899 in 1988 and 0.931 in 1994. In the last row HI1 effects, which proved to be insignificant for all years, were dropped and the model was re-estimated.

data: that is, the extent to which the unmodified Erikson and Goldthorpe core model of social fluidity provides an adequate fit to the data from the later surveys. Second, we search for the best model which can subsequently be used in estimating hierarchical, sector, and affinity effects for 1972, 1988, and 1994. Although the CnSF could be accepted as a good description of general tendencies in mobility, significant changes in these four effects could show up—and they are of profound interest to us.

From the fourth row we see that the model assuming that the modifications of the core design introduced by Erikson and Goldthorpe (1992) in their analysis of the 1972 Polish data[146] hold in 1988 and 1994 performs poorly. The next model (the fifth row), which assumes that the Erikson and Goldthorpe modifications hold for 1972 and 1988 but that 1994 witnessed 'the return to the core', does a better job. Models in the next two rows postulate that only parts of the Erikson and Goldthorpe 1972 modifications apply to 1988. They perform slightly better than the preceding model. The best choice among core models presented in Table 11.7 is the model in the eighth row. It assumes that the full return to the core had taken place already in 1988.[147] In the last row the fit of this model is recalculated after three non-significant hierarchy effects were removed from the model (see the note to Table 11.7). This model is an acceptable source for tracing possible temporal changes in hierarchy, inheritance, sector, and affinity effects.[148]

Women 1972–88–94. Constant fluidity accounts for 95.1 percent of the baseline G^2 and misclassifies 4.2 percent cases. The Unidiff model significantly improves the fit (G^2 = 14.22, 2 d.f.) and returns the β parameters of 0.813 (1988) and 0.745 (1994) indicating, contrary to the finding for men, a continuing 1972–88–94 significant increase in fluidity.

From the fourth row of Table 11.8 we see that a core model with the male 1972 design matrices does not fit well. The fifth row, however, shows that the core design applied to all three dates produces an acceptable fit. For women, there is, thus, no need to introduce the Erikson–Goldthorpe modifications to the core design not only in 1988 and 1994 but in 1972 as well. If we supply the core model for 1972–88–94 with a small change in the AF1 design matrix

[146] In their design of the AF2 effects they dropped (for males) the affinity between classes I + II and III and added affinity between classes I + II and V + VII, and I + II and VIIa, interpreting these modifications as necessitated by the effectiveness of state-socialist social polices aimed at reducing distances between social classes.

[147] This is consistent with the remark by Goldthorpe and Erikson (1992: 163) that their modifications may no longer be needed in the analyses of Polish data from the 1980s.

[148] We also use this model in estimating structural shift parameters presented in Table 11.A3 in the appendix. We do the same in the analysis of women below—the most preferred core model is used in estimating shift parameters. For men, the most interesting result is that in 1994 mobility into class III and IVab was structurally favoured over mobility into the service class—a result clearly different from 1972 and 1988 and indicating structural change typical of implementing capitalism in the post-state-socialist context. For women mobility into lower non-manual positions has always been structurally favoured over mobility into the service class. As with men, this tendency is especially visible in 1994.

TABLE 11.8.*Results of fitting the CnSF, the Unidiff, and various core models with temporally changing parameters, in 1994, unemployed classified according to their last occupation, sample size* = 5,044, *women*

	G^2	d.f.	p	rG^2	Δ	bic
Conditional independence	1508.01	108	.00		22.1	577.21
Constant social fluidity	73.15	72	.41	95.1	4.2	−540.72
Uniform difference	58.93	70	.83	96.1	3.3	−537.89
Core: EG Polish design in 1972, 1988, and 1994	127.73	84	.00	91.5	4.3	−588.45
Core: Core design in 1972, 1988, and 1994	103.36	84	.07	93.2	3.7	−612.82
Core: Core design in 1972, 1988, and 1994 modified in each year byallowing for negative affinity I + II → V + VII + VIIa and III → V + VI	85.27	84	.44	94.3	3.4	−630.91

Note: Betas for Unidiff model (with reference parameter for 1972 = 1.000) are: 0.813 in 1988 and 0.745 in 1994.

TABLE 11.9.*Parameter estimates of the accepted core model (Core: EG Polish design in 1972, return to the core already in 1988, re-estimated, Table11.7and Table11.A1), significant parameters printed in bold, A = unemployed in 1994 left out of the analysis, B = unemployed in 1994 classified according to their last job (men)*

Year	HI1	HI2	IN1	IN2	IN3	SE	AF1	AF2
1972	n.e.	−0.131	**0.754**	**1.257**	−0.426	**−0.566**	−0.460	**−0.491**
1988	n.e.	**−0.266**	**0.620**	**0.429**	**0.575**	**−0.388**	**−0.869**	**−0.240**
1994—A	n.e.	**−0.299**	**0.597**	0.203	**1.045**	−0.500	−0.808	**0.307**
1994—B	n.e.	**−0.363**	**0.504**	0.305	**1.015**	**−0.509**	−0.801	**0.315**

Note: The HI2 parameter is estimated incrementally to HI1. The IN2 parameter is estimated incrementally to IN1 and the IN3 parameter incrementally to IN2.

n.e. = not estimated.

(see the last row),[149] we get an acceptable model for estimating hierarchy, inheritance, sector, and affinity effects. In Table 11.9 and 11.10 we inspect these effects.

In Table 11.9 we see that HI1 effects are non-existent among men, not only in 1972, as Erikson and Goldthorpe have pointed out, but also in 1988 and

[149] Allowing for negative affinity in the I + II → V + VI, I + II → VIIa, and III → V + VI outflows has a good rationale in the fact that among women in Poland these movements have always represented mobility very much inconsistent with the cultures of the origins in question.

TABLE 11.10. *Parameter estimates of the accepted core model (Core design in 1972, 1988, and 1994 modified in each year by allowing for negative affinity I + II → V + VII + VIIa and III → V + VI, Table11.8and Table11.A2), significant parameters printed in bold, A = unemployed in 1994 left out of the analysis, B = unemployed in 1994 classified according to their last job (women)*

Year	HI1	HI2	IN1	IN2	IN3	SE	AF1	AF2
1972	−0.084	**−0.270**	0.158	**0.833**	0.386	**−0.692**	**−0.533**	**0.247**
1988	**−0.232**	−0.176	0.142	**0.559**	0.178	**−0.698**	−0.360	**0.231**
1994—A	−0.116	0.036	0.074	0.472	0.020	**−0.692**	**−0.778**	0.022
1994—B	−0.087	0.081	0.095	0.536	0.048	**−0.646**	**−0.926**	0.013

Note: The HI2 parameter is estimated incrementally to HI1. The IN2 parameter is estimated incrementally to IN1 and the IN3 parameter incrementally to IN2.

1994. HI2 effects, however, clearly increase in time implying that long-range mobility becomes more and more difficult. Inheritance effects IN1 and IN2, very strong in 1972, significantly decline. The propensity for immobility among farmers (IN3) is rising, however. In comparison to these changes, trends in sector and affinity effects are rather small.

In Table 11.10 we repeat the analysis for women. As far as hierarchy effects are concerned, HI1 effects are insignificant in 1972 and 1994 but the 1994 level implies a decline in this effect after 1988, while the 1988 level implies an increase during the 1980s. HI2 effects are declining both during late state-socialism and during early capitalism. All inheritance effects decline in both periods—including a propensity for immobility among farmers. Sector effects do not change among women and AF2 effects decline in 1994 after being at the same level in 1972 and 1988.

Conclusion

We summarise our results with three points. First, as far as absolute mobility is concerned, for both sexes neither late state-socialist developments nor early capitalist ones decreased downward mobility. Downward mobility increased in fact under late state-socialism as well as under early capitalism. This increase was more profound among men. In terms of upward mobility the position of women seems to be better too. Upward mobility was increasing both in 1972–88 and 1988–94 among women, but remained stable among men. Detailed outflows tell, in general, the same story.

Second, as far as relative mobility is concerned, the general trend among men is no change in fluidity. Among women, however, a clear tendency of

increasing fluidity in both 1972–88 and 1988–94 can be observed. For women, both state socialism and the capitalism of the early 1990s increases fluidity. The difference between men and women is also visible in effects estimated within the core models. For men we can ascertain 'the return to the core' in 1988. For women there was no need to return to the core because already in 1972 the core model fitted well. Moreover, for men 'bringing back' hierarchy effects was generally more effective than for women, while the decline in inheritance effects was more effective among the latter.

Third, taking into account earlier research findings and the overview of macro-structural developments in Poland in the 1970s, 1980s, and 1990s presented in the first section of this chapter, it is difficult to explain what exactly led to women achieving mobility outcomes which are more positive than those of men. In this respect, our results can only invite further research. One important line of inquiry should be dividing the broad service class into smaller categories and ascertaining once again differences in male and female mobility. In our opinion only then can the possible effects of educational differentials be meaningfully studied. Such an analysis is not possible with the data at hand. It is, however, the most immediate next task.

Appendix

FIG. 11.A1.*Gross national product (per head), Poland, 1950–96, 1980 = 100*

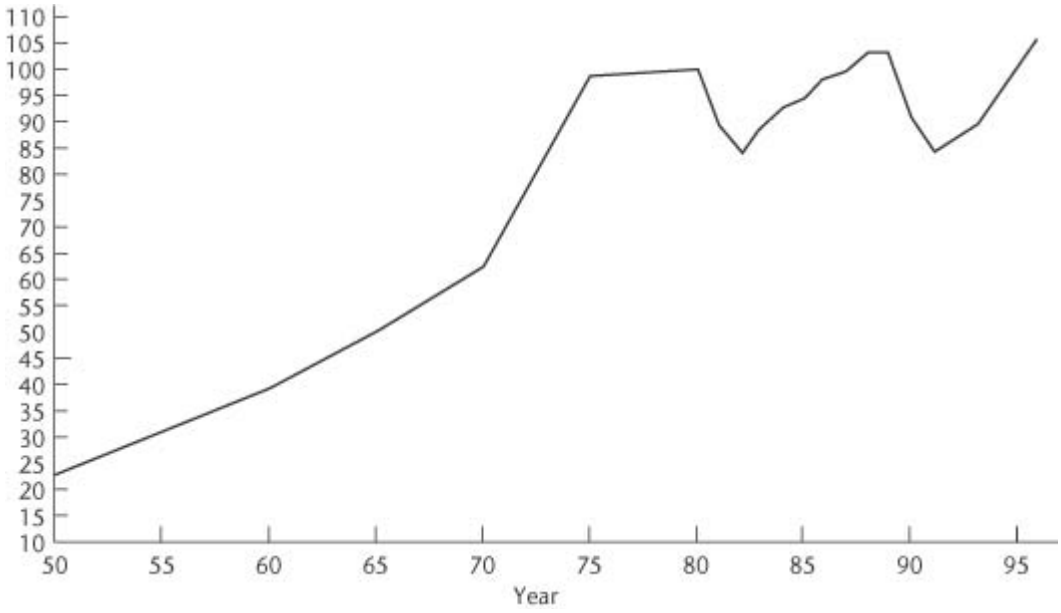


FIG. 11.A2.*University students per 10,000 of population, Poland, 1950–96*

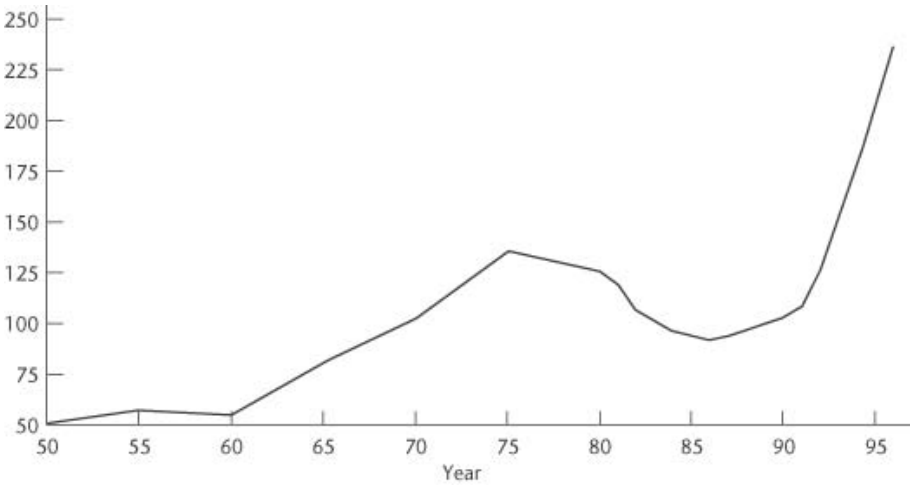


TABLE 11.A1.*Results of fitting the CnSF, the Unidiff, and various core models with temporally changing parameters, in 1994, unemployed left out of the analysis, sample size* = 5,432, *men*

	G^2	d.f.	*p*	rG^2	Δ	bic
Conditional independence	1758.40	108	.00		−1.6	829.58
Constant social fluidity	81.25	72	.21	95.4	3.6	−537.95
Uniform difference	78.54	70	.22	95.5	3.4	−523.46
Core: EG Polish design in 1972, 1988, and 1994	128.03	84	.00	92.7	4.0	−594.90
Core: EG Polish design in 1972 and 1988, return to the core in 1994	117.19	84	.00	93.3	3.8	−605.21
Core: EG Polish design in 1972, no more service class–working class affinity in 1988, return to the corein 1994	114.23	84	.02	93.5	3.9	−608.17
Core: EG Polish design in 1972, emerging affinitybetween higher and lower non-manual classes in 1988,return to the core in 1994	112.45	84	.02	93.6	3.7	−609.96
Core: EG Polish design in 1972, return to the core already in 1988	110.02	84	.03	93.7	3.9	−612.38
Core: EG Polish design in 1972, return to the core already in 1988a, re-estimated	110.79	87	.04	93.7	3.9	−637.42

Note: Betas for Unidiff (with reference parameter for 1972 = 1.000) are: 0.901 in 1988 and 0.927 in 1994. In the last row, H1 effects, which proved to be insignificant for all years, were dropped and the model was re-estimated.

TABLE 11.A2.*Results of fitting the CnSF, the Unidiff, and various core models with temporally changing parameters, in 1994, unemployed left out of the analysis, sample size* = 4,927, *women*

	G^2	d.f.	*p*	rG^2	Δ	bic
Conditional independence	1495.66	108	.00		22.4	577.39
Constant social fluidity	73.98	72	.41	95.1	4.3	−538.20
Uniform difference	59.09	70	.82	96.0	3.3	−536.08
Core: EG Polish design in 1972, 1988, and 1994	125.83	84	.00	91.6	4.3	−588.38
Core: Core design in 1972, 1988, and 1994	103.36	84	.07	93.2	3.7	−612.82
Core: Core design in 1972, 1988, and 1994 modified in eachyear by allowing for negativeaffinity I + II → V + VII + VIIaand III → V + VI	87.72	84	.36	94.1	3.5	−626.49

Note: Betas for Unidiff model (with reference parameter for 1972 5 1.000) are: 0.815 in 1988 and 0.727 in 1994.

TABLE 11.A3.*Structural shift parameters for accepted core models (the parameter for class I + II fixed at 0)*

Class	Men			Women		
	1972	1988	1994	1972	1988	1994
III	−1.532	−0.525	0.127	0.695	0.650	1.340
IVab	−2.222	−0.599	0.308	−1.317	−1.930	−0.588
IVc	−3.795	−2.423	−2.634	−2.430	−2.544	−2.177
V + VI	−0.783	−0.221	−0.084	−1.926	−1.955	−1.216
VIIa	−1.139	−0.764	−0.573	−1.046	−1.356	−0.806
VIIb	−2.513	−1.480	−1.110	−2.603	−3.480	−1.613

12 Changes in Intergenerational Class Mobility in Hungary, 1973–2000

Péter Róbert and Erzsébet Bukodi

Hungary has an exceptionally rich set of social mobility data. A question on father's occupation was included in the 1930 Census and again in the 1949 Census. Later, the Hungarian Central Statistical Office (CSO) carried out large-scale social mobility surveys in 1962–4, 1973, 1983, and 1992. These data sources have recently been complemented by the Way of Life and Time Use Survey, carried out by the CSO in 2000, where a question on father's occupational class was also included. This chapter uses data from the last four of these surveys and focuses on trends in class mobility over nearly three decades in Hungary.

Since the available Hungarian mobility data covers the whole twentieth century, with its historical, economic, and political changes, Hungary always served as a good test case for the long standing debate in sociology about the role of industrialisation and democratisation in increasing mobility chances. In this respect, the effects of industrialisation and of political measures on long-term changes in status attainment seem to reinforce each other, as a recent analysis confirmed (Luijkx et al. 2002). But we also tend to agree with Ossowski (1963) who proposes that the proper question to ask is not whether Communism increased mobility but whether the decline of class boundaries was any greater than might have been expected from economic developments. In this respect, the hypothesis formulated by Kelley and Klein (1977, 1981) about the gradual reclosure of the social structure in socialist societies at a certain point after the Communist takeover sounds plausible. Based on earlier findings about the Hungarian mobility regime, which we summarise below, we also expect that the secular trend of increasing openness was more characteristic of the beginning of the period we consider here; and this phase was followed by a levelling off (if not a decline) in mobility chances.

In the next sections we first summarise the findings of previous studies on social mobility in Hungary as well as the structural and institutional developments of the last three decades. Second, we provide a description of changes in absolute mobility rates between 1973 and 2000. Third, we present the results of statistical models of relative mobility rates fitting the constant social fluidity model (CnSF) and the uniform difference (Unidiff) models to the data. This part of the chapter is supplemented with a quasi cohort analysis in order to get a better view of changes over time. We also provide a Hungarian version of the core fluidity model. Finally, we summarise the findings and draw our conclusions.

Social mobility in Hungary in the light of previous studies

Our first analyses are based on the 1973 Hungarian social mobility survey. Andorka (1983), using this same dataset, presented mostly descriptive statistics on absolute mobility rates as well as the occupational profiles of successive birth cohorts based on job history data. He argued that mobility connected to self-employment and managerial status had been influenced mainly by socialist political measures. Simkus (1981) found that the increase of intergenerational mobility in Hungary was largely based on the decline of intergenerational inheritance of farming as well as of higher status non-manual occupations. Decomposing structural transformation revealed that the increase in social fluidity was mainly due to forced mobility (Simkus 1984).

Focusing on long-term tendencies of change in mobility chances, Andorka (1990*a, b*) investigated data within a longer time-span between 1930 and 1983. On the level of observed mobility rates Hungarian society became more open between the 1940s and the 1960s. This trend did not persist into the 1970s. For almost the same historical period, Ganzeboom et al. (1991) performed a careful test of trends in men's social fluidity between 1930 and 1989. In addition to CSO data, data from TARKI (Social Research Informatics Centre) for the years 1982, 1986, 1988, and 1989 were included in order to extend the time-span. Occupational classifications in the various data-files were handled more rigorously, different levels of aggregation were applied, and various types of log-linear model were fitted to the data. The authors concluded that the Hungarian mobility regime gradually opened up over time and that this development continued even after 1973. As a slight exception to this general trend, the increase of inheritance of self-employment at the early stage of Communism could be mentioned.

Wong and Hauser (1992), however, came to another conclusion after analysing the 1983 Hungarian social mobility data. In this analysis, they

investigated intergenerational fluidity based on father's occupation and son's and daughter's first occupation, computing twenty 8 × 8 mobility tables, one for each sex in ten five-year birth cohorts covering about fifty years. Although the increase in social fluidity was substantial for the older cohorts who entered the labour force in the early years of the socialist transition, the authors found support for the relative closure thesis for the younger cohorts. As for gender differences, occupational inheritance was smaller for women than for men but women's mobility chances were more strongly determined by their social origin than were men's.

Some of the most recent trend analyses of social mobility in Hungary have included the 1992 social mobility data. Andorka (1997) compared social fluidity between 1973 and 1983 as well as between 1983 and 1992. For the first time-span he found significant changes in mobility chances for men but this was not the case for the second. For women, no changes in mobility chances could be observed for any of the two periods. Most recently, Szonja Szelényi (1998: ch. 4) attempted to give a summary of Hungary's mobility processes during the twentieth century, based on CSO data from 1983. Her log-linear analysis applying row and column effects models with freely scaled distances, fitted to the data of four Hungarian birth cohorts, suggested 'no evidence of massive changes' despite the 'radical interventionist policies of socialism' (Szelényi 1998: 70). Temporal changes seemed to be closer to the trendless fluctuation proposed by Sorokin (1959). Only a minor 'socialism effect' was found, indicating increased exchange mobility between the managerial and working classes, but even this process produced more deterioration for the managers than improvement for the workers. The results provided no support for the claim that offspring of small proprietors were discriminated against by the socialist regime, their inheritance parameters being roughly constant over time.

Since access to Hungarian social mobility data became available relatively early, it has been widely used for international comparisons (Hazelrigg and Garnier 1976; Tyree et al. 1979; McClendon 1980*a, b*; Heath 1981; Grusky and Hauser 1984). These papers were based on three by three father to son mobility tables and the limitations of the data as well as serious concerns about their comparability have been expressed by Hazelrigg and Garnier (1976: 500) and—more sharply—by Erikson and Goldthorpe (1992: 27).

The most elaborate analysis by Grusky and Hauser (1984), testing the Featherman Jones Hauser (FJH) hypothesis (Featherman et al. 1975), applied log-linear and log-multiplicative models to the three by three father to son mobility tables, adding also exogenous variables to the models for measuring industrialisation, educational enrolment, social democracy, and income inequality. In a comparative view, Hungary turned out to be an outlier: the final models—in order to make them fit—had to include a specific dummy variable for Hungary. As a proof of the presence of a 'socialism effect', in a subsequent paper by Hauser and Grusky, where Hungary together with

Czechoslovakia, Poland, and Yugoslavia represented the 'Eastern block' among twenty-two nations, the authors found that 'exchanges between manual and non-manual sectors take place 27 percent more frequently in socialist countries than in their non-socialist counterparts' (Hauser and Grusky 1988: 738).

Comparing Hungary to a less industrialised western country, where modernisation and economic transformation took place in the same historical period, Simkus et al. (1990) reached the conclusion that deviations in mobility patterns between Ireland and Hungary were largely a consequence of changes in the private ownership of land and capital in the latter country. In fact, Andorka and Zagorski (1980) came to the same conclusion when comparing Hungary and Poland, based on data from the early 1970s. They found that differences in mobility patterns were mostly due to the fact that agriculture became collectivised in Hungary, while private farming survived in Poland under Communism.

Erikson and Goldthorpe (1992) also analysed data from the 1970s in *The Constant Flux* and found the Hungarian mobility pattern to be strongly affected by the nationalisation of agriculture which led to increased absolute mobility rates. Hungary deviated from the common pattern in many respects, such as a higher rate of recruitment to all classes from farm origins; a lower rate of recruitment from skilled worker-class origins; a lower rate of outflows from class origins to service-class positions; and a higher rate of outflows to skilled or unskilled working class positions. With respect to relative mobility rates, Erikson and Goldthorpe developed a core social fluidity model based on the concept of hierarchy, inheritance, sector, and affinity effects. When testing the significant differences between the effect parameters estimated for the core model and the nine nations separately, Hungary produced four differences (out of the eight effects): the HI1 effect was stronger, while the IN1, SE, and AF2 effects were weaker. As this review of the literature indicates, results from previous research on the Hungarian mobility regime are not univocal. For international comparative analyses, Hungarian 'exceptionalism' seems to be a typical feature; Hungary seems to deviate both from the western nations and from other former state-socialist countries. Some conclusions of the earlier studies focusing on temporal changes in social mobility in Hungary emphasised a trend toward increasing openness. Other studies, however, reported a more marked reversal in the increase of mobility opportunities. This makes our analysis highly relevant as we have a very recent dataset from 2000.

Economic and institutional changes in Hungary during the last three decades

In the period between the early 1970s and 1990s, the basic feature of economic and political developments was the slowdown of the 'revolutionary'

pace of political changes (which had started in the late 1960s). The quota system in education was abolished in the beginning of the 1960s and the general political climate of the country started to become more liberal after 1963, the year of political amnesty for the last 1956 prisoners. At the same time, the pace of industrialisation began to decline and the weaknesses of the planned economic system became more apparent. A moderate liberalisation of the economy and the introduction of certain market elements were expected to improve economic conditions and the New Economic Mechanism (NEM) was introduced in 1968 to reach these goals. In fact, previous studies on long-term changes in mobility processes and status attainment have proposed 1968 as the most important historical time-point when a new economic and political era started in Hungary (Luijkx et al. 1998, 2002).

Despite attempts at reforming the planned system, the serious weakness of the Hungarian economy became obvious in the 1980s. Economic development continued to deteriorate; the annual growth of GDP varied between only 1 and 3 percent during most of the decade. The Communist party had to make unpopular decisions, such as increasing prices, which led to growing inflation rates. After one and a half decades of political liberalism and political legitimacy based on the continuous improvement of living conditions, the political opposition intensified its activity, building on the increased dissatisfaction of the Hungarian population due to declining material circumstances. The process culminated in founding new political parties and the Communist regime had to start negotiations with the opposition (the Round Table Discussions). This led to the establishment of the parliamentary multiparty system and to free elections in 1990, just at the time when socialism collapsed in all other central and eastern European countries.

The 1990s brought significant economic changes to Hungary. First of all, the collapse of the system resulted in a decline in economic performance. The main features of the economic disruption were the absolute decrease in GDP (in 1991 there was a 12 percent decline), the two-digit inflation rate, and the high level of unemployment (12 percent in 1993). Since the economic crisis affected the mining, manufacturing, and steel industry sectors most strongly, the labour market situation deteriorated faster for men than for women. The growing service sector (trade, transport, communication, and services) provided more job opportunities for women and thus men became over-represented among the unemployed. Due to privatisation, the other main feature of economic developments after 1990, the proportion of the self-employed increased from 3 to 10 percent of the labour force and the majority of employees started to work for the private sector. At the same time the employment rate dropped, becoming lower than in most of the developed industrial societies at around 42 percent for men (aged 15–59 years) and 30 percent for women (aged 15–54 years). A slow economic improvement started only in the second half of the 1990s. By the end of the decade, both the unemployment

and inflation rates turned out to be less than 10 percent, and an increase of 3–4 percent per annum in GDP was reached (Fazekas 2000).

In sum, the period our data cover can be characterised by a continuously declining performance of the economy. The 1990s also brought a decline in the tendency of modernisation as the collapse of socialism resulted in deterioration in the institutions of the safety net and in the support for those coming from disadvantaged families. This latter argument also supports our expectation about a levelling off or a reversal in the trend of increasing social fluidity in Hungary.

Trends in origin and destination class structures

The economic and institutional shifts in Hungarian society over the last three decades are reflected in the class distributions for the four points in time, presented in Table 12.1 for men and women. (Information on data and variables can be found in appendix A to this chapter). The crucial transformation, which has occurred to the class structure of Hungarian males and females between the early 1970s and 2000, indicates an overall trend towards upgrading of work in Hungary. Growing managerialism and professionalism and the emergence of the service sector have led to three major structural changes. First, the proportion of individuals belonging to the service class (and primarily to the upper service class) increased, especially between 1973 and 1983; second, the percentage of unskilled and agricultural workers decreased; and, third, the petty bourgeoisie increased in line with the new market conditions that emerged in the 1980s and accelerated in the 1990s.

Dissimilarity indices provide a condensed view of shifts over time. The figures in Table 12.2 also show that there were more structural changes between 1973 and 1983 than in the subsequent part of the period studied, especially between 1983 and 1992. However, economic restructuring and the emerging private sector in the 1990s also resulted in a stronger shift in the class structure as the higher Δ for 1992/2000 reveals.

The gender-specific differences in the class distributions reveal a marked segregation in the Hungarian class structure. Although the total magnitude of the service class is larger for women, men have a higher share in the upper service class. As in most modern societies, the routine non-manual class is strongly feminised in Hungary. Men, on the other hand, dominate the skilled manual worker class.

The pattern of dissimilarity indices is also gendered. The structural changes in class destinations between 1973 and 1983 were much stronger for women but they seem to be less affected by the system transformation in the 1990s. For men the origin–destination Δs in Table 12.2 show a decreasing trend between 1973 and 2000; that is, there are less and less structural changes

TABLE 12.1. *Origin and destination class structures in 1973, 1983, 1992, and 2000 (males and females aged 20–69 currently in employment or unemployed having had a job)*

	1973		1983		1992		2000	
	Origin	Destination	Origin	Destination	Origin	Destination	Origin	Destination
Males[a]								
Class I	2.5	5.5	4.2	10.6	5.3	10.0	9.6	11.2
Class II	3.1	8.5	5.5	9.3	7.2	10.2	7.1	11.4
Class IIIa	2.8	3.9	2.2	2.5	1.8	1.8	2.0	2.5
Class IVab	6.9	1.7	4.8	2.5	4.5	6.2	4.4	9.6
Class IVc	26.4	0.7	15.8	1.2	7.4	1.5	2.1	2.6
Class V + VI	16.6	34.1	19.2	36.6	24.8	37.2	32.8	32.2
Class VIIa + IIIb	20.7	32.1	27.5	28.9	28.3	26.5	26.2	26.0
Class VIIb	21.0	13.6	20.9	8.5	20.8	6.6	15.8	4.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Females[b]								
Class I	3.1	2.3	4.6	6.0	5.8	5.6	9.8	8.1
Class II	3.2	9.9	5.8	20.3	8.5	23.4	7.7	26.4
Class IIIa	3.1	22.9	2.6	16.5	1.7	19.6	1.7	17.1
Class IVab	8.1	1.0	4.1	1.4	4.4	3.6	4.1	6.2
Class IVc	24.5	0.4	15.5	0.2	6.7	0.4	2.0	0.7
Class V + VI	18.7	8.9	19.8	14.5	25.1	11.7	30.9	11.9
Class VIIa + IIIb	21.6	37.6	27.1	32.2	27.4	31.6	27.4	28.2
Class VIIb	17.7	17.0	20.4	8.9	20.3	4.2	16.4	1.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a] Values of *N* for males in the year: 1973 = 11,221; 1983 = 9,047; 1992 = 7,212; and 2000 = 2,609.

[b] Values of *N* for females in the year: 1973 = 8,271; 1983 = 7,814; 1992 = 6,516; and 2000 = 2,134.

TABLE 12.2.*Dissimilarity indices (Δ)*

	1973/1983	1983/1992	1992/2000	1973/2000
Destination/destination				
Males	9.2	5.6	7.6	18.0
Females	20.1	8.4	8.6	30.8
Origin/origin				
Males	13.4	9.2	12.5	32.8
Females	13.7	9.8	9.2	29.2
	1973	1983	1992	2000
Origin/destination				
Males	37.8	29.3	21.8	12.1
Females	42.5	34.9	36.9	37.0
Males' destination/females' destination		29.3	28.7	36.0
31.8				

hidden behind the observed mobility patterns. For women, the structural modifications dropped between 1973 and 1983 but they began to increase slightly between 1983 and 2000. Gender segregation in the class structure of men and women is also displayed by the larger origin–destination Δs for women (where fathers and daughters are compared). The dissimilarity indices for the destination classes of men and women (Table 12.2) do not indicate any decline either. Of course, Δs are rough measures but it seems that gender specific structural differences in the class distribution are persistent in Hungary despite large shifts in the female class structure between 1973 and 2000.

Trends in absolute mobility rates

We start to investigate the historical trend in intergenerational class mobility in the context of absolute rates. First of all, we consider the total mobility rate (TMR), which is the percentage of respondents found in the off-diagonal cells of the mobility table. In other words, this measure represents the percentage of men and women whose destination class was different to their class of origin. Furthermore, we decompose the TMR into total vertical (TV) and total non-vertical (TNV) mobility rates. Vertical mobility refers to all such cases where moves occur between lower-level and higher-level classes; while non-vertical mobility means movements between classes within the same level. Finally, total vertical mobility is decomposed into total upward (TU) and total downward (TD) mobility. These rates are defined in accordance with Erikson

TABLE 12.3. *Absolute class mobility rates in 1973, 1983, 1992, and 2000 (seven-class schema) (males and females aged 20–69 currently in employment or unemployed having had a job)*

	1973	1983	1992	2000
Males				
Total mobility rate	75.1	72.4	69.7	63.8
Total vertical	45.1	52.0	53.8	50.3
Total non-vertical	30.0	20.4	15.9	13.5
Total vertical/total non-vertical	1.5	2.5	3.4	3.7
Total upward	35.1	40.7	39.9	33.2
Total downward	10.0	11.3	13.9	17.1
Total upward/total downward	3.5	3.6	2.9	1.9
Mobility into the service class (I + II)	11.9	16.7	15.8	15.0
Mobility into the self-employed class (IVab)	1.3	2.2	6.0	9.0
Mobility into the unskilled worker class (VIIa + IIIb)	30.9	27.3	24.1	23.3
N	11,221	9,047	7,212	2,610
Females				
Total mobility rate	80.2	77.7	75.3	73.9
Total vertical	42.2	51.1	45.6	57.3
Total non-vertical	38.0	26.6	29.7	16.6
Total vertical/total non-vertical	1.1	1.9	1.5	3.4
Total upward	26.6	39.4	30.8	40.1
Total downward	15.6	11.7	14.8	17.2
Total upward/total downward	1.7	3.4	2.1	2.3
Mobile into the service class (I + II)	10.2	22.5	23.8	28.8
Mobile into the self-employed class (IVab)	0.8	1.2	3.4	6.0
Mobile into the unskilled worker class (VIIa + IIIb)	37.2	30.7	29.3	25.6
N	8,271	7,814	6,516	2,134

and Goldthorpe (1992: ch. 6). These measures are displayed in Table 12.3, for males and females in employment and aged 20–69.

Observed total mobility rates tend to decrease in Hungary, more for men than for women. The decline is quite gradual for women but men experienced a larger drop for 2000 in comparison to 1992. The ratio of TV/TNV mobility increased among both sexes but was more pronounced for women. A look at the percentages mobile into the service class (in the lower panel of the tables) can give an explanation; this proportion increased for women but not for men.

When decomposing total vertical mobility into upward and downward moves, the trend becomes even more unfavourable for men; upward mobility

decreased and downward mobility increased for them between 1983 and 2000. Downward mobility for this period increased for women, too, but the rate for upward mobility displays a U-curve, at least between 1983 and 2000. Consequently, for 2000, the ratio of observed upward to downward mobility is more favourable for women (2.3) than for men (1.9).

This analysis is repeated for all men and women (the retired and those out of the labour force are coded in accordance with their last class position) and the results are presented in Table 12.4. The patterns for the total mobility rate or for vertical and non-vertical mobility do not seem to deviate from what we have seen before. For upward and downward mobility, women's advantage is

TABLE 12.4.*Absolute class mobility rates in 1973, 1983, 1992, and 2000 (seven-class schema) (all males and females aged 20–69 having had a job)*

	1973	1983	1992	2000
Males				
Total mobility rate	75.0	73.4	72.2	66.0
Total vertical	43.7	50.7	52.4	49.9
Total non-vertical	31.3	22.7	19.8	16.1
Total vertical/total non-vertical	1.4	2.2	2.6	3.1
Total upward	33.7	39.9	40.0	35.7
Total downward	10.0	10.8	12.4	14.2
Total upward/total downward	3.4	3.7	3.2	2.5
Mobility into the service class (I + II)	11.0	16.7	16.0	14.0
Mobility into the self-employed class (IVab)	1.3	1.9	4.6	7.7
Mobility into the unskilled worker class (VIIa + IIIb)	31.0	28.5	26.1	25.4
N	13,072	10,885	9,518	3,524
Females				
Total mobility rate	78.2	77.5	76.1	74.4
Total vertical	37.0	47.8	50.5	53.2
Total non-vertical	41.2	29.7	25.6	21.2
Total vertical/total non-vertical	0.9	1.6	2.0	2.5
Total upward	21.4	35.4	35.5	36.3
Total downward	15.6	12.4	15.0	16.9
Total upward/total downward	1.4	2.8	2.4	2.1
Mobility into the service class (I + II)	7.4	19.1	19.7	23.1
Mobility into the self-employed class (IVab)	0.7	1.0	2.2	4.5
Mobility into the unskilled worker class (VIIa + IIIb)	32.6	32.2	33.8	31.3
N	13,429	11,581	10,580	3,676

perhaps less pronounced in comparison to men. As the number of cases indicates, the two tables differ less for males than for females.

Unlike some of the other country chapters, we did not perform analyses in which the unemployed were classified in a separate and additional destination class. This could have been done only for the 1992 and the 2000 data because unemployment did not exist under socialism. In addition, we applied only the 'individual' approach and considered the location of men and women in the class structure in accordance with their own work situation. We did not recalculate our data on the basis of the 'dominance principle, because Hungarian families are dual earner ones in a strict sense with women working full time. Part-time employment has increased slightly in Hungary in the 1990s, but it is still rare.

Despite the fact that the total mobility rates are quite high in Hungary, the trends discussed above do not support a claim about increasing social openness. Compared to women, we can have more concern about men's mobility chances—at least on the basis of the decreasing trend of upward and the increasing trend of downward vertical mobility. This makes clear that the generally positive connotation of high mobility rates that people usually have in mind is very questionable.

Trends in relative mobility

In order to outline the pattern of social fluidity for Hungarian males and females over the last decades, the log-linear method is applied. The starting point of the investigation is a three-way mobility table: origin (*O*), destination (*D*), and time of survey (*T*). First, we fit a model assuming that origin and destination are independent. This is our baseline model that makes it possible to assess the extent to which further models are able to account for the total association between father's class and respondent's class. Our second model postulates unchanging relative rates as measured in terms of odds ratios. We allow variation in the origin and destination distributions at different points in time but the association between fathers' class and respondents' class is identical in the four tables, that is, we fit the CnSF to the data. The aim of applying this model is to test the validity of the FJH hypothesis for Hungary. In the third model we examine whether the odds ratios in our mobility tables differ uniformly between surveys. For this purpose, we employ the more refined Unidiff model containing both log-linear and log-multiplicative components (cf. Erikson and Goldthorpe 1992; Xie 1992). This model tests whether there were uniform changes in mobility chances in the direction of greater or less fluidity from time to time. All analyses have been carried out using LEM (Vermunt 1993).

Results of the above-mentioned models fitted to the 1973, 1983, 1992, and 2000 data are presented in Table 12.5 for men and women aged 20–69 and

TABLE 12.5. *Results of fitting different models to the 1973, 1983, 1992, and 2000 mobility tables (males and females aged 20–69 currently in employment or unemployed having had a job)*

	G^2	d.f.	Δ	rG^2	bic
Males					
Seven-class schema					
Ind. {*OT*} {*DT*}	5,769.6	144	15.9	—	4,284.7
CnSF {*OT*} {*DT*} {*OD*}	259.1	108	3.1	95.5	−854.6
Unidiff	202.7	105	2.6	96.5	−880.1
Unidiff parameters	1.00	0.80	0.79	0.95	
	(1973)	(1983)	(1992)	(2000)	
Unidiff linear trend	241.7	107	3.0	95.8	−861.7
Unidiff linear trend per year	−0.0064				
Eight-class schema (separating class I and II)					
Ind. {*OT*} {*DT*}	5,969.9	196	16.0	—	3,948.8
CnSF {*OT*} {*DT*} {*OD*}	323.9	147	3.4	94.6	−1,192.0
Unidiff	262.7	144	2.9	95.6	−1,222.3
Unidiff parameters	1.00	0.80	0.78	0.95	
	(1973)	(1983)	(1992)	(2000)	
Unidiff linear trend	305.4	146	3.2	94.9	−1,200.2
Unidiff linear trend per year	−0.0065				
Females					
Seven-class schema					
Ind. {*OT*} {*DT*}	5,220.1	144	16.5	—	3,763.4
CnSF {*OT*} {*DT*} {*OD*}	197.0	108	2.9	96.2	−895.6
Unidiff	175.2	105	2.8	96.6	−886.9
Unidiff parameters	1.00	0.90	0.83	0.81	
	(1973)	(1983)	(1992)	(2000)	
Unidiff linear trend	176.1	107	2.8	96.6	−906.3
Unidiff linear trend per year	−0.0082				
Eight-class schema (separating class I and II)					
Ind. {*OT*} {*DT*}	5,377.2	196	16.7	—	3,394.4
CnSF {*OT*} {*DT*} {*OD*}	254.3	147	3.3	95.3	−1,232.8
Unidiff	236.4	144	3.2	95.6	−1,220.3
Unidiff parameters	1.00	0.91	0.85	0.82	
	(1973)	(1983)	(1992)	(2000)	
Unidiff linear trend	236.9	146	3.2	95.6	−1,240.1
Unidiff linear trend per year	20.0074				

currently in employment. The upper panel of these tables displays the results for the seven-class schema and the lower panel shows the estimates for the eight-class schema, separating the upper (I) and lower (II) service classes. It seems that the temporal invariance in all the odds ratios in the four mobility tables imposed by the CnSF model describes the Hungarian mobility regime quite well. This model captures 95 and 96 percent of the association between father's class and respondent's class, for men and women respectively. It misclassifies only about 3 percent of the cases for both sexes. The CnSF model performs fairly well, suggesting that the hypothesis of constant social fluidity between origin and destination over the last three decades in Hungary provides a good account of the data.

However, the Unidiff model, which permits the association between origin and destination to vary over time, improves on the CnSF model. This improvement is not huge; the amount of the association between father's class and respondent's class captured by this model increased only by 1 percent, as compared to the CnSF model, and the proportion of misclassified cases decreased only slightly, but the reduction in the G^2 is 56.4 and 21.8, for men and women respectively, in comparison to a loss of three degrees of freedom. For men, the Bayesian information criterion (bic) statistic also indicates that the Unidiff model is better than the CnSF model, but for women the CnSF model should be the preferred one according to bic.

Looking at the Unidiff parameters (where the value is set to 1 for 1973), the estimates reveal a particular difference between men and women in Hungary, in accordance with the above-mentioned fit statistics. For men, there was a fall in the association between origin and destination between 1973 and 1983. This trend, however, seems to have halted in 1992 and to have reversed in 2000, though social fluidity is still somewhat greater in 2000 than it used to be in 1973. Not surprisingly, fitting a linear trend to the data yields a model that is worse than the previous one by any goodness-of-fit criterion. Still, on these grounds, we can say that the annual rate in the reduction of the association between origin and destination, between 1973 and 2000, was 0.6 percent for men.

For women, however, the Unidiff parameters reveal a steady increase in the openness of society. This increase was seemingly larger between 1973 and 1983, became more moderate between 1983 and 1992 and levelled off between 1992 and 2000. When fitting the linear trend model to the data, it turns out to be the best one according to the bic statistic, though other criteria of the fit do not improve. Hungarian women experienced an annual decline in the association between origin and destination, in the period 1973 and 2000, of 0.8 percent.

Turning to the eight-class schema, as the results in Table 12.5 show, separating the upper and the lower service class does not modify the picture described above. A slight difference is that the annual rate in the increase of

social fluidity is only 0.7 percent for women in this case. Since our previous analysis on the validity of the Erikson and Goldthrope (EGP) class schema for Hungary indicated a difference between the upper and lower service class (Bukodi and Róbert 1999), we expected to get more insight into the Hungarian mobility patterns by separating these two classes. However, this assumption is not supported by our estimates.

When repeating the whole analysis for men and women aged 20–69 and including all those who are retired or out of the labour force but have been in employment earlier, our results turned out to be basically the same. The estimates presented in Table 12.6 (only for the seven-class schema) indicate a somewhat stronger annual reduction in the association between origin and destination for men, while the same reduction is lower for women—only 0.5 percent compared to 0.8 percent per year. The U-curve of the Unidiff parameters, indicating decreasing social fluidity in the 1990s, is also less marked for men.

Summarising the results of this section, we can say that Hungarian social mobility patterns have changed in the last three decades and this change indicates an increase in social fluidity between 1973 and 1983 for both sexes. Later, the increase became more moderate and for the last decade after the

TABLE 12.6. *Results of fitting different models to the 1973, 1983, 1992, and 2000 mobility tables (seven-class schema), all individuals aged 20–69 having had a job*

	G^2	d.f.	Δ	rG^2	bic
Males					
Ind. {*OT*} {*DT*}	7,323.9	144	16.4	—	5,809.2
CnSF {*OT*} {*DT*} {*OD*}	311.8	108	2.9	95.7	−824.2
Unidiff	262.4	105	2.5	96.4	−842.1
Unidiff parameters	1.00	0.82	0.81	0.87	
	(1973)	(1983)	(1992)	(2000)	
Unidiff linear trend	284.7	107	2.7	96.1	−840.8
Unidiff linear trend per year	−0.0069				
Females					
Ind. {*OT*} {*DT*}	9,443.6	144	18.2	—	7,920.3
CnSF {*OT*} {*DT*} {*OD*}	247.1	108	2.5	97.4	−895.4
Unidiff	234.2	105	2.6	97.5	−876.5
Unidiff parameters	1.00	0.94	0.90	0.88	
	(1973)	(1983)	(1992)	(2000)	
Unidiff linear trend	234.5	107	2.6	97.5	−897.3
Unidiff linear trend per year	−0.0048				

collapse of socialism it virtually disappeared and turned in reverse, at least for men. So, our findings do not support the claim of a secular trend toward increasing social fluidity in Hungary between the early 1970s and 2000.

Age group and cohort analysis of social fluidity

Another way to get more insight into the general trend in social fluidity is by analysing age groups. For this purpose, we used the pooled data for all the four mobility tables and we disaggregated the data to four age groups. In this case we analysed all males and females having had a job in order to gain enough cases (especially for the 2000 data with a smaller sample size). The results of the analysis according to age group are displayed in Table 12.7, for men and women, respectively.

It seems that, for all age groups of both men and women, the assumption of constant social fluidity describes the Hungarian mobility pattern quite well. The bic statistics are negative everywhere, the CnSF model captures a minimum of 84.6 percent of the association between origin and destination, and the proportion of misclassified cases is not more than 5.1 percent. Fit statistics for the Unidiff model are better only for the oldest age group. In comparison to a loss of 3 d.f., the reduction in G^2 from the youngest to the oldest age group is 6.5, 15.2, 10.0, and 44.9, respectively, for men. The same figures in the same order are 2.4, 10.1, 16.5, and 52.3 for women. It is only the oldest age group where the Unidiff model with a linear trend can be the preferred one, at least according to the bic criterion. Otherwise the Unidiff parameters display a U curve for men; social fluidity is smaller for 2000 than it used to be for 1983 and 1992. For men in the age group 30–39, the association between origin and destination is even stronger—though probably not significantly stronger—for 2000 than for 1973. This curvilinear pattern of the Unidiff parameters appears only for the youngest women. According to bic, the Unidiff model with a linear trend could be the preferred one for the two oldest age groups of women. But other parameters do not indicate much difference even for these two groups.

It seems that the age-decomposition provides even less support for any claim on a secular trend toward increasing openness in Hungarian society. Perhaps the oldest age group (50–69) could be said to display something like that: the annual rate in the reduction of the association between origin and destination was 1.8 percent per year for men and 1.1 percent per year for women. But for the younger age groups, and especially for men, fluidity remained constant over the last three decades in Hungary.

Since the analysis in this chapter relies on four cross-sectional surveys, it is obvious that some birth cohorts were sampled on more than one occasion. Consequently, it is possible to examine whether or not the strength of the

TABLE 12.7. *Results of fitting different models to the 1973, 1983, 1992, and 2000 mobility tables by age groups (all males and females having had a job)*

	G^2	d.f.	?	rG^2	bic
Males					
Age group: 20–9 (*N*: 1973 = 3,307; 1983 = 2,404; 1992 = 1,704; 2000 = 767)					
Ind. {*OT*} {*DT*}	1,229.8	144	12.4	—	68.0
CnSF {*OT*} {*DT*} {*OD*}	98.1	108	3.2	92.0	-875.2
Unidiff	91.6	105	2.9	92.5	-854.7
Unidiff parameters	1.00	0.84	0.86	0.90	
	(1973)	(1983)	(1992)	(2000)	
Unidiff linear trend	95.2	107	3.1	92.2	-869.2
Unidiff linear trend per year	-0.0055				
Age group: 30–9 (*N*: 1973 = 2,689; 1983 = 2,699; 1992 = 2,206; 2000 = 728)					
Ind. {*OT*} {*DT*}	1,656.4	144	15.5	—	317.3
CnSF {*OT*} {*DT*} {*OD*}	254.1	108	5.1	84.6	-722.7
Unidiff	238.9	105	4.5	85.6	-710.8
Unidiff parameters	1.00	0.81	0.81	1.06	
	(1973)	(1983)	(1992)	(2000)	
Unidiff linear trend	253.3	107	5.0	84.7	-714.5
Unidiff linear trend per year	-0.0029				
Age group: 40–9 (*N*: 1973 = 2,944; 1983 = 2,234; 1992 = 2,201; 2000 = 874)					
Ind. {*OT*} {*DT*}	1,616.1	144	15.8	—	317.3
CnSF {*OT*} {*DT*} {*OD*}	147.6	108	4.5	90.9	-826.4
Unidiff	137.6	105	4.4	91.5	-809.4
Unidiff parameters	1.00	0.80	0.81	0.84	
	(1973)	(1983)	(1992)	(2000)	
Unidiff linear trend	142.9	107	4.5	91.1	-822.2
Unidiff linear trend per year	-0.0067				
Age group: 50–69 (*N*: 1973 = 5,493; 1983 = 4,761; 1992 = 4,521; 2000 = 1,513)					
Ind. {*OT*} {*DT*}	4,535.4	144	19.9	—	3,138.8
CnSF {*OT*} {*DT*} {*OD*}	228.9	108	3.7	94.9	-818.6
Unidiff	184.0	105	3.3	95.9	-834.3
Unidiff parameters	1.00	0.85	0.82	0.68	
	(1973)	(1983)	(1992)	(2000)	
Unidiff linear trend	187.5	107	3.4	95.9	-850.2
Unidiff linear trend per year	-0.0180				
Females					
Age group: 20–9 (*N*: 1973 = 3,131; 1983 = 2,367; 1992 = 1,794; 2000 = 697)					
Ind. {*OT*} {*DT*}	1,110.6	144	12.7	—	183.7
CnSF {*OT*} {*DT*} {*OD*}	86.2	108	2.6	92.2	-884.6
Unidiff	83.8	105	2.6	92.4	-860.0
Unidiff parameters	1.00	0.89	0.87		0.94
	(1973)	(1983)	(1992)	(2000)	
Unidiff linear trend	84.9	107	2.6	92.3	876.8
Unidiff linear trend per year	-0.0042				
Age group: 30–9 (*N*: 1973 = 2,736; 1983 = 2,833; 1992 = 2,392; 2000 = 728)					
Ind. {*OT*} {*DT*}	1,606.1	144	15.6	—	-99.8
CnSF {*OT*} {*DT*} {*OD*}	114.9	108	3.6	92.8	-864.8
Unidiff	104.8	105	3.5	93.5	-847.7
Unidiff parameters	1.00	0.85	0.80	0.75	
	(1973)	(1983)	(1992)	(2000)	
Unidiff linear trend	105.7	107	3.5	93.4	-864.9
Unidiff linear trend per year	-0.0096				
Age group: 40–9 (*N*: 1973 = 3,054; 1983 = 2,411; 1992 = 2,341; 2000 = 890)					
Ind. {*OT*} {*DT*}	1,805.9	144	17.0	—	499.6
CnSF {*OT*} {*DT*} {*OD*}	172.1	108	4.4	90.5	-807.7
Unidiff	155.6	105	4.2	91.4	-796.9
Unidiff parameters	1.00	0.87	0.80	0.72	
	(1973)	(1983)	(1992)	(2000)	
Unidiff linear trend	159.0	107	4.2	91.2	-811.7
Unidiff linear trend per year	-0.0110				
Age group: 50–69 (*N*: 1973 = 6,205; 1983 = 5,382; 1992 = 5,441; 2000 = 1,868)					
Ind. {*OT*} {*DT*}	5,493.2	144	20.7	—	4075.1
CnSF {*OT*} {*DT*} {*OD*}	235.7	108	3.6	95.7	-827.8
Unidiff	183.4	105	3.1	96.7	-850.6
Unidiff parameters	1.00	0.82	0.79	0.68	
	(1973)	(1983)	(1992)	(2000)	
Unidiff linear trend	187.9	107	3.2	96.6	-865.8
Unidiff linear trend per year	-0.0112				

TABLE 12.8. *Relationship between birth cohort, historical year, and age*

Birth cohort	Historical year			
	1973	1983	1992	2000
1924–33	40–9	50–9		
1934–43	30–9	40–9	49–58	
1944–53	20–9	30–9	39–48	47–56
1954–63		20–9	30–9	38–47
1963–72			20–9	28–37

association between the origins and destinations of these cohorts has varied over time. This approach would give approximate information on how intragenerational life-course mobility contributes to any change in the intergenerational social fluidity of particular birth cohorts. This analysis is performed again on all males and females having had a job. Table 12.8 displays the age

TABLE 12.9. *Results of fitting different models to the 1973, 1983, 1992, and 2000 mobility tables by birth cohorts (all males and females having had a job)*

	G^2	d.f.	Δ	rG^2	bic
Males					
Birth cohort: 1924–33 (*N*: 1973 = 2,944; 1983 = 2,097)					
Ind. {*OT*} {*DT*}	1,056.2	72	17.0	—	442.3
CnSF {*OT*} {*DT*} {*OD*}	48.7	36	3.0	95.4	−258.2
Unidiff	48.7	35	3.0	95.4	−249.7
Unidiff parameters	1.00	1.004			
	(1973)	(1983)			
Birth cohort: 1934–43 (*N*: 1973 = 2,689; 1983 = 2,234; 1992 = 1,775)					
Ind. {*OT*} {*DT*}	1,300.3	108	16.0	—	348.1
CnSF {*OT*} {*DT*} {*OD*}	107.3	72	4.0	91.7	−527.5
Unidiff	102.8	70	3.9	92.1	−514.3
Unidiff parameters	1.00	0.87	0.87		
	(1973)	(1983)	(1992)		
Birth cohort: 1944–53 (*N*: 1973 = 3,307; 1983 = 2,699; 1992 = 2,267; 2000 = 743)					
Ind. {*OT*} {*DT*}	1,612.7	144	14.6	—	301.2
CnSF {*OT*} {*DT*} {*OD*}	140.0	108	3.5	91.3	−843.6
Unidiff	133.9	105	3.3	91.7	−822.4
Unidiff parameters	1.00	0.86	0.86	0.93	
	(1973)	(1983)	(1992)	(2000)	
Birth cohort: 1954–63 (*N*: 1983 = 2,404; 1992 = 2,132; 2000 = 827)					
Ind. {*OT*} {*DT*}	810.5	108	12.4	—	117.0
CnSF {*OT*} {*DT*} {*OD*}	62.0	72	3.0	92.3	−556.3
Unidiff	59.3	70	2.8	92.7	−541.9
Unidiff parameters	1.00	1.06	1.19		
	(1983)	(1992)	(2000)		
Birth cohort: 1964–72 (*N*: 1992 = 1,550; 2000 = 697)					
Ind. {*OT*} {*DT*}	404.3	72	14.7	—	151.5
CnSF {*OT*} {*DT*} {*OD*}	41.0	36	4.4	89.8	−236.9
Unidiff	39.1	35	4.0	90.3	−231.0
Unidiff parameters	1.00	1.18			
	(1983)	(2000)			
Females					
Birth cohort: 1924–33 (*N*: 1973 = 3,054; 1983 = 2,379)					
Ind. {*OT*} {*DT*}	1,324.6	72	19.2	—	705.3
CnSF {*OT*} {*DT*} {*OD*}	60.1	36	3.7	95.5	−249.6
Unidiff	56.9	35	3.5	95.7	−244.2
Unidiff parameters	1.00	0.88			
	(1973)	(1983)			
Birth cohort: 1934–43 (*N*: 1973 = 2,736; 1983 = 2,411; 1992 = 2,116)					
Ind. {*OT*} {*DT*}	1,433.0	108	15.9	—	472.6
CnSF {*OT*} {*DT*} {*OD*}	94.1	72	3.9	93.4	−546.1
Unidiff	85.2	70	3.8	94.0	−537.3
Unidiff parameters	1.00	0.96	0.79		
	(1973)	(1983)	(1992)		
Birth cohort: 1944–53 (*N*: 1973 = 3,131; 1983 = 2,833; 1992 = 2,421; 2000 = 808)					
Ind. {*OT*} {*DT*}	1507.0	144	14.7	—	192.6
CnSF {*OT*} {*DT*} {*OD*}	86.6	108	2.9	94.2	−899.1
Unidiff	85.8	105	2.9	94.3	−872.6
Unidiff parameters	1.00	1.04	0.99	0.98	
	(1973)	(1983)	(1992)	(2000)	
Birth cohort: 1954–63 (*N*: 1983 = 2,367; 1992 = 2,279; 2000 = 848)					
Ind. {*OT*} {*DT*}	741.6	108	12.7	—	188.6
CnSF {*OT*} {*DT*} {*OD*}	87.6	72	3.8	88.2	−532.5
Unidiff	86.3	70	3.6	88.4	−516.6
Unidiff parameters	1.00	1.09	0.98		
	(1983)	(1992)	(2000)		
Birth cohort: 1964–72 (*N*: 1992 = 1,618; 2000 = 676)					
Ind. {*OT*} {*DT*}	327.0	72	13.4	—	230.4
CnSF {*OT*} {*DT*} {*OD*}	15.9	36	2.0	95.1	−262.8
Unidiff	14.8	35	2.0	95.4	−256.2
Unidiff parameters	1.00	1.16			
	(1992)	(2000)			

groups of five successive birth cohorts for the survey years and shows which periods are investigated when a given birth cohort is analysed. The estimates are displayed in Table 12.9 for men and women, respectively.

The results of this cohort analysis confirm what we have seen before in this chapter. The CnSF model describes the mobility pattern of these male and female birth cohorts very well. By assuming constant social fluidity over time in Hungary, our model captures nearly 90 percent or even more of the association between origin and destination and the proportion of misclassified cases is never more than 4 percent. As usual, we fit the Unidiff model to test for the possibility of uniform changes from table to table in the direction of increasing or decreasing fluidity. However, estimates indicate hardly any change for any of the male or female birth cohorts. In comparison to a loss of between one and three degrees of freedom, the reduction in G^2 is always very small and the bic values are also smaller for the Unidiff than for the CnSF

model, for all birth cohorts. Only the small decrease in the misclassified cases for the middle-aged and the younger cohorts can be considered as a sign that the assumption of uniform change cannot be fully rejected for these cohorts.

The cohort born between 1944 and 1953 is the only one represented in all four surveys we use in this chapter. For men in this cohort, the Unidiff parameters display the same U-curve we have seen before, while this reverse in the trend is not present for women. Looking at the younger birth cohorts born between 1954 and 1963, as well as between 1964 and 1972, the Unidiff parameters reveal an increase in the association between origin and destination over time. Among women this pattern appears only for the youngest birth cohort. Though the Unidiff model did not fit better than the CnSF model, we believe that it is still worthwhile to draw attention to these findings based on the Unidiff parameters because the fit of the Unidiff model to the data was not unacceptable.

Summarising what we could learn from this quasi-cohort analysis, it seems that the Hungarian mobility pattern between 1973 and 2000 can largely be described by constant social fluidity. If we keep on searching for uniform change over time in any direction, what we find is definitely not a trend toward increasing openness. On the contrary, Hungarian society seems to become less open in the second part of the period we investigated in the chapter, especially for the 1990s, after the collapse of socialism, and especially for men.

The pattern of social fluidity

So far, we have presented a global picture about changes over time in social fluidity in Hungary. In this last section we provide a more detailed description of the Hungarian fluidity pattern. By doing this we will build on the 'core model' of social fluidity developed in the course of the Comparative Analysis of Social Mobility in Industrial Nations (CASMIN) project (Erikson and Goldthorpe 1992: ch.4). This aimed to account for the overall pattern of association between origin and destination within the class structures of advanced societies using eight parameters (effects): two hierarchy effects (HI1 and HI2); three inheritance effects (IN1, IN2, and IN3); one sector effect (SE); and negative (AF1) and positive (AF2) affinity effect.

When fitting the core social fluidity model to the 1973 Hungarian data in *The Constant Flux,* the percentage of misclassified cases turned out to be relatively high. The main deviations of the Hungarian case from the core model were the following: the IN3 term defined originally for high farm inheritance had to be omitted; the positive affinity (AF2) term assuming fluidity between the petty bourgeoisie and the service class had also to be omitted; and an additional positive affinity term (AFX) had to be included indicating

mobility between farmers and agricultural workers (Erikson and Goldthorpe 1992: 151–2).

As outlined earlier, the Hungarian class structure has gradually become more similar to that of the advanced market economies. Consequently, we expected the core model to fit better for more recent periods. On the basis of the bic statistics this assumption could not be rejected but other parameters were less supportive of our hypothesis. The association between father's class and respondent's class captured by the core model turned out to be roughly the same for 1983, 1992, and 2000, for men, and for 1992 and 2000, for women. The proportion of cases misclassified by the core model was even higher for 2000. What we can definitely say is that the core model describes Hungarian mobility patterns better for the 1980s and subsequent times than it used to do for the 1970s. However, we prefer to present a Hungarian version of the core fluidity model in this chapter.

The Hungarian version of the core model has been developed on the basis of the standardised adjusted residuals calculated for the four mobility tables, for men and women separately. The design matrices are shown in appendix B (and can be compared with the matrices for the unmodified core model reported in Chapter 2). The main features of the modifications can be summarised as follows. Instead of a term defined for farm inheritance, we introduced a term for the inheritance of the service class (INX). Furthermore, we included several amendments for the positive affinity (AF2) matrix. We omitted mobility from the service class to the petty bourgeoisie. Instead of assuming a high mobility from the petty bourgeoisie to the service class for women, we expected that the daughters of self-employed fathers would tend to end up in the routine non-manual class. We also omitted the assumption of high exchange mobility between the petty bourgeoisie and farmers. We accepted the hypothesis for an intergenerational 'upgrading' of manual work and high mobility from the semi- and unskilled worker class to the skilled manual worker class but eliminated the reverse move between these two classes. Instead, we included two other moves, where sons of skilled worker fathers have a high probability of moving to the petty bourgeoisie class and daughters of the same fathers have a high probability of moving to the routine non-manual class. Finally, a large flow was assumed for both sexes from the agricultural worker class to the farmer class. As this move became a quite customary life course event in the 1990s when the agricultural cooperatives closed down, this can be a typical case when intragenerational mobility appeared as intergenerational class mobility. But we also kept the AFX matrix introduced by Erikson and Goldthorpe for mobility from the farmer class to the agricultural worker class.

Estimates for the fit of the Hungarian version of the core model are presented in Table 12.10, for males and females aged 20–69, currently employed or unemployed. The

TABLE 12.10. *Results of fitting the Hungarian version of the core social fluidity model to the 1973, 1983, 1992, and 2000 mobility tables (seven-class schema), individuals aged 20–69 currently in employment or unemployed having had a job*

	G^2	d.f.	Δ	rG^2	bic
Males					
1973 ind.	2,558.8	36	17.9	—	2,223.1
core (A)	164.4	27	3.3	93.6	−87.4
1983 ind.	1,453.7	36	14.7	—	1,125.7
core (A)	87.3	27	2.8	94.0	−158.6
1992 ind.	1,149.3	36	14.1	—	829.5
core (A)	112.1	27	3.4	90.2	−128.8
core (B 5 A–n.s.)	111.8	29	3.3	90.3	−144.7
2000 ind.	607.8	36	17.2	—	324.6
core (A)	60.3	27	4.0	90.2	−153.1
core (B 5 A–n.s.)	59.6	30	3.9	90.2	−173.6
Females					
1973 ind.	2,279.9	36	18.8	—	1,955.1
core (A)	270.1	27	6.3	88.1	26.5
core (B 5 A–n.s.)	270.4	29	6.2	88.1	9.0
1983 ind.	1,638.6	36	17.0	—	1,315.9
core (A)	194.0	27	5.1	88.2	−48.1
core (B 5 A–n.s.)	193.9	28	5.0	88.2	−57.0
1992 ind.	1,002.0	36	14.0	—	685.9
core (A)	61.8	27	2.8	93.8	−175.3
core (B 5 A–n.s.)	61.1	29	2.8	93.9	−192.5
2000 ind.	599.6	36	13.1	—	23.5
core (A)	52.2	27	4.9	91.2	−154.8
core (B 5 A–n.s.)	51.8	31	4.8	91.3	−179.9

models are fitted separately for the four tables. The parameter estimates for the core social fluidity model are presented in Table 12.11. If one parameter turned out to be insignificant, the model was re-estimated without that parameter(s). Thus, Table 12.10 includes an A and a B version of the Hungarian core model for certain tables. As the higher degrees of freedom show, the B models do not contain the non-significant parameters. Parameter estimates in Table 12.11 come always from the preferred (either A or B) models.

The Hungarian version of the core fluidity model fits the data to an acceptable degree. Even in the worst case, for the 1973 table for women, the model captures 88 percent of the association between origin and destination and the proportion of misclassified cases is slightly more than 6 percent. As far as the detailed pattern of social fluidity in Hungary is concerned, the parameter estimates in Table 12.11 reveal certain changes over time. With respect to the HI and IN effects, somewhat contradictory processes can be observed. On the

TABLE 12.11. *Parameter estimates of the preferred core social fluidity model (italics in Table12.10)*[a]

	HI1	HI2	IN1	IN2	INX	SE	AF1	AF2	AFX
Males									
1973	−0.149	−0.285	0.416	1.259	*−0.633*	−0.674	−0.507	*0.427*	*0.801*
	(0.037)	(0.063)	(0.052)	(0.143)	(0.179)	(0.051)	(0.092)	(0.033)	(0.084)
1983	−0.182	−0.369	0.223	0.960	*−0.486*	−0.622	−0.282	*0.268*	*0.474*
	(0.044)	(0.060)	(0.059)	(0.146)	(0.175)	(0.056)	(0.084)	(0.036)	(0.111)
1992	n.s.	−0.497	0.384	0.593	n.s.	−0.438	−0.389	*0.284*	*0.493*
		(0.065)	(0.041)	(0.104)		(0.054)	(0.101)	(0.035)	(0.145)
2000	n.s.	n.s.	0.422	0.703	*0.671*	−0.551	−0.583	*0.307*	n.s.
			(0.065)	(0.211)	(0.243)	(0.087)	(0.175)	(0.059)	
Females									
1973	−0.123	−0.489	n.s.	1.161	n.s.	−0.906	−0.323	*0.372*	*0.674*
	(0.033)	(0.067)		(0.253)		(0.046)	(0.123)	(0.033)	(0.075)
1983	−0.212	−0.600	n.s.	0.957	*−0.687*	−0.600	−0.237	*0.320*	*0.955*
	(0.034)	(0.057)		(0.109)	(0.275)	(0.055)	(0.082)	(0.031)	(0.10)
1992	n.s.	−0.542	0.217	0.615	n.s.	−0.559	−0.377	*0.322*	*0.867*
		(0.060)	(0.063)	(0.095)		(0.075)	(0.093)	(0.035)	(0.173)
2000	n.s.	−0.362	0.234	0.729	n.s.	−0.898	n.s.	*0.343*	n.s.
		(0.089)	(0.050)	(0.152)		(0.161)		(0.067)	

Note: Italicised parameters are modified as shown in appendix B.

[a] Standard errors are in parentheses.

one hand, the hierarchy effects seem to disappear by 2000, at least for men, whereas for women they strengthen slightly. On the other hand, however, the inheritance effects (IN1 and IN2) display the same U-curve (a decline for 1983 and partly for 1992, and an increase for 2000) as we saw earlier in the Unidiff parameters. The pattern for the specific INX term is even more characteristic, at least for men. The service class inheritance parameter had a negative sign in 1973 and 1983 (with a decline between them), became insignificant in 1992, and turned out to be strongly positive in 2000. Consequently, the additive odds representing the propensity for immobility in the service class for males (where IN1, IN2, and IN3 apply) are 6.02 in 2000 ($e^{0.422 + 0.703 + 0.671 = 1.796}$). Since the INX term is not significant for women, the same odds are only 2.61 for them. In sum, class inheritance did not increase as much for females as for males.

With respect to the sector barriers between agricultural and non-agricultural employment, the parameter estimates for SE are negative and they weaken first between 1973 and 1992 and strengthen later for 2000. This recent change, in fact, brings Hungary closer to the original assumption of the core model about stronger sector barriers in advanced societies. While sector barriers in 2000 are stronger for women than for men, the negative affinity (AF1) term, emphasising the distance between the service class and the agricultural worker class from a 'cultural viewpoint', is not significant for them.

For men, both terms indicate the low relative chances for mobility between the top and bottom of Hungarian society. The—strongly modified—positive affinity term (AF2) seems to be quite persistent with some temporal modifications for men. The AFX term, however, becomes insignificant for 2000. Thus, the move from the farmer class to the agricultural worker class, which was a special term for Hungary introduced by Erikson and Goldthorpe (1992), is not a characteristic type of mobility anymore, either for men or for women.

In sum, the parameters of the core model provide us with an understanding of the changing mobility regime in Hungary. The decrease in social fluidity in the 1990s largely resulted from the strengthening of class inheritance, particularly for individuals belonging to the service and self-employed classes, on the one hand, and, on the other, from the ceasing of the typical mobility routes of the earlier periods, such as mobility from farmers to agricultural labourers.

Conclusion

This chapter investigated temporal changes in Hungarian mobility patterns between 1973 and 2000. This is not the first analysis benefiting from the rich variety of Hungarian mobility data and dealing with long-term tendencies in social mobility in this country. Previously Ganzeboom et al. (1991) explored long-term changes in Hungarian social fluidity and found a gradual opening of the mobility regime. However, their research covered a period between 1930 and 1989 and did not consider the time after the collapse of socialism. Two more recent analyses also found evidence of a secular decline in the effect of social origin on social status in Hungary (Luijkx et al. 1998, 2002), but they also found some levelling off or even a slight reverse in the decreasing trend as well. These papers concluded that there was more systematic change than trendless fluctuation in the Hungarian society. Two datasets from the beginning of the 1990s (1992, 1993) have already been used in these studies, but the analytical approach applied there was based on the status attainment modelling of the mobility process. The present research as a next step in investigating long-term trends in social mobility in Hungary approached the problem from a class perspective again. Moreover, this analysis is the first one using the most recent Hungarian mobility data from 2000, which reflects the mobility experiences of a decade after the collapse of socialism.

In the chapter we explored changes in the Hungarian class structure as well as in observed mobility rates. We found that the pace of structural changes declined. The restructuring of the class distribution of Hungarian society slowed down for the 1980s as compared to its pace in the 1970s, but it increased again in the 1990s. Observed mobility rates are relatively high in

Hungary but the trend our data show does not indicate an increase in the openness of the society. On the contrary, total mobility rates decrease, especially for men. A further characteristic of the absolute mobility patterns, we want to underline, is the increase in vertical mobility—and, within this, of downward mobility. This holds true especially for men.

When turning to relative mobility rates we found that the hypothesis of constant social fluidity cannot be rejected for Hungary. We were able to detect certain trends in the mobility patterns but they did not reveal a steady increase in the openness of Hungarian society. Though an increase in social fluidity did occur in Hungary between 1973 and 1983, it levelled off later between 1983 and 1992, and reversed between 1992 and 2000. As far as the age-decomposition is concerned, only the oldest age group—50–69—showed an increase in social fluidity. For the younger ones fluidity remained constant over time. The hypothesis of constant social fluidity was supported by the analysis of birth cohorts as well, though the assumption of a uniform change for the younger cohorts could not be rejected either. For the purpose of a closer look on the pattern of social fluidity, a Hungarian version of the core model has been applied. In this respect, we want to underline the increase in inheritance effects, which also support the statement that mobility chances did not increase. On the contrary, they became worse in the last decade after the collapse of socialism. We also compared male and female mobility patterns. Focusing on the population in employment, we can conclude that the mobility chances of women did not deteriorate so much as those of men did. This is, however, a consequence of the selection effect that appears if we analyse employed women only. If we analyse all men and women, the relative advantage of women disappears.

Taking into account the main objectives of the project on the national patterns of social mobility between the 1970s and 1990s, Hungary as a case study can contribute to answering some of the research questions. Our starting point was the hypothesis about the gradual reclosure of the social structures of socialist societies (Kelley and Klein 1977, 1981). Our results support this assumption. If we divide the period of the three decades investigated here into three parts (1970s, 1980s, 1990s), the increase of mobility chances was already much more moderate by the second phase (the last phase of socialism). Thus, the hypothesis of a trend toward increased equality is only partly supported by the Hungarian case. With respect to the third phase, post-socialism brought an increase in social and especially income inequalities. The alternative hypothesis, in contrast to the assumption of an increase of equality in terms of class origin, is that intergenerational mobility chances tend to deteriorate in advanced societies. The Hungarian case seems to support this, especially if we consider our cohort analysis where the younger generations seem to be more strongly affected by the negative influences of system transformation.

Concerning the debate on the industrialisation hypothesis (Treiman 1970), we believe that the Hungarian case demonstrates the link between industrialisation and increasing social fluidity, as our results indicate for the first phase of our time-span. However, this result cannot be interpreted in a purely liberal context. In another paper (Luijkx et al. 2002), we argue that Hungary is a country where mobility processes were influenced by political changes, which have induced institutional and economic changes toward a more modern society. Institutional changes, indeed, have been the driving force for changes in mobility chances. Both the educational system and the welfare system can be mentioned in this respect. We had no room in this chapter to analyse the role of education in intergenerational mobility (but see Simkus and Andorka 1982; Róbert 1991; Szelényi and Aschaffenburg 1993; Ganzeboom and Nieuwbeerta 1999, on the persisting influence of social origin on educational inequalities). We had no room either to provide an insight into the changes of the welfare system in Hungary, which took place in the direction of increased marketisation. We believe that these changes contributed to the decline in mobility chances that our data revealed for the 1990s. But we leave this as a task for further analyses, which need to investigate these mechanisms in a more detailed manner.

Appendix A

Data

The data for this analysis is derived from the 1973, 1983, and 1992 Social Mobility and Life-History Survey as well as the 2000 Way of Life and Time Use Survey of the Hungarian Central Statistical Office. All four national surveys have been carried out on probability samples of the Hungarian population aged fourteen and over and contain information on destination class and social origin of men and women. For this analysis we selected individuals aged 20–69 at the time of interview. The exact number of cases is shown in the tables.

Class origin is defined as the respondent's father's class when the respondent was aged fourteen. The class schema was constructed as follows: (1) detailed occupational measures were applied using four-digit (in the case of 1973 survey two-digit) Hungarian occupational codes; (2) these were then recoded into the EGP categories taking into account information on self-employment and number of subordinates.

For any comparison with other studies on Hungarian data (especially to those by Andorka 1990*a,* 1990*b,* 1997 but also Ganzeboom et al. 1991), we have to note that the EGP schema has certain deviations from the

classifications applied in those analyses, which are based on the Hungarian occupational grouping developed by Ferge and Andorka. There are two major differences between this Hungarian occupational categorisation and the EGP classes (Róbert 1998):

1. The Hungarian classification separated two groups on the top of the society: the managers (leaders) and the professionals (intelligentsia). This distinction was based on a power relationship. The equivalent classes in the EGP schema are the upper and the lower service classes (class I and II) where managers and professionals appear to be 'mixed' and the distinction is made on the basis of the higher or lower level of the positions.
2. Male service workers appear in Class IIIb in the EGP schema while jobs of this type in commerce, sales, transportation, communication, etc. were counted as manual and were grouped together with the skilled- or semi-/ unskilled workers by the Hungarian categorisation.

In addition to these conceptual differences, the two schemas classify certain occupations differently. An analysis investigating the EGP categorisation on recent Hungarian data of the Central Statistical Office confirmed its validity, although class IIIb (service workers) seem to be closer to class VI or in some respects to class VIIa (skilled and unskilled manual workers) than to class IIIa (routine non-manual employees) in Hungary (Bukodi and Róbert 1999). In this chapter we apply the seven (1eight) categories version of the EGP schema as presented in Table 12.A1.

TABLE 12.A1.*Class categories, seven- and eight-class versions*

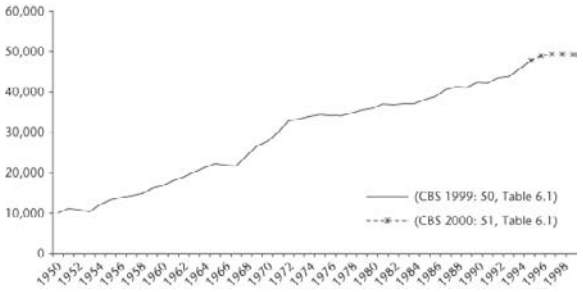
Full version	Seven-class version	Eight-class version
I	Service class	Upper service class
II	Service class	Lower service class
IIIa	Routine non-manual class	Routine non-manual class
IIIb	Routine non-manual class	Routine non-manual class
IVa	Self-employed class	Self-employed class
IVb	Self-employed class	Self-employed class
IVc	Farmers	Farmers
V	Skilled workers	Skilled workers
VI	Skilled workers	Skilled workers
VIIa	Unskilled workers 1 IIIb	Unskilled workers 1 IIIb
	Unskilled service workers	Unskilled service workers
VIIb	Farm workers	Farm workers

Appendix B

Design matrices for the Hungarian modifications to the core model

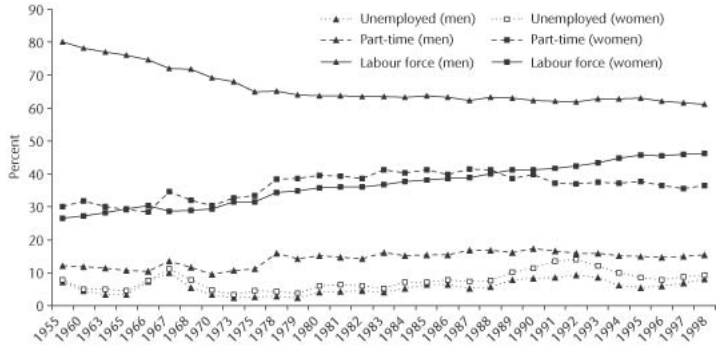
1. *Matrices identical to original core model and common to men and women*

FIG. 13.1.*Real (1995) GDP per capita in Israel: 1950–99*



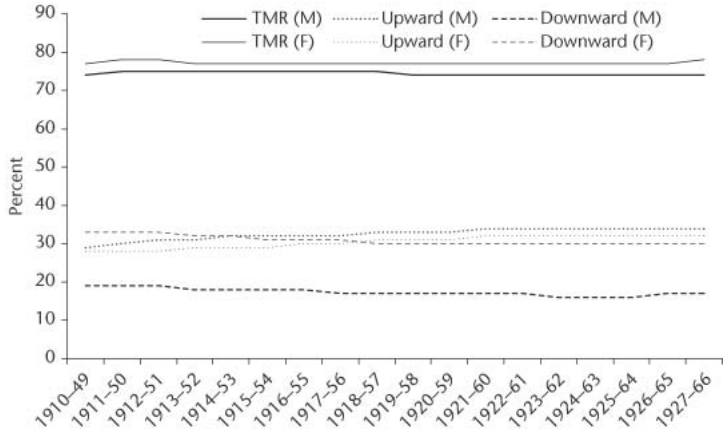
2. *Hungarian variants: men*

FIG. 13.2.*Selected characteristics of the Israeli labour force*



3. *Hungarian variants: women*

FIG. 13.3.*Total mobility rates, total upward mobility rates, and total downward mobility rates in Israel, men and women aged 25–64 by birth-cohorts*



13 Opportunities, Little Change: Class Mobility in Israeli Society, 1974–91

Meir Yaish

At the heart of the long lasting debate in sociology regarding the consequences of the industrialisation process for social mobility is the so-called 'liberal thesis of industrialisation'. This states that the industrialisation process brings about not only more opportunities for social mobility, but also more *equality of opportunity* as social selection processes become more meritocratic (cf. Blau and Duncan 1967; Treiman 1970; Featherman and Hauser 1978; but see Sorokin 1959; Lipset and Zetterberg 1959; Featherman et al. 1975; Erikson and Goldthorpe 1992, for arguments against this thesis). In this context, Israeli society will serve as a case study to answer two main questions:

(i) *Has the Israeli mobility and fluidity pattern increased over time?*
(ii) *Has the mobility process in Israeli society become more meritocratic over time?*

It has previously been argued that in the context of the above-mentioned debate Israeli society, along with the Republic of Ireland (see Whelan and Layte in this volume), provides one of the most adequate tests of the industrialisation thesis (Yaish 1998, 2000). This is claimed on two grounds. First, Israeli society has undergone immense economic (as well as demographic) changes over a very short period of time. Second, high quality data are readily available to link these changes to social mobility. In what follows, then, I study changes over time (or lack of them) in Israeli mobility and fluidity patterns by comparing results from two nationally representative cross-sectional mobility surveys in Israel: the 1974 mobility survey (Matras and Weintraub 1977) and the 1991 mobility survey (Kraus and Toren 1992). Previous Israeli research on mobility has been dominated by the status attainment approach (see, among others, Semyonov and Kraus 1983; Smooha and

Kraus 1985; Kraus and Hodge 1990), and only a few studies have taken the tabular approach (Matras 1963; Zloczower 1973; Matras et al. 1975; Matras and Weintraub 1977; Tyree et al. 1979; Goldthorpe et al. 1997; Yaish 1995, 1998, 2000). A common element in the studies that have used the tabular approach is their exclusion of women from the analysis. These studies, moreover, display a wide range of variation in their analytical techniques, methodologies, populations studied, and ultimately the quality of their data. A classification of these studies along these dimensions would identify the following three 'generations' of social mobility research in Israel:

1. Studies from the 1960s and early 1970s. Mobility studies in this period used occupational categories between which only inflow and outflow percentages of Israeli society were examined. The majority of the studies in this period, however, were typically based on incomplete, and often dubious, data of only certain sections of Israeli society (cf. Matras 1963; Zloczower 1973; Matras et al. 1975; an exception in this period is the study by Matras and Weintraub (1977), who examined the mobility of all Israeli men).
2. Studies from the 1980s and 1990s. Compared with the previous generation, mobility studies in this period can be said to: (1) pay special attention to issues of data quality; (2) use methodologies that are tailored to the study of both relative and absolute mobility; (3) study the Israeli mobility process within a class structure; (4) examine Israeli mobility in a comparative perspective; and (5) examine changes in the Israeli mobility pattern over successive birth cohorts (Tyree et al. 1979; Yaish 1995; Goldthorpe et al. 1997).
3. Studies from the late 1990s (Yaish 1998, 2000). Mobility studies in this period improved on the previous generation by offering more systematic examinations of changes over time in Israeli mobility and fluidity patterns by comparing the results of a standardised analysis between two cross-sectional, nationally representative mobility surveys.

Despite the heterogeneity in techniques, methods, and data quality, a comparison between the results of these studies across 'generations' would suggest that the mobility of Israeli men is characterised by:

(1) Constant absolute mobility *rates* over time;
(2) An increase in upward mobility *rates* over time;
(3) A fairly common fluidity *pattern* over time;
(4) A constant fluidity *level* over time;
(5) A very high level of *fluidity* in a comparative perspective.

This study is part of the third generation of mobility research in Israel as it offers a systematic examination of changes over time in Israeli class mobility and fluidity patterns. However, it differs from previous mobility studies of

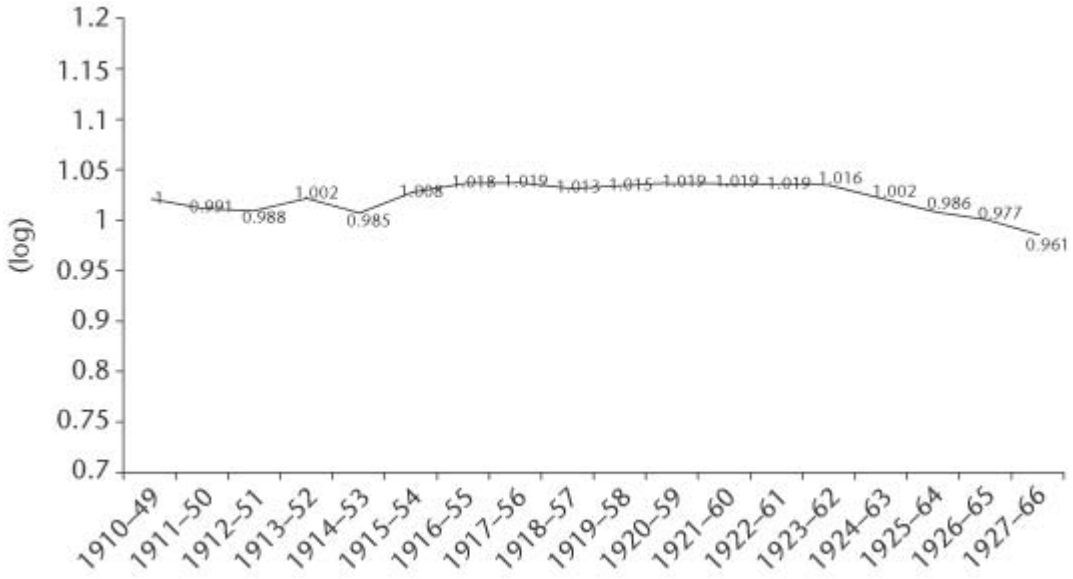
Israeli society in three ways. First, the analyses are based on data that represent the entire Israeli population, men *and* women, at two distinct points in time. Second, the Israeli class mobility pattern is studied at both the individual and the household level. Finally, this study uses analytical techniques that examine the effect of individual characteristics (e.g. the individual's educational level) on the relationship between groups of individuals (e.g. the class fluidity pattern).

The Israeli context

The last hundred years or so have seen many changes in Israeli society. At the beginning of the Zionist enterprise in 1882, Israel–Palestine was, as it had been for centuries, poor and underdeveloped. The 'industrialisation process' began with the economic boom of the 1930s and the Second World War (Carmi and Rosenfeld 1974: 477). After Israel was established (in 1948) the process intensified and the structure of the Israeli economy changed dramatically (Kraus 1992). Equating industrialisation processes with economic growth (Wrigley 1972: 226), Fig. 13.1 shows that for the most part Israel has experienced sustained economic growth since it was established: GDP per capita has increased from 10,000 NIS in 1950 to about 50,000 NIS in 1999. Within this general trend, periods of extreme economic growth as well as recession periods can be identified (see also the unemployment figures in Fig. 13.2).

As a result of massive immigration in the early years of statehood, from 1951 through to 1953, the newly created state suffered from severe unemployment. In 1954, mainly due to reparation money received from Germany,

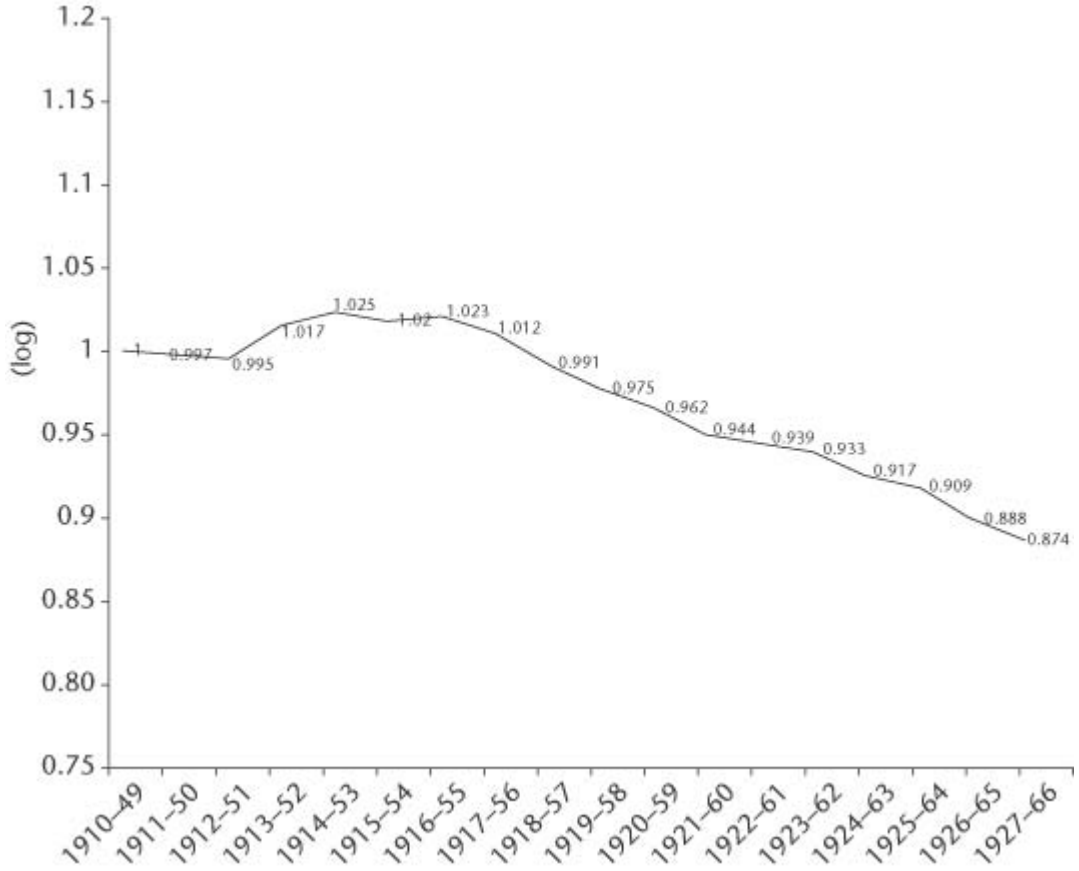
FIG. 13.4. *Unidiff parameter estimates: Israeli men*



the economy entered a period of rapid economic growth that continued until 1965. By the end of this period the reparation payments had ended (Aharoni 1991), and in 1966 there was widespread unemployment and a significant drop in GDP (Aharoni 1991: 79). Economic growth began again only after the Six-Day War of 1967, and the period from 1967 to 1972 is characterised by exceptionally high and rapid economic growth (Remba 1971). From 1974 through to 1988 economic growth improved only marginally. Towards the end of 1988, another recession gripped the economy, coupled with a relatively high rate of unemployment. Economic growth resumed only in the early 1990s, but ended in the second half of the decade, due in part to the aftermath of the massive influx of immigrants from the former Soviet Union.

Israel's economic growth has been accompanied by marked structural changes in its various economic segments. The proportion of the population actively engaged in agriculture declined, industrial growth slowed down in the late 1970s, and services expanded substantially, especially in the public sector (Kraus 1992). From 1975 to 1984, one out of seven workers was employed in industry, with the remainder employed in services, half of them in the public sector (Aharoni 1991: 91). Israel's economic growth and, in particular, the expansion of the service industries (and the public sector) created a demand for labour which, in turn, increased employment opportunities for women. Studies have shown that Israeli women's participation rates in the paid economy are similar to those of women in other western societies (Ben-Porath and Gronau 1985; Haberfeld and Cohen 1998). Thus, for

FIG. 13.5. *Unidiff parameter estimates: Israeli women*



example, the participation rate of Israeli women in the paid economy has increased over the years from about 25 percent in 1955 to about 50 percent in 2000 (see Fig. 13.2). As in most western societies, gender segregation in the Israeli labour force is high, and has hardly narrowed between 1972 and 1983 (Cohen et al. 1987). Thus, for example, most Israeli women work in white-collar occupations (Semyonov and Kraus 1983), and about half of all employed women work in the public sector (Kraus 1992; Haberfeld and Cohen 1998). And, as can be seen in Fig. 13.2, twice as many women work in part-time jobs as men (30 percent and 15 percent, respectively).

Israel has a highly centralised, state regulated economy. Ownership of economic resources is divided between the government, the *Histadrut* (the General Federation of Labour), and the private sector, with a growing tendency towards privatisation of government and *Histadrut* enterprises. Up to the early 1990s, the proportion of organised labour in Israel was amongst the highest in western societies—about 90 percent of the workforce. The *Histadrut* which is, *inter alia,* a labour union negotiates collective arrangements with the government and the private sector that cover most aspects of employment relations.

Industrialisation is not the only process to have affected the Israeli stratification structure: demographic changes have also played a major role. First of all, Israeli society is—to an exceptional degree—a society of immigrants. Successive waves of Jewish immigrants have entered the region since the Zionist movement was established in 1882, and the establishment of the state of Israel in 1948 encouraged growing numbers of Jews to enter the country. Indeed, from 1948 to 1990 some 2,031,800 immigrants (the majority of whom are Jewish) entered the country (CBS 1991: 43, Table 2.2).[150]

Second, and related to the above, Israeli society is multi-ethnic. It has been described (Lewin-Epstein and Semyonov 1986) as a dual society but on two different levels. At the primary level, there is the division between Jews and non-Jews, the latter being predominantly Arabs. Arabs holding Israeli citizenship make up around 17 percent of the national population. In regards both to area of residence and occupation, a high degree of segregation exists between citizen-Arabs and Jews. There is evidence (cf. Shavit 1992; Lewin-Epstein and Semyonov 1993) that Arabs have gained some benefit from geographical segregation, in that within their own enclaves they are less exposed to labour-market discrimination. At the secondary level, there is then the division among Jews between those of European or American origin (Ashkenazi Jews) and those of Asian or African origin (Sephardi Jews). The Sephardi are disadvantaged relative to the Ashkenazi in their opportunities

[150] In this respect, Tyree et al. (1979), argue that immigration and social mobility are positively correlated. One can argue, thus, that the nearly constant influx of Jewish immigrants into Israel may have affected social mobility to such an extent that industrialisation is less relevant to the understanding of mobility trends in Israeli society. Against this I would argue that immigration and economic growth (i.e. industrialisation) are also very closely related; massive numbers of new arrivals into a society can initiate economic growth. By contrast, emigration may hinder economic growth (see e.g. Goldthorpe's (1992) analysis of Irish society). It is beyond the scope of this chapter to address the 'immigration' issue in Israel. Studies that have taken the 'immigration' issue to the heart of the analysis show, however, that, among Jewish Israeli men, immigrants and natives share a very similar fluidity pattern (Goldthorpe et al. 1997; Yaish 1998, 2000, 2002).

for socio-economic achievement, but there are indications that the degree of ethnic inequality in this respect is tending to weaken over time (cf. Kraus and Hodge 1990; Yaish 1998, 2001).[151]

Finally, it is important to recognise the role of the Zionist movement and government interventions in the development of Israel's economy. To begin with, the Zionist movement was an ideological movement that aimed to establish a new, modern, Jewish society in Palestine (Eisenstadt 1967: 2–3), and emphasised the 'return to the soil' of Jews in Palestine. By returning to the soil they meant to establish an agricultural basis for the Jewish community in Palestine (Eisenstadt 1967: 4). Indeed, within the first fifty years of the Zionist enterprise new agricultural settlements were established in Palestine. After Israel was established, the state took over the tasks of the Zionist movement. A policy of 'decentralisation' was adopted in which a large part of the population was settled on the periphery of the country, mainly in settlements with an agricultural infrastructure (Kipnis 1990). And, for primarily ideological reasons, new entrants to agriculture were offered tax relief and agricultural settlements were offered capital and other resources (Hanaki et al. 1989). At the same time, the establishment of the state of Israel marked a historical turning point for Palestinian society. Arabs became a subordinate, minority sub-population in Israel, as the new Jewish state confiscated some 40 percent of the land owned by them. This left most Israeli-Arabs landless, and thus contributed a great deal to the proletarianisation of Israeli-Arabs which began in the 1930s (cf. Rosenfeld 1978).

Data and variables

The analyses in this chapter are based on data from two nationally representative surveys that were tailored to the study of social mobility in Israel (see Table 13.1). The 1974 mobility survey (hereafter 1974MS) was conducted by the Israel Central Bureau of Statistics as part of its 1974 civilian labour force survey. The target population of the sample is all Israeli persons (Jews and Arabs) aged fourteen and over, excluding the institutionalised population. The sample includes 3,500 households, with 15,078 persons aged fourteen and above, of whom 11,917 are Jews and 3,161 Arabs (Matras and Weintraub 1977).[152] The 1991 mobility survey (hereafter 1991MS) was conducted by Kraus and Toren (1992), and carried out by 'Pori Research Institute' in 1991. The target population of the sample is all Israeli persons (Jews and Arabs) aged eighteen and over, excluding the institutionalised population. The sample includes

[151] There is very little reason to believe that one 'mobility regime' adequately characterises all sections of Israeli society. Nonetheless, previous studies show that men of the three main ethnic groups in Israeli society share a very similar fluidity pattern (Goldthorpe et al. 1997; Yaish 1998, 2001).

[152] For sampling procedures, see CBS, Labour Mobility Survey 1977, No. 544.

TABLE 13.1. *Technical details of the data*

Date	References for survey details	Survey organization	Ages	Mode	Population	Response rate (%)	House holds
1974	Matras and Weintraub (1977)	CBS	14+	Interview	Civilian L.F.	90	3,500
1991	Kraus and Toren 1992	Pori Agency	18+	Interview	All	86	5,800

5,800 households, with 9,926 persons aged eighteen and older, of whom 8,158 are Jews and 1,768 Arabs.[153] The analyses in this chapter are based on two sub-samples of these data. Accordingly, from each mobility survey a sub-sample of *all* Israeli men and women aged 25–65 who were part of the Israeli *civilian* labour force is analysed.[154]

Three variables are at the heart of the following analysis—class origins, educational qualifications, and class destinations. However, differences exist between the surveys in the level of specificity of the information that is available for the construction of these variables. In what follows I explain the origins and implications of these differences.

The information on father's occupation in the 1974MS is classified into the two-digit Israeli occupational classification. The implication of this is that only the 'standard' seven-class version[155] of the Goldthorpe class schema can be applied to this occupational classification (see Yaish 1998: ch. 3). To achieve comparability in the analysis of the two sub-samples I used the same occupational classification, and hence class classification, also in the 1991MS. Unlike father's occupation, the information on the respondent's current, or last, occupation is classified into the three-digit Israeli occupational classification. Thus, I was able to utilise the seven-class version that is appropriate for the study of women; that is, class IIIb is combined with class VIIa instead of class IIIa.[156] The information on educational qualifications in the

[153] The sampling procedures of this survey are similar to those of the CBS labour mobility surveys.

[154] I restrict the sample to respondents aged twenty five or over (rather than age twenty as is nearly the standard in most mobility research) to allow them the necessary time after compulsory military service to have completed their post-secondary studies and enter the labour market. I also omitted from the analysis employees in the non-civilian labour force. This is because, as mentioned above, the 1974MS includes information on the civilian labour force only. Thus, to allow comparability between the two surveys I restrict also the 1991MS population to the civilian labour force only.

[155] By the standard version I mean that it is not possible to separate class IIIa from class IIIb, although this separation is desirable when women are included in the analysis (see Erikson and Goldthorpe 1992).

[156] It is important to note that: (1) women dominate class IIIb, and (2) class origin refers to *father's* class position—also in the case of women. Therefore, in the context of intergenerational class mobility (particularly relative mobility), applying a less detailed classification to class origins should not have severe consequences. Having said that, it is possible to assess the severity of this problem based on the detailed information available from the 1991MS. Such an analysis indicated that the effects of different classifications of class origins on the mobility pattern of either men or women in the 1991MS are minimal.

1974MS is limited to years of schooling only. The implication of this is that I am unable to apply the CASMIN educational variable to these data. Again, to achieve comparability in the analysis of the two sub-samples the effect of education on class mobility is assessed using years of schooling also in the 1991MS.

The intergenerational class mobility tables, for men and women in each survey, are then presented in appendix A to this chapter. In addition to these four mobility tables, I constructed two 'complete mobility tables' (also shown in appendix A). In complete mobility tables the household's, rather than the individual's, class position is the focus of the analysis. Accordingly, the class position of households of unmarried persons is determined by their own employment, while that of married couples takes into account the labour market experiences of both men and women in a household. In constructing this household class position I followed Erikson and Goldthorpe's (1992: 266) dominance approach.[157]

Trends in absolute mobility

Studying Israeli society enables us to follow trends in mobility rates in a society where most stages of the industrialisation process are covered by data of high quality. It is well established by now that the industrialisation process in Israel–Palestine began in the late 1930s, and that this process accelerated in the 1960s. The 1974MS and the 1991MS cover these periods well. The industrialisation process in Israel and other factors which I have reviewed earlier have, no doubt, altered the Israeli class structure.

Table 13.2 presents the marginal distributions in the Israeli mobility tables, by gender and year of survey. It shows how both between origins and destinations and over time (i.e. between the two surveys) the Israeli class structure has changed. Thus, for example, the dissimilarity indices, reported at the bottom of Table 13.2, between the origin and destination distributions in the 1974 mobility table are as high as 45 and 44 percent, for men and women respectively. In the 1991 mobility table, the respective indices reach 27 and 38 percent. For comparison, in the nations of the CASMIN project the dissimilarity index in the men's class distributions of only three nations (Hungary, Poland, and Japan) is higher than 27 percent, although all are lower than 45 percent (Erikson and Goldthorpe 1992: 193, Table 6.2). Among women, however, the Israeli dissimilarity indices are within the range of the

[157] 'Work time' is taken as the first dominance criterion, so an employed person dominates one who is unemployed, while, among the employed, full-timers dominate part-timers. When partners still remain undifferentiated dominance is determined by the 'work position' criterion, so higher-level employment dominates lower-level employment (here I used the dominance 1 approach; see Erikson and Goldthorpe 1992: 266).

TABLE 13.2.*Marginal distribution of origin and destination class in the seven-class intergenerational mobility tables for Israeli men and women aged 25–64, and dissimilarity indices* (Δ) *derived from pairwise comparisons of origin, destination, and year of survey*

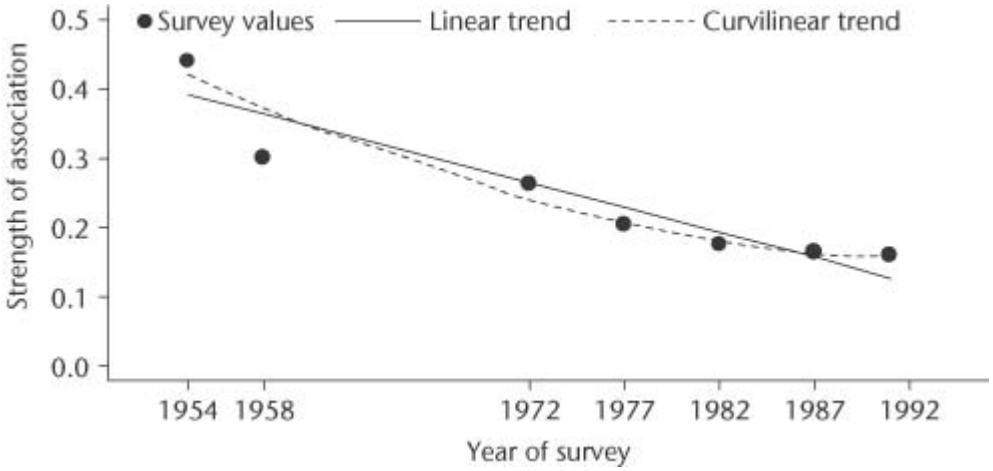
Class	Origins				Destinations			
	1974		1991		1974		1991	
	Men	Women	Men	Women	Men	Women	Men	Women
I+II	6	11	11	15	15	26	23	32
III	6	8	7	8	6	9	8	14
IVab	53	58	31	31	20	16	18	6
IVc	15	6	11	5	5	4	2	1
V+VI	6	6	16	18	22	7	29	9
VIIa	11	11	21	22	31	38	19	37
VIIb	3	0	2	2	1	0	0	1
N	2,969	1,080	3,414	2,978	2,969	1,080	3,414	2,978
			Men			Women		
Comparison			1974	1991	1974–91	1974	1991	1974–91
Dissimilarity indices(Δ)								
Origin/Destination			45	27		44	38	
Origin/Origin					27			28
Destination/Destination					18			14

five CASMIN nations for which data on women's class distributions were available. The high indices of dissimilarity in Israel imply that a high rate of intergenerational class mobility is expected for both men and women. The question yet to be resolved is whether total rates of mobility have increased as Israel has become more industrialised.

The total mobility rates calculated from the Israeli mobility tables are at high, but nonetheless constant, levels. Thus, for example, among men the Total Mobility Rates (TMRs) are 74 and 73 percent, in 1974 and 1991 respectively. In a comparative perspective, with the CASMIN nations, Israel appears to be among the most mobile nations (along with Sweden and Hungary, 73 and 76 percent respectively; see Erikson and Goldthorpe 1992: 195, Table 6.3). Among women, the TMRs are 76 and 77 percent. Compared with the CASMIN nations, Israeli women do not appear to have as exceptionally high a level of total mobility as men (see Erikson and Goldthorpe 1992: 245, Table 7.4).[158]

[158] In the complete mobility tables the TMRs are 69% and 65%, in 1974 and 1991, respectively.

FIG. 14.1. *Long-term trends in intergenerational occupational prestige mobility. Men in the Netherlands 1954–93*



Source: Ganzeboom and Luijkx (1995).

A more detailed examination of these data supports this general pattern of no change in the Israeli TMR. Figure 13.3 presents graphs that represent 'smoothed' yearly measures (one year moving average) of the Israeli TMRs based on the consolidated datasets.[159] The bold lines represent the TMRs of men (dark) and women (light). The dotted and broken lines then represent a decomposition of TMRs into total upward mobility and total downward mobility, respectively.

The trend that Fig. 13.3 reveals is very clear. The total rate of mobility has stayed fairly constant over time, for both men and women alike. One can say, then, that very little association exists between the industrialisation process and TMRs in Israel, as a comparison between Fig. 13.1 and 13.3 illustrates.

It is also apparent in Fig. 13.3 that throughout the period downward mobility is considerably more frequent among women than among men (see the broken lines). However, it would also appear that over time (for both men and women) downward mobility declines while upward mobility increases.[160] For Israeli men, moreover, upward mobility is considerably more frequent than downward mobility. For women, on the other hand, upward mobility would appear to exceed downward mobility only half way through the period.

[159] From the consolidated data I constructed a time series consisting of eighteen, forty-year birth-cohorts. That is, for each gender I constructed eighteen mobility tables comprising the following birth-cohorts: 1910–49, 1911–50, 1912–51, 1913–52, 1914–53, 1915–54, 1916–55, 1917–56, 1918–57, 1919–58, 1920–59, 1921–60, 1922–61, 1923–62, 1924–63, 1925–64, 1926–65, 1927–66.

[160] The same pattern emerges from the complete mobility tables. Thus, for example, between 1974 and 1991 upward mobility has increased from 22 percent to 30 percent, while downward mobility has decreased from 22 percent to 17 percent.

What, then, are the theoretical implications of this analysis? To begin with, the analysis showed that for men and women alike the available opportunities for mobility within a changing class structure have a strong effect on class mobility. In this respect, the empirical evidence I have presented supports the expectation that in industrial nations more opportunities are available at the top of the class structure. Thus, for Israeli men and women alike upward mobility has increased over time while downward mobility has decreased. Second, upward mobility has become more frequent than downward mobility in Israeli society. However, Israeli women's mobility pattern, as in other industrial societies (cf. Erikson and Goldthorpe, 1992: ch. 7), has a strong (though declining) component of downward movement. The theoretical implication of this latter finding would appear to reject Braverman's (1974) argument that the participation of women in the labour force would somehow offset the long-term tendency for the working class in industrial society to decline.

Trends in relative mobility

Table 13.3 presents the results of fitting the 'Constant Social Fluidity' (CnSF) and the Unidiff models to the 1974 and the 1991 mobility tables, for men and women separately. The second row of Table 13.3 shows that Model B (CnSF) misclassifies fewer than 3 percent of all cases, for both men and women. The model, moreover, captures more than 93 and 86 percent of the association between father's class and respondent's class, for men and women respectively. What is more, in the case of Israeli men, the returned *p*-value is very close to the conventional standard of 0.05 ($p = .04$), while it is well above this standard for women ($p = .38$). Overall, then, it is possible to accept this model for both men and women. The implication of this analysis is that the Israeli

TABLE 13.3. *Results of fitting the CnSF and the Unidiff models to the 1974 and the 1991 seven-class intergenerational mobility tables, Israeli civilian labour force aged 25–64, by gender*

Model	d.f.	Men(N = 6,383)				Women(N = 4,058)			
		G^2	p	rG^2	Δ	G^2	p	rG^2	Δ
A. Ind. {*OT*}{*DT*}	72	761	.00	—	12.0	284	.00	—	8.7
B. CnSF {*OT*}{*D-T*}{*OD*}	36	52	.04	93	2.4	38	.38	87	2.3
C. Unidiff	35	50	.05	93	2.5	36	.41	87	2.2

Notes: *O*= origin class; *D*= destination class; *T*= year of survey.

bic statistics (for Models A, B, and C, respectively) by gender: men: 130, −263, −257; women: −314, −261, −255.

fluidity pattern (men and women alike) has not changed over time. It is important, next, to explore the possibility that within this apparent similarity, the strength of the *OD* association has changed over time.

To address this question, I apply the Unidiff model (see Xie 1992; Erikson and Goldthorpe 1992; Firth 1998) to these data. The third row of Table 13.3 shows that, for both men and women, the Unidiff test did not improve significantly upon the fit obtained by the previous model (G^2 is reduced by only 2 points for the loss of 1 degree of freedom). The implication is that the Israeli fluidity level (men and women alike) has not changed—let alone increased—over time.[161]

Since our examination of a trend in the Israeli fluidity pattern relies on two cross-sectional datasets from two points in time, it could be that the above analysis misses out some of what may have happened *between* these two points. Thus, a secular trend towards increasing fluidity may be better detected across successive birth-cohorts. To pursue such an examination entails, first, a consolidation of the two mobility surveys, and then to fit the Unidiff model to the mobility tables of as many birth-cohorts as possible (at most, there are fifty-eight yearly birth-cohorts). To obviate a potential problem of low cell counts in yearly birth-cohorts, however, I fitted the Unidiff model to the eighteen mobility tables that form the time series that was introduced earlier (see n. 10 above).

The patterns that emerge from the analysis of the above-mentioned time series are presented in Fig. 13.4 and 13.5, for men and women respectively. For Israeli men, then, Fig. 13.4 shows that the strength of the *OD* association has, with some fluctuation, remained relatively constant over time. For Israeli women, however, Fig. 13.5 shows that the strength of the *OD* association has tended to weaken over time, particularly since the 1916–55 mobility table.[162]

To summarise, then, in the context of the theoretical debate about the effect of the industrialisation process on social fluidity, the Israeli analysis would appear to lend support to the camp that rejects the liberal thesis. It was shown that the industrialisation process in Israel, which began in the 1930s,

[161] The conclusion that the pattern of the *OD* association is constant over time was confirmed also when the complete mobility tables were analysed. Thus, for example, the p-value from the CnSF model is .122 (G^2 of 46 with 36 d.f.), and the Unidiff test did not improve significantly upon the fit obtained by this model (G^2 is reduced by about 2 points for the loss of 1 d.f.).

[162] Since the time series is constructed in such a way that many of the observations are included in more than one mobility table, I repeated the cohort analysis for three independent successive birth-cohorts (Israeli men and women who were born between 1909 and 1926 in the 1974MS; Israeli men and women who were born between 1927 and 1949 in both mobility surveys; and Israeli men and women who were born between 1950 and 1966 in the 1991MS). The results of this analysis confirmed my earlier conclusion. Whereas, for example, the CnSF model appears to fit the data well for both men and women (the model misclassifies fewer than 5 percent of the cases, and the returned p-values are well above the .05 level), the Unidiff model improves significantly upon the fit obtained by this model *only* for women (G^2 is reduced by 6 points for the loss of 2 d.f, $p < .05$). Under this model it is estimated that amongst women the strength of the *OD* association in the 1927–49 cohort is 61% of that in the 1910–26 cohort, while a further decline in the strength of this association is apparent in the 1950–66 cohort.

FIG. 14.2.*(a) Estimated scaling parameters for EGP classes (men and women and their fathers separately, against class number). (b) Estimated scaling parameters for EGP classes (men and women and their fathers separately, against ISEI score). (c) Estimated diagonal parameters (men and women separately)*

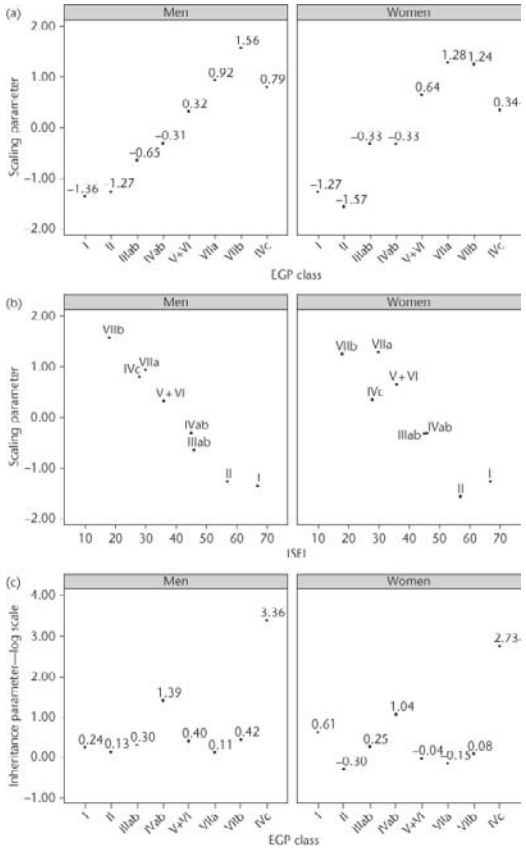
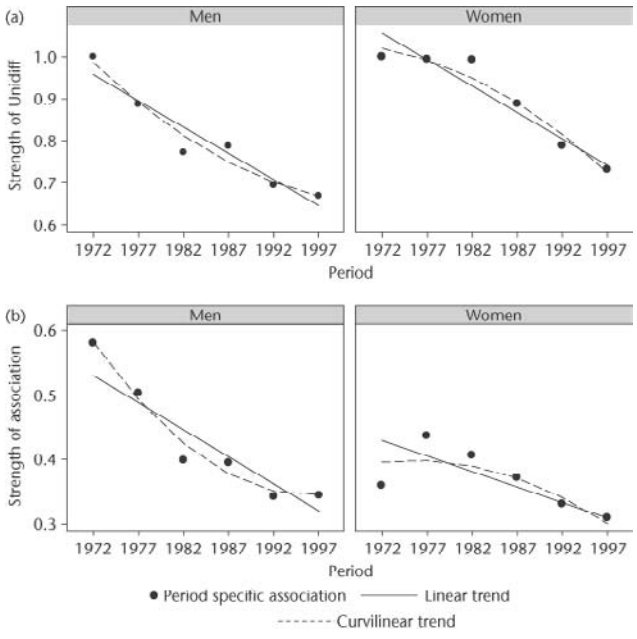


FIG. 14.3.*(a) Trends in Unidiff for bivariate origin–destination (men and women separately). (b) Trends in scaled uniform association for bivariate origin–destination (men and women separately)*



does not appear to have affected the Israeli fluidity *pattern*. The analysis further throws doubt on the assumption that a causal (and functional) link exists between industrialisation and increasing fluidity *levels*. This is in spite of the finding that the fluidity level of Israeli women may have slightly increased over time. This is because, if we accept that industrialisation is the mechanism that causes greater fluidity in society, it should apply to men and women alike. However, the analysis showed that the fluidity level of Israeli men, and households, has not weakened over time.

Commonality and variation in social fluidity

The analysis above was concerned with very general (global) tests of propositions about changes over time in social fluidity. The objectives of the following analysis are to provide a more detailed description of the Israeli fluidity pattern, and to examine the ways in which this detailed pattern may have changed over time. These objectives can be reached by applying the so-called 'core model' of social fluidity (cf. Erikson and Goldthorpe 1992) to the Israeli mobility tables. Previous research in Israel (Goldthorpe et al. 1997; Yaish 1998, 2000) has shown that the core model captures, with few modifications, the fluidity pattern of Israeli men. The point of departure for the following analysis is thus the variant core models that were applied to and accepted for the Israeli data (see appendix B in which the Israeli variants of the core model are described).[163] In what follows, I expand this analysis to Israeli women.

Applying the Israeli model: men

The results of fitting the Israeli variant models to the 1974 and the 1991 mobility tables of Israeli men are presented in panel A of Table 13.4.[164] These models misclassify dissimilarity rider (D) in fewer than 3.3 percent of the cases, capture more than 90 percent of the association between origin and destination class, and the returned *p*-values from the models are higher than the conventional 0.05 level. On all accounts, then, these models fit the data well. It is possible now to examine the parameter estimates derived from these models, as presented in panel B, and to compare them to the core parameters estimated by Erikson and Goldthorpe (1992) using data from several European countries.

Several points of interest emerge from the comparison. Beginning with the parameters of the 1974 variant model (Model C), it is shown that all parameters

[163] As explained elsewhere (Yaish 1998, 2000), there are two variant core models in the Israeli case: a variant model for 1974 mobility table and a variant model for the 1991 mobility table.

[164] The results reported in Table 13.4 are slightly different from those presented by Yaish (1998, 2000). This is due to the fact that the destination class categories were modified in the current analysis to allow the inclusion of women.

TABLE 13.4. *Results of fitting the core model of social fluidity to the seven-class intergenerational mobility table for Israeli men aged 25–64, by year of survey*

Model	d.f.	1974 (N = 2,969)				1991 (N = 3,414)			
		G^2	p	rG^2	Δ	G^2	p	rG^2	Δ
A. Ind.	36	385	.00	—	11.4	376	.00	—	12.5
B. Core	28	95	.00	75	6.2	83	.00	78	6.0
C. Variant	28	37	.11	90	2.9	37	.12	90	3.3
D. C–n.s.[a]	30/29	44	.05	89	3.1	37	.15	90	3.3

Note: Bic statistics (for Models A, B, C, and D, respectively) by year of survey: 1974: 97, −129, −187, −196; 1991: 83, −145, −191, −199.

[a] C–n.s. = Model C omitting non-significant parameters.

TABLE 13.5. *Results of fitting the core model of social fluidity to the seven-class intergenerational mobility table for Israeli women aged 25–64, by year of survey*

Model	d.f.	1974 (N = 1,080)				1991 (N = 2,978)			
		G^2	p	rG^2	Δ	G^2	P	rG^2	Δ
A. Ind.	36	104	.00	—	9.7	179	.00	—	8.4
B. Core	28	41	.05	61	6.1	55	.00	69	4.6
C. Variant	28	34	.21	68	5.2	44	.03	75	3.5
D. C–n.s.	n.a./30			n.a.		46	.03	74	3.7

Note: Bic statistics (for Models A, B, C, and D, respectively) by year of survey: 1974: −147, −155, −162, n.a.; 1991: −109, −169, −180, −194.

* C–n.s. = Model C omitting non-significant parameters.

achieve their expected sign. This suggests that the Israeli fluidity pattern, taken as a whole, follows the general expectation of the core model. Having said that, a deviation from the core level is observed with reference to three effects: (1) a non-significant IN2 effect; (2) a non-significant AF1 effect; and (3) a weak sectoral effect (SE). In what follows these deviations from the core level and their implications for the Israeli fluidity pattern will be discussed.

To begin with, the statistically non-significant IN2 effect in this variant model implies that the propensity for immobility among members of the Israeli service class, petty bourgeoisie, and farmer class is lower than the core level.[165] Moreover, the parameter estimates (see Model Δ in panel B) indicate

[165] Since the majority of Israelis from petty bourgeois origins are sons of immigrants, it may be expected that they will have a relatively high propensity for mobility (e.g. Tyree et al. 1979 provide a discussion on the effect of immigration on social fluidity; see also Yaish 1998: ch. 7, 2002). This being the case, the non-significant IN2 term in the Israeli variant model may refer to the petty bourgeoisie only. However, a model that excludes the IN2 term from the cell indicating immobility of the petty bourgeoisie did not confirm this hypothesis, and the IN2 term for immobility of the service and the farmer classes was still not significant.

that the propensity for immobility in these classes is about half the core level. For example: the additive odds representing the propensity for immobility of the service class and the petty bourgeoisie, where IN1 and IN2 apply, are 1.70 in Israel compared to a core level of 3.45 ($e^{0.53} = 1.70$ and $e^{(0.43+0.81)=1.24} = 3.45$ respectively). Likewise for the farmer class, where IN1, IN2, and IN3 apply, the additive odds for immobility are 3.74 in Israel compared to 7.24 in the core level ($e^{1.32} = 3.74$ and $e^{1.98} = 7.24$ respectively). This confirms the conclusions of other research that Israeli society is a highly 'fluid' society in a comparative perspective (Tyree et al. 1979; Goldthorpe et al. 1997; Yaish 2000). Second, the non-significant AF1 effect and the weak SE effect suggest that the boundaries between agricultural and non-agricultural classes are permeable in Israel. On the one hand, no specific barrier to movement between the farm-working class (VIIb) and the service class (I+II) appears to exist (the AF1 term is not significant). On the other hand, the general SE term in Israel reduces such mobility to only two thirds of what it would have been in the absence of this effect ($e^{-0.51} = 0.60$), compared with one third in the core model ($e^{-1.03} = 0.36$). The relatively easy intersectoral movement of labour in Israel may reflect the Zionist ideology and government intervention as outlined earlier. Interestingly, a similar pattern is found in Hungary (Erikson and Goldthorpe 1992: 153) where government intervention has played an important role in enforcing such a pattern.

Moving next to the parameter estimates from the 1991 variant model, Table 13.4 shows that all parameters in the variant model (Model C) achieve their expected sign, as in 1974. However, some deviations from the core pattern and the 1974 pattern are apparent. First, the relatively weak SE term in 1974 is no longer significant in 1991. However, the now statistically significant AF1 term (representing the barrier to movement between the farm-working class (VIIb) and the service class (I+II)) suggests that a specific barrier for intersectoral mobility exists in the 1991 mobility table. Thus, some intersectoral barriers for mobility have always existed in Israel—although these barriers have always been very weak. As mentioned earlier, the relatively easy intersectoral movement in Israel may be the result of Zionist ideology and government intervention (cf. Yaish 2000).[166] Second, the pattern of immobility has changed between 1974 and 1991. This can be seen with reference to the IN2 effect—the effect that enhances immobility for the service class

[166] Goldthorpe et al. (1997) report a similar finding. These authors, however, give two alternative explanations for this feature. First, this deviation is explained by a pro-agricultural ideology in Israel which aims to create a *Hebrew farmer*. Second, this deviation may be the result of a small sample size which, in particular, affects the number of individuals in the agricultural sector (see Goldthorpe et al. 1997: 9).

and petty bourgeoisie. The IN2 term has a significant effect in the 1991 model, while it has no significant effect in the 1974 model. This piece of evidence suggests that the Israeli fluidity pattern has shifted *closer* to the core level over time. Finally, comparing the inheritance effects between this model and the core model reveals two distinctive features. On the one hand, the propensity for immobility of the service class and petty bourgeoisie, where IN1 and IN2 apply, is only about half of the core level ($e^{0.63} = 1.88$ and $e^{1.24} = 3.45$ respectively). On the other hand, inheritance among Israeli farmers is stronger than the core level by a factor of one-and-a-half ($e^{2.42} = 11.2$ and $e^{1.98} = 7.24$ respectively). Here again we see the distinctive position of the agricultural sector—this time its elite—in the Israeli class structure. Finally, hierarchical barriers to mobility in Israel seem to be slightly lower than the core level. It is calculated that short-range mobility, where HI1 applies, reaches nearly nine-tenths of what it would have been in the absence of such an effect ($e^{-0.16} = 0.85$), and long-range mobility, where HI1 and HI2 apply, reaches about two thirds of what it would have been in the absence of such effects ($e^{-0.34} = 0.71$).[167] The equivalent figures under the core model are four-fifths ($e^{-0.22} = 0.80$) and just over a half ($e^{-0.64} = 0.52$), respectively.

Applying the Israeli model: women

The results of fitting the variant models to the 1974 and the 1991 mobility tables of Israeli women are presented in panel A of Table 13.5. The 1974 model misclassifies (Δ) little more than = percent of all cases, captures 67 percent of the association between origin and destination class, and the returned *p*-value from the model is higher than the conventional .05 level. Although the model performed better in the case of men, the overall performance of the model in the case of women led me to accept it in their case as well.[168] A similar conclusion is reached regarding the 1991 variant model. Although, as can be seen in Table 13.5, the returned *p*-value from the model does not reach the conventional 0.05 level ($p = .03$), the model misclassifies fewer than = percent of cases, and captures 75 percent of the association between origin and destination class. Accepting the same models for men and women suggests that men and women in Israeli society share the same fluidity pattern.[169]

[167] Note, however, that in the 1991 model the AF1 term is statistically significant. Since the AF1 term refers to a combination of hierarchical and sectoral barriers to mobility, it may offset the hierarchy (particularly HI2) and the SE parameters.

[168] It is worth noting that the core model was originally developed to characterise the class fluidity pattern of men. In fact, the model was developed based on the mobility tables of French and English men (cf. Erikson and Goldthorpe 1992: ch. 4).

[169] Indeed, applying the CnSF and the Unidiff models to men and women's mobility tables, for each survey separately, confirmed this suggestion. This analysis also reveals that the main difference between the two genders, as far as fluidity is concerned, is that the *OD* associations in the women's mobility tables were estimated (under the Unidiff model) to be weaker, by a factor of 0.7, than in the men's tables. This would then imply that the 'core' parameter estimates from the women's tables should be smaller than those estimated from the men's tables.

TABLE 13.6. *Results of fitting the core model of social fluidity to the seven-class intergenerational mobility table (controlling for education) for Israeli men aged 25–64, by year of survey*

Model	1974 (N = 2,957)				1991 (N = 3,367)			
	d.f.	G^2	Δd.f.	δG^2	d.f.	G^2	δd.f.	ΔG^2
A. null	17,736	9,861.7	—	—	20,196	10,966.0	—	—
B. var	17,728	9,514.4	8	347.3	−0,188	10,645.0	8	321.0
C. B − n.s	17,730	9,521.0	2	6.6	−0,189	10,645.0	1	0.0
D. B + ed	17,724	8,390.7	6	1,130.3	−0,183	9,371.4	6	1,273.6
E. D–n.s	17,727	8,394.7	3	4.0	−0,185	9,372.0	2	0.4

Note: Bic statistics (for Models A, B, C, D, and E, respectively) by year of survey: 1974: −131,883, −132,167, −132,176, −133,258, −133,278; 1991: −153,061, −153,317, −153,326, −ndash;154,550, −154,566.

* D–n.s. 5 Model D omitting non-significant parameters.

TABLE 13.7. *Results of fitting the core model of social fluidity to the seven-class intergenerational mobility table (controlling for education) for Israeli women aged 25–64, by year of survey*

Model	1974 (N = 1,072)					1991 (N = 2,922)			
	d.f.	G^2		Δd.f.	ΔG^2	d.f.	G^2	Δd.f.	ΔG^2
A. null	6,426	3,323.8		—	—	17,526	8,621.6	—	—
B. var	6,418	3,254.0		8	69.8	17,518	8,492.7	8	128.9
C. B − n.s			n.a.			17,520	8,494.1	2	1.4
D. B + ed	6,412	2,725.9		6	528.1	17,514	7,192.6	6	1,302.0
E. D–n.s			n.a.			17,517	7,194.4	3	1.8

Note: Bic statistics (for Models A, B, C, D, and E, respectively) by year of survey: 1974: −41,533, −41,526, n.a., −42,012, n.a.; 1991: −131,236, −131,301, −131,316, −132,570, −132,592.

Δd.f. 5 Change in degrees of freedom; ΔG^2 = Change in G^2.

It is possible now to examine the parameter estimates derived from these variant models. Beginning with the 1974 survey, Model C in Table 13.5 shows that all the parameters achieve their expected sign. This suggests that the Israeli women's fluidity pattern, taken as a whole, follows the general expectation of the core model. However, only two parameters in the 1974 model are statistically significant (IN2 and AF2), and it may well be that with a larger sample size the statistical inference from this analysis fares better.[170] But even if one is prepared to accept these parameters, with a very low level of certainty, it is still apparent that their size is considerably lower than the core

[170] Note the very small sample size (N = 1,080). The very small sample size also resulted in unstable estimates. Thus when I started removing non-significant parameters from the model, the size—and standard errors—of the remaining parameters changed substantially.

and the men's parameters (see Table 13.4). This, then, points to the fact that Israeli women enjoy a relatively high level of fluidity compared with men (see also note 21 above).

Moving next to the 1991 variant model (Model C). Most of the parameter estimates from this model, reported in panel B of Table 13.5, achieve their expected sign. Now, however, the majority of the parameters are statistically significant, and their size would appear to have shifted closer to the core level.[171] This trend is also evident for Israeli men. However, several interesting differences do exist between women's and men's fluidity patterns. First, the relatively strong inheritance effect amongst male farmers (IN3) does not appear to apply for women. In fact, Israeli women of farm origins do not appear to benefit from intergenerational transmission of land and farms (IN3 is very weak and not statistically significant). This is not a surprising finding, as in Jewish agrarian communities (*Moshavim*) it is possible for families to divide their farm only to the benefit of a continuing *son* who will then become a farmer in that community. In the historically more agrarian Arab community an additional factor may be at work. It is well documented that most Arab farmers had lost their land to the newly established Jewish state, resulting in a very low level of class inheritance amongst farmers (cf. Yaish 1998, 2001).

Second, the general inheritance of class position (IN1)—and particularly inheritance of farm, bourgeois, and service class positions (IN2)—would appear to be weaker among women than men. This points to the fact that the level of women's fluidity is generally higher than men's. As women's class position is partly determined by marriage (cf. Erikson and Goldthorpe 1992), it is expected that it will not be strongly related to their father's class position. Finally, the SE term for mobility is statistically significant for women but not for men—although it is still lower than the core level.

The results of the above analyses can be easily summarised as follows:

(1) The Israeli fluidity pattern is well captured by the core model in the 1974 and 1991 mobility tables;
(2) Israeli men and women share a basically similar fluidity *pattern*—as it is captured by similar core models; however,
(3) Israeli women's *level* of fluidity is higher than that of men—as it is captured by the size of the core parameters;
(4) Overall, fluidity in Israel appears to be at a higher level compared to the core level; however,
(5) The Israeli fluidity pattern has shifted closer to the core pattern over time.

[171] The very small sample size in the women's 1974 mobility table makes a more detailed examination of changes over time in women's fluidity patterns problematic.

In sum, I showed that social institutions and other particular features of Israeli society have a limited though distinctive influence on the Israeli fluidity pattern (see, further, Yaish 1998, 2000). Nonetheless, I was also able to show that the Israeli fluidity pattern would appear to oscillate around (and even shift closer to) a common fluidity pattern that characterises industrial nations. It is within this cross-national commonality that the Israeli fluidity *level* would appear to be near the most fluid end. [172]

Ascription and achievement in the process of social fluidity

Educational qualifications are often viewed as the most important determinant of occupational success (cf. Shavit and Müller 1998). It is also argued that the educational system is a sorting mechanism in society (see e.g. Collins 1979), which replaces the more traditional selection mechanisms such as the extended family and the juridical system (see e.g. Sorokin 1964: 169–70). It is clear from the above that the effect of education on social mobility is related to the way the educational system of society is organised. As the subject of this study is Israeli society, I shall begin with a review of Israel's educational system.

Israel's educational system is highly centralised and standardised: the Ministry of Education certifies teachers, develops curricula, sets the matriculation exams, and maintains the administration. And most schools and all universities are publicly funded.[173] The Israeli education system has undergone two main stages of development since the founding of the state of Israel. Soon after independence, a compulsory education law was introduced (the 'Compulsory Education Law' 1949); then, in 1968, the entire Israeli school system was reformed.[174] The objectives of the educational reform were not

[172] It should be further noted here that the Israeli variant core models achieved an acceptable fit also to the 1974 and the 1991 *complete* mobility tables. An examination of the parameter estimates of these models showed how closely these resemble men's parameters, particularly in 1974. This is not surprising, as women's participation in *full* -time employment in the Israeli labour force is significantly lower than men's (see Fig. 13.2). This being the case, the majority of Israeli households' class position is determined by the husband's class position. Indeed, only about 15% in 1974 and 30% in 1991 of Israeli households' class positions are determined by women's class position. Details of these analyses are available from the author on request.

[173] At the same time, Israel's educational system is differentiated along several lines. First, there are separate Jewish and Arabic schools. Second, within the Jewish system, there are several streams catering to different shades of religious orthodoxy (Kraus et al. 1998).

[174] Prior to this reform, attendance at school was compulsory by law until age fourteen (or completion of the eighth grade), and the Israeli school system was a 1 + 8 + 4 system. As part of the reform the minimum leaving age was raised to fifteen (with tuition free until age sixteen), and the Israeli school system was changed to a 1 + 6 + 3 + 3 system. As of today, however, the Israeli school system consists of an almost equal mixture of the pre- and post-reform structures (see Kraus et al. 1998 and the citations therein).

merely 'cosmetic'—to change the *structure* of the educational system. The reformers aimed to change the *process* of educational attainment in Israel by adopting an *equal opportunity approach* that would give each pupil the chance to fully develop his/her potential.

In sum, then, no a priori structural inequalities would appear to exist within the Israeli school system. This is because the Israeli educational system is standardised and centralised by the Israeli Ministry of Education. Second, reform of the Israeli education system in the late 1960s aimed to *equalise* educational opportunities between individuals from different social backgrounds. These features represent a clear government intervention that aims to bring Israel closer to the meritocratic model. To this, proponents of the liberal thesis would add that the industrialisation process itself should also promote a meritocratic society because in industrial society achievement replaces ascription in the process of class reproduction. Within this framework, moreover, merit is equated with education.

Having said that, the following analysis aims to estimate the extent to which, if at all, the association between class origins and destinations is mediated through education. The point of departure in this analysis is that the association between origins and destinations is fairly adequately estimated by the eight parameters of the variant core model that was fitted to the Israeli mobility tables earlier in this chapter. Accordingly, I introduce to the variant core model measures of individual educational attainment, and examine the effects of so doing on the parameters initially estimated.[175] To the extent that these parameters shift towards zero, the association between class origins and destinations can be regarded as being mediated by the educational attainment variable that was introduced. Before we proceed, however, I should remind the reader that due to data limitations, as explained in the introduction, the educational variable in the multinominal logit models is years of schooling.[176] Having made these preliminary clarifications, we can embark on the analysis.

Table 13.6, then, presents the results of fitting the Israeli variant core model to men's mobility tables in 1974 and 1991. Model C is identical to the log-linear model (Model D) in Table 13.4, and Model Δ adds the education variable to this variant model. It can be seen that the inclusion of the education variable, in both 1974 and in 1991, is statistically significant (for 6 d.f. G^2 is reduced by more than 1,000 points). This implies that education mediates some of the association between class origins and destinations. Put in other words, education has an important and significant role in the allocation

[175] This procedure simply requires that I rewrite the topological log-linear model (i.e. the Israeli variant core model) as a multinomial logit model for individual-level data (cf. Breen 1994; Logan 1983).

[176] Given my data constraints, years of schooling should be viewed as a proxy measure of educational qualifications for the purpose of estimating how much the latter mediates the direct *OD* association.

TABLE 13.A1.*Counts and marginals in the seven-class intergenerational mobility table Israelis aged 25–64, in the 1974 IMS (top) and 1991 IMS (bottom) surveys*

Class of origin	Class of destination								
	I + II	IIIa	IVab	IVc	V + VI	IIIb + VIIa	VIIb	*N*	%
Men's mobility tables									
I + II	80	11	19	7	31	25	—	173	6
	178	33	46	9	69	45	—	380	11
IIIab	48	27	26	1	38	43	1	184	6
	83	21	29	1	64	31	1	230	7
IVab	218	89	382	51	340	481	8	1,569	53
	217	83	273	16	283	199	1	1,072	31
IVc	40	20	78	79	67	161	4	449	15
	83	16	74	44	73	97	1	388	11
V + VI	34	13	29	12	62	35	1	186	6
	96	38	79	7	227	92	1	540	16
VIIa	35	14	44	5	98	133	4	333	11
	126	77	104	7	244	164	2	724	21
VIIa	3	2	16	6	14	30	4	75	3
	10	13	12	1	25	19	—	80	2
N	458	176	594	161	650	908	22		
	793	281	617	85	985	647	6		
%	15	6	20	5	22	31	1		
	23	8	18	2	29	19	—		
Women's mobility tables									
I + II	57	9	15	1	8	24	1	115	11
	225	56	25	2	28	98	—	434	15
IIIab	33	11	4	3	5	34	—	90	8
	89	35	11	2	18	83	1	239	8
IVab	125	53	120	23	46	254	2	623	58
	273	132	59	9	92	354	8	927	31
IVc	12	3	9	12	5	19	—	60	6
	61	20	9	4	11	48	6	159	5
V + VI	17	5	11	3	6	27	—	69	6
	136	87	35	—	66	198	3	525	18
VIIa	32	11	16	1	4	54	—	118	11
	155	90	28	6	61	301	7	648	22
VIIb	—	—	—	1	—	3	—	4	—
	5	6	4	1	4	25	1	46	2
N	276	92	175	44	74	415	3		
	944	426	171	24	280	1,107	26		
%	26	9	16	4	7	38	—		
	32	14	6	1	9	37	1		
Complete mobility tables									
I + II	146	10	22	6	32	28		244	8
	428	37	39	9	67	50	0	630	17
IIIab	40	53	22	3	38	46	1	203	7
	74	115	28	2	50	55	1	325	9
IVab	207	98	405	51	316	491	5	1,573	51
	215	95	275	20	248	259	3	1,115	30
IVc	34	17	78	82	62	164	4	441	14
	66	16	66	40	60	95	3	346	9
V + VI	32	13	29	12	74	38	1	199	6
	96	40	72	4	200	119	1	532	14
VIIa	30	13	44	3	95	183	3	371	12
	115	72	96	6	189	250	2	730	19
VIIb	2	2	16	6	14	31	5	76	2
	7	12	13	2	21	18	0	73	2
N	491	206	616	163	631	981	19		
	1,001	387	589	83	835	846	10		
%	16	7	20	5	20	32	1		
	27	10	16	2	22	23	0		

TABLE 13.A2.*Design matrices for the Israeli variants of the core fluidity model*

1. Matrices identical to original core model and common to 1974 and 1991

1 1 1 1 1 2 * AF1	1 2 1 1 1 1 1 * AF2
1 1 1 1 1 1 1	2 1 1 1 1 1 1
1 1 1 1 1 1 1	1 1 1 2 1 2 1
1 1 1 1 1 1 1	1 1 2 1 1 2 1
1 1 1 1 1 1 1	1 1 1 1 1 1 1
1 1 1 1 1 1 1	1 1 1 1 2 1 1
2 1 1 1 1 1 1	1 1 1 1 1 2 1

2. Affinity matrices for 1974

1222222*HI1 2111122 2111122 2222211 2111122 2222211 2222211	1111122*HI2 1111111 1111111 2111111 1111111 2111111 2111111	2111111*IN1 1211111 1121111 1112111 1111211 1111121 1111112
2111111*IN2 1111111 1121111 1112111 1111111 1111111 1111111	1111111*IN3 1111111 1111111 1112111 1111111 1111111 1111111	1112112*SE 1112112 1112112 2221221 1112112 1112112 2221221

3. Affinity matrices for 1991

1111112*AF1 1111111 1111111 1111111 2111111 1111111 2111111	1211111*AF2 2111111 1112111 1121121 1111111 1111211 1111121

of Israeli men to their respective class position. However, the parameter estimates from this Model (D), presented in the second panel, indicates that not all the association between class origins and destinations—as this is captured by the eight core parameters—is mediated by education. Furthermore, education does not appear to have a uniform effect on the core parameters. Whereas, for example, inheritance effects (IN1 and IN3) do not appear to move closer to zero once education is controlled for, hierarchical barriers to mobility (HI1 and HI2) would appear to be eliminated almost completely. This suggests that education is important for a certain kind of mobility, while less so for another.

An examination of changes over time in the effect of education on the Israeli fluidity pattern, by comparing the core parameters from Models E between 1974 and 1991, reveals a remarkably stable pattern. To begin with, the three statistically significant parameters in the 1974 model (IN1, IN3, and AF2) remain statistically significant in the 1991 model. What is more, the size of each of these parameters has not changed, statistically significantly, over time.[177] The implication of this is that the effect of education on the *OD* association, as far as these three core parameters are concerned, is fairly constant over time. At the same time, it can be seen that in 1991 two parameters that were not statistically significant in 1974 are statistically significant (HI2 and AF1). It appears, furthermore, that in the 1991 model the HI2 term has become positive once education is controlled for. That is, the effect of education on social fluidity has changed over time such that it not only offsets long-range hierarchical barriers for mobility (as Model E in 1974 indicates), but also advances such mobility (as Model E in 1991 indicates). However, the statistically significant AF1 term in the 1991 model would appear to offset part of this temporal change. All of the above would then suggest that, although education mediates a large part of the *OD* association in Israeli society, its effect on this association has remained fairly constant over time. Put in other words, the stratification process in Israeli society, as far as the fluidity pattern of Israeli men is concerned, has not become increasingly meritocratic over time.

The same analysis is repeated for women (see Table 13.7). As in the men's analysis, the inclusion of the education variable, in both 1974 and in 1991, is statistically significant (for 6 d.f. G^2 is reduced by more than 500 points). However, the effect of education on social fluidity is different for men and women, particularly in 1974. Thus, for example, the inclusion of the education variable in the 1974 mobility table would appear to mediate completely the core parameters. In particular, the only two significant terms in Models B (IN2 and AF2) are no longer statistically significant. What is more, the hierarchical barriers to mobility, although not significant in either of models B or C (i.e. before or after the inclusion of the education variable), have become positive. The implication of this is that education not only promotes hierarchical mobility for women, but it also reduces the effect of class inheritance. [178]

In the 1991 mobility table, the effect of education on the core parameters is similar to the men's case. To begin with, education has an important and

[177] This conclusion is reached after a t -test was used to test each pair of these parameters. The results of this analysis are available from the author on request.

[178] Note, however, the very small N in this mobility table. For this reason the results of the analysis should be read with some caution.

TABLE 14.1.*Class structures for all men and women in the labour force for six five-year periods in the Netherlands (1970–99)*

	Class structure					
	1970–4	1975–9	1980–4	1985–9	1990–4	1995–9
Men						
I	16.2	18.3	16.3	18.5	20.9	24.0
II	14.9	21.9	23.2	24.4	26.1	26.1
III	12.5	8.0	9.8	9.9	9.1	11.9
IVab	9.9	6.6	5.6	5.2	5.0	3.4
V + VI	21.7	24.6	24.5	21.8	21.3	21.1
VIIa	16.5	13.6	15.3	15.9	13.1	10.4
VIIb	2.2	2.2	1.6	1.4	1.3	1.4
IVc	6.1	4.9	3.7	3.0	3.3	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Women						
I	7.1	8.1	5.0	8.1	9.6	11.1
II	21.2	27.1	30.1	30.9	35.2	34.5
III	36.1	40.2	42.3	40.6	36.9	39.7
IVab	11.8	5.8	5.5	5.8	3.8	3.0
V + VI	5.6	4.6	4.9	4.1	3.6	2.7
VIIa	15.4	11.9	10.3	9.3	9.3	7.8
VIIb	0.8	0.7	0.5	0.4	1.1	0.7
IVc	2.0	1.7	1.3	0.8	0.6	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 14.2.*Percentage mobile for all men and women in the labour force for six five-year periods in the Netherlands (1970–99)*

	Men (%)	Women (%)
1970–4	69.2	78.0
1975–9	72.7	80.5
1980–4	73.8	79.5
1985–9	74.0	80.9
1990–4	74.3	81.7
1995–9	74.7	82.4

significant role in the allocation of Israeli women to their respective class position. However, not all of the association between class origins and destinations—as this is captured by the eight core parameters—is mediated by education. Furthermore, education does not appear to have a uniform effect on the core parameters. Whereas, for example, hierarchical barriers to mobility (HI1 and HI2) are no longer significant once education is controlled for, the inheritance effect (IN1) is—although it appears to move closer to zero. This suggests, as in the case of men, that education is important for a certain

kind of mobility, while less so for another. It also suggests that, over time, the effect of education in mediating class origin effects on Israeli women's fluidity pattern might have *weakened*. In particular, in 1991 education seems no longer to mediate the effect of class inheritance completely, as it did in 1974. Thus, one may argue, the stratification process in Israeli society, as far as the fluidity pattern of Israeli women is concerned, might have become *less* meritocratic over time.

As I have indicated earlier, however, the relatively small N in the 1974 women's mobility table would make an over time comparison of their core parameters somewhat problematic. In light of this, I am inclined to take a rather conservative approach in interpreting these results, and argue that the stratification process in Israeli society, as far as the fluidity pattern of Israeli women is concerned, has *not* become *more* meritocratic over time.

Conclusions

This chapter engaged with the debate concerning the consequences of the industrialisation process for social mobility and fluidity. Two contradictory views form this debate. On the one side, it is argued that a strong link exists between industrialisation and social mobility (cf. Treiman 1970). On the other side, it is argued that a link between industrialisation and social mobility does not exist (cf. Lipset and Zetterberg 1959; Sorokin 1959; Featherman, et al. 1975; Erikson and Goldthorpe 1992, among others). Studying mobility trends in the context of a unique society such as Israel sheds new light on this debate. Three issues were addressed in the analysis: (1) the extent to which absolute mobility has changed over time, (2) the extent to which relative mobility has changed over time, and (3) the extent to which education mediates relative mobility.

The analysis showed that for men and women alike the available opportunities for mobility within a changing class structure have a strong effect on class mobility. In this respect, the empirical evidence I have presented supports the expectation of the liberal thesis that in industrial nations more opportunities are available at the top of the class structure. Thus, it was shown that, for Israeli men and women alike, upward mobility has increased over time while downward mobility has decreased over the same period. At the same time, gender differences in mobility patterns were observed. In particular, the Israeli women's mobility pattern, as in other industrial societies (cf. Erikson and Goldthorpe 1992: ch. 7), has a strong (though declining) component of downward movement. This, in turn, would appear to reject a Marxist claim (see Braverman 1974) that the participation of women in the labour force would somehow offset the long-term tendency for the working

class of industrial society to decline. Finally, the analysis showed that the Israeli total rates of mobility (men and women alike) have stayed nearly constant over the years covered by these data. This constancy runs contrary to the liberal thesis explanation. Thus, it is concluded that social mobility and the industrialisation process do *not* go hand in hand (cf. Sorokin 1959).

The examination of changes over time in relative mobility in Israel led to a similar conclusion. That is, in the context of the theoretical debate about the effect of the industrialisation process on social fluidity, the Israeli analysis damages the liberal thesis that a causal (and functional) link exists between industrialisation and increasing fluidity. In spite of a nearly monotonic increase in Israel's GDP, the fluidity level of Israeli men has stayed nearly constant over time, while that of women has only recently increased slightly.

Nonetheless, the Israeli fluidity *pattern* (for men and women alike) has changed over time. I have shown that particular historical and political features of Israeli society may have affected the Israeli fluidity pattern. These changes, moreover, are mostly associated with land distribution (cf. Yaish 1998, 2000). That is, changes over time in the Israeli fluidity pattern do not correspond to the industrialisation process. At the same time, and in spite of the above, I have shown that there appears to be some force that pulls the Israeli fluidity pattern (men, women, and ultimately households) closer to a common level of fluidity. This common level and pattern of fluidity, moreover, is well captured by the core model of social fluidity developed by Erikson and Goldthorpe (1992).

Finally, the analysis examined the effect of education on class mobility in Israel. It was shown in this analysis that education has a very specific, and often limited, effect on the mobility process. In the Israeli case, it would appear, education affects mainly hierarchical mobility. Intergenerational inheritance of class position, for example, is not affected by education. This, then, would suggest that the Israeli stratification system may have some meritocratic components. However, it is also apparent that non-meritocratic components of the Israeli stratification system are common. More importantly, the non-meritocratic elements do not appear to have weakened over time.

The implications of this study go beyond the immediate concerns of Israeli sociologists and members of Israeli society. The study has value, I believe, for all students of social mobility and stratification in industrial nations. The results of this chapter serve to reject the idea that economic progress affects the process of stratification in industrial nations. In that respect, exponents of the liberal thesis offer a very functional and simple explanation, with little empirical support, for what should happen in the industrialisation process. Accordingly, stratification processes affect individuals' actions, but are beyond the control of individuals; their only determinant is the industrialisation

process and its logic. Once society internalises this logic, which is imposed on society, the process of stratification is affected.

A rejection of this scenario implies that other factors affect the stratification process. These factors, moreover, would appear to be common to all industrial societies and fairly constant over time. In light of the above, then, it is argued here that the stratification process is chiefly affected by individuals' actions—to fulfil their aspirations, to maintain their social standing, and/or in response to external factors. This being the case, then, the driving force behind social mobility is social—that is, individual-action.

Appendix A

TABLE 14.3. *Fit statistics for bivariate association models for O (origin class) and D (destination class), men and women in the labour force (ilf), six five-year periods*[a]

Type of model	Men				Women ilf		
	d.f.	L^2	*p*	bic	L^2	*p*	bic
Panel A: unconstrained association models							
A Conditional independence	294	5388.3	.000	2465.6	1271.6	.000	−1401.9
B Common social fluidity	245	340.2	.000	−2095.5	238.7	.601	−1989.2
C Uniform differences	240	274.1	.065	−2111.8	225.1	.747	−1957.4
D Linear uniform differences	244	280.3	.055	−2145.4	226.0	.789	−1992.8
E Curvilinear uniform differences	243	278.0	.061	−2137.7	225.6	.782	−1984.1
Panel B: equal scaled association models							
F Free diagonals	234	534.9	.000	−1791.4	322.6	.000	−1805.3
G Equal Diagonals	274	596.9	.000	−2127.0	358.7	.000	−2133.0
H Unidiffed diagonals	269	587.4	.000	−2086.8	354.1	.000	−2092.0
I Linear association and linear scaled diagonals	277	597.9	.000	−2155.8	356.8	.001	−2162.1
J Linear association and equal diagonals	278	605.0	.000	**−2158.7**	360.6	.001	**−2167.4**
K Curvilinear associations and curvilinear diagonals	275	591.4	.000	−2142.5	355.5	.001	−2145.2
L Curvilinear associations and equal diagonals	277	598.9	.000	−2154.8	359.8	.001	−2159.1
Panel C: unequal scaled association models							
Fa Free diagonals	−28	510.5	.000	−1756.1	305.5	.000	−1767.8
Ga Equal diagonals	268	572.5	.000	−2091.7	340.8	.002	−2096.3
Ha Unidiffed diagonals	263	563.3	.000	−2051.3	335.6	.002	−2056.0

Ia Linear associations and linear scaled diagonals	271	574.0	.000	−2120.0	338.2	.003	−2126.1
Ja Linear associations and equal diagonals	272	580.9	.000	−2123.1	342.4	.002	−2131.1
Ka Curvilinear associations and curvilinear diagonals	269	567.5	.000	−2106.7	337.3	.003	−2108.9
La Curvilinear associations and equal diagonals	271	574.7	.000	−2119.4	342.0	.002	−2122.3

[a] Best fitting model according to bic is in boldface.

TABLE 14.4. *Fit statistics for partial association models for O (origin class), D (destination class), and E (education), men and women in the labour force (ilf)*[a]

Type of model	Men				Women ilf		
	d.f.	L^2	*p*	bic	L^2	*p*	bic
Panel A: Unidiff models							
A0 Common social fluidity	1337	1746.5	.000	−11544.9	1239.2	.973	−10918.9
A1 Unidiffed common social fluidity	1322	1610.8	.000	−11531.5	1200.6	.992	−10821.1
A1a Linear *OE*; unidiffed *ED* | *O* and *OD* | *E*	1326	1622.7	.000	−11559.4	1203.3	.993	−10854.8
A1b Linear *OD* | *E*; unidiffed *OE* and *ED* | *O*	1326	1614.9	.000	−11567.2	1202.5	.993	−10855.5
A1c Linear *ED* | *O*; unidiffed *OE* and *OD* | *E*	1326	1651.8	.000	−11530.3	1215.1	.986	−10843.0
A1d Linear *OE, ED* | *O* and *OD* | *E*	1334	1669.0	.000	−11592.6	1219.4	.989	−10911.4
A1e Constant *OE*; unidiffed *OD* | *O* and *ED* | *O*	1327	1645.2	.000	−11546.8	1207.5	.991	−10859.6
A1f Constant *OD* | *E*; unidiffed *OE* and *ED* | *O*	1327	1648.7	.000	−11543.3	1209.0	.991	−10858.1
A1g Constant *ED* | *O*; unidiffed *OE* and *OD* | *E*	1327	1669.1	.000	−11523.0	1222.8	.981	−10844.3
A1h Curvilinear *OE, ED* | *O* and*OD* | *E*	1331	1642.9	.000	−11588.9	1207.9	.993	−10895.6
Panel B: scaled association models—scalings							
B1 All unequal scores—free diagonals	1334	1936.5	.000	−11325.1	1307.5	>.500	−10823.3
B1a Equal *E*-scores	1336	1981.5	.000	−11300.0	1337.2	.486	−10811.8
B1b Equal *O*-scores	1340	2043.1	.000	−11278.1	1343.5	.468	−10841.9
B1c Equal *D*-scores	1340	2039.5	.000	−11281.7	1341.2	.485	−10844.1
B1d Equal *O*–D scores	1346	2145.1	.000	−11235.8	1399.2	.153	−10840.7
B1e Equal *O*–*D* scores; equal *E* scores	1348	2192.6	.000	−11208.2	1410.7	.115	−10847.4
Panel C: scaled association models—trends with equal scalings							
C0 Linear associations—free diagonals	1360	2243.8	.000	−11276.3	1428.7	.095	−10938.6
C1 Curvilinear associations—free diagonals	1357	2220.4	.000	−11269.9	1416.6	.127	−10923.3
C2 Curvilinear associations—unidiffed diagonals	1392	2272.2	.000	−11566.0	1439.3	.184	−11218.9
C3 Curvilinear associations—curvilinear diagonals	1395	2275.1	.000	−11593.0	1439.8	.197	−11245.7
C4 Curvilinear associations—linear diagonals	1396	2275.5	.000	−11602.5	1439.8	.203	−11254.8
C5 Curvilinear associations—fixed diagonals	1397	2280.9	.000	−11607.1	1443.2	.190	−11260.5
C6 Linear associations—fixed diagonals	1400	2306.9	.000	−11610.8	1455.3	.148	**−11275.7**
C7 Free associations—fixed diagonals	1396	2251.2	.000	**−11626.8**	1437.2	.216	−11257.4

[a] Best fitting model according to bic is in boldface.

Appendix B

The Israeli model of social fluidity

Three alterations to the original core model were suggested for the 1974 mobility table (Goldthorpe et al. 1997; Yaish 1998, 2000; see Table 13.A2), all of which concern the positive affinity effect (AF2)—the effect that reinforces the linkage

between *particular* classes in the mobility table. It was then suggested that:

(1) the pair of cells indicating mobility between the petty bourgeoisie, class IVab, and the service class, I + II, should be *omitted* from the AF2 term;
(2) the cell indicating mobility from the petty bourgeoisie, class IVab, to the unskilled working class, VIIa, should be *included* in the AF2 term;
(3) the cell indicating mobility from the skilled manual class, V + VI, to the unskilled working class, VIIa, should be omitted from the AF2 term.

The modified model then suggests that the Israeli petty bourgeoisie have a distinctively low propensity for mobility into the service class, and a distinctively high propensity for mobility into the unskilled working class. This was previously explained by the different composition of the Israeli petty bourgeoisie (class IVa vis-à-vis class IVb) compared to the CASMIN nations, coupled with the disadvantaged economic position of the Israeli self-employed. This model also suggests that the expected high propensity for mobility from the skilled working class (V + VI) into the unskilled working class (VIIa) does not exist in Israel. As with the petty bourgeoisie, the differences in the relative size of classes V and VI compared to the CASMIN nations, coupled with hierarchical differences between the two sub-classes, explain the Israeli variant fluidity pattern of class V + VI as a whole when compared to the core pattern.

Also for the 1991 mobility table three alterations to the core model were suggested (Yaish 1998, 2000; see Table 13. A2). These modifications follow a similar pattern to the 1974 variant model, with two differences. On the one hand, unlike the 1974 variant model, no evidence for a distinctively high movement of men from the petty bourgeoisie into the unskilled working class is found. It was argued that as a result of compositional changes (i.e. an increase in the share of class IVa within class IVab) the fluidity pattern of the petty bourgeoisie (i.e. class IVab) has shifted so as to be closer to the fluidity pattern of small employers (IVa). Thus, men from petty bourgeois origins have a lower propensity for mobility into the unskilled working class (VIIa) in 1991 than in 1974. However, even in 1991, the composition of the Israeli petty bourgeoisie (class IVab) remains quite distinct from that of the CASMIN nations, and they still do not have a positive affinity with the service class, as the core model expects. On the other hand, a *new* barrier for mobility from the skilled working class into the service class was suggested. This barrier, it was then proposed, is due to the exclusion of army personnel from the analysis. All in all, then, it was suggested that:

(1) the pair of cells indicating mobility between the petty bourgeoisie, class IVab, and the service class, I + II, should be omitted from the AF2 term;
(2) the cell indicating mobility from the skilled manual class, V + VI, to the unskilled working class, VIIa, is omitted from the AF2 term;
(3) the cell indicating upward mobility from the skilled workers (V + VI) to the service class (I + II) is included in the AF1 term.

14 Recent Trends in Intergenerational Occupational Class Reproduction in the Netherlands 1970–99

Harry B. G. Ganzeboom and Ruud Luijkx

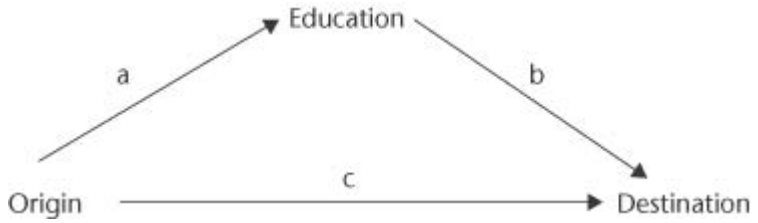
Previous research on intergenerational social mobility among men in the Netherlands has consistently shown that there has been a major trend towards more social fluidity (i.e. less association between origins and destinations) in the second half of the twentieth century. In a first attempt to look at long-term trends, Ganzeboom and De Graaf (1984) matched the 1954 mobility table, constructed by Van Heek and published and documented by Van Tulder (1962), with a table derived from the 1977 Life Situation Survey of Statistics Netherlands. The 1977 table was cast in prestige layers in order to match the format of the earlier published table. Using Hope's (1982) log-linear model (then labelled as the vertical distance model), the young authors found a clear trend, that was expressed in the comparison of a 0.54 versus 0.66 multiplicative coefficient (1.00 being the point of no association). Converted to an annual rate, the speed of change was about 20.95 percent per year. Put in a different way, using linear extrapolation, the Netherlands could be expected to reach perfect mobility by 2023.

The conclusion of *significant change* was not much in line with the 1980s international social mobility literature, the vast majority of which supported the FJH thesis (Featherman et al. 1975) that there are 'no significant differences among industrialised countries'. In order to further scrutinise the finding, the Utrecht Mobility Seminar (a group of stratification researchers then at Utrecht University) brought together and analysed more detailed and voluminous data

from secondary sources, and matched these with the class measures of social stratification prevailing in the international literature. Ganzeboom et al. (1987) (but see also Luijkx and Ganzeboom 1989 and Luijkx 1994) assembled a set of ten mobility tables for 7,310 men that spanned the 1970–85 period. All these data contained detailed occupation codes and could be matched with the ten-class EGP typology that had been proposed by Erikson et al. (1979). Using this much larger database and more rigorous and controlled harmonisation of data—but using a somewhat smaller time window than the previous analysis—the results were much in line with what was found for the 1954–77 comparison. The scaled association coefficient declined significantly over subsequent surveys, and the trend was even more dramatic, estimated at about −2.2 percent per annum. If linearly extrapolated, Dutch society could be expected to reach the point of perfect mobility by 2014.

Subsequent contributions have widened the time window again. The original data for the 1954 survey are lost, but a dataset collected by Gadourek (1963) in 1958 turned out to be a valuable substitution, and confirmed the earlier conclusion that the Netherlands in the 1950s was less open than in the 1970s (Ganzeboom 1984). Ganzeboom and Luijkx (1995) added data collected before 1970 as well as until 1993 that were cast in prestige and in class categories. Linear extrapolations led them to forecast that perfect mobility would be reached between 2009 and 2019 (cf. Fig. 14.1 that displays the long-term trend in prestige mobility). However, it is only fair to say that Ganzeboom and Luijkx reached more mitigated conclusions on the diagonal parts of their class tables (e.g. they predicted that it would take 400 years before the farm category would become perfectly open), as well as finding (insignificant) traces of curvilinearity in the trends.

FIG. 14.4.*Basic status attainment model*



In this chapter, we broaden the scope of these trend analyses in a number of ways. First, by adding a number of recent social mobility files to the existing database, and further expanding the time horizon, we will be able to establish more conclusively how the pattern of social reproduction and mobility in the Netherlands has changed, and in particular to see whether the previously established trends are still continuing or have actually taken different directions by the end of the twentieth century. Secondly, from these files we have available large-scale data on the social mobility of women in the labour force, relative to their father, and can thus answer the question of whether the trends we see for men are paralleled for women in the labour force. These two issues constitute the first part of this chapter. In the second part of this chapter, we accomplish a third aim, by expanding the bivariate social mobility relationship into an elementary three-variable occupational attainment model, with education mediating between father's occupation and respondent's current occupation.

Data

The data sources used in our analysis are listed in Table 14.A1 Altogether they constitute thirty-five samples[179] of men and women of adult age (25–64). Ten of the thirty-five sources are identical to the data used by Ganzeboom et al. (1987) and Luijkx (1994) that established the trend between 1970 and 1985. These sources are marked with an asterisk. However, the counts derived from these sources are not exactly identical to the ones used in the earlier analyses, due to variations in selections and (updated) conversions used. In some of the surveys, questions about occupation have only been asked about current job; in other surveys questions have been included about previous jobs. The analyses in this chapter will be conducted on the group of 'all men', as well as the group of 'women in the labour force'. We selected only those respondents who have a valid code for father's occupation, education, and own occupation. Taken together, we have complete data on 20,769.7 men and 8,897.7 women at our disposal. The number of men in our studies almost triples the number of cases used in our analysis for the period 1970–85.

Note that the analyses for women are restricted to women active in the labour force (i.e. employed or currently seeking work). While for men, we have classified those outside the labour force (primarily due to early retirement and disability) by their previous occupation—if available—for women we used only those with a current occupation or who were unemployed (in which case we used their most recent occupation) and have excluded long-time retirees from the labour market (primarily housewives). It may be important to note

[179] A full description of how the data were harmonised and how weights, selections, and codes need to be interpreted is provided at the first author's website (www.scw.vu.nl/~ganzeboom/ismf) that documents the International Stratification and Mobility File, of which these data are part.

that the participation of women in the labour force has dramatically increased over the period studied[180], from about 25 percent to almost 65 percent most recently. For men, labour force participation is stable at around 75 percent, if not slightly declining. It is to be expected that the dramatic inflow of women will have consequences for the structure of their employment, that is, the distribution of classes. In particular it is to be expected that the expansion of women in the labour force will lead to a stronger representation of classes that were dominated by women to begin with.

The analyses reported in this chapter are conducted on an aggregation of the data over six equally spaced time periods (1970–4, …, 1995–9). The virtues of this aggregation are that the results are easier to present and the fit statistics are more robust, as the data are very thinly distributed over the thirty-five tables once they become cross-classified with education.

The occupations in almost all of the data were originally coded to the four-digit Census Classification 1971/1984 (CBS7184) of Statistics Netherlands (Centraal Bureau voor de Statistiek 1971, 1984)[181], which is intimately related to the International Standard Classification of Occupation 1968—ISCO68 (International Labour Office 1969); indeed, the first three digits of these two classifications have a one-to-one mapping. Some of the surveys contain a truncated or aggregated version of these CBS7184-codes, but there are still two or three digits available. Two of the surveys contain a single-digit self-completion code for occupations which is still compatible with the 'EGP classification', which is our final instrument of analysis. Furthermore, the oldest survey used, from 1970, was generated before the Census of 1971 and was coded into the four-digit Census code of 1960 (Centraal Bureau voor de Statistiek 1960). Finally, in one recent survey the occupations are coded by Statistics Netherlands' 1992 SBC (SBC92) classification (Centraal Bureau voor de Statistiek 1992), which is more or less unrelated[182] to the ILO's revision of ISCO in 1988—ISKO88 (International Labour Office 1990).

Using conversion schemes generated by Ganzeboom and Treiman (1996), all the original codes are transferred into the two international standard classifications, ISCO68 and ISKO88. These international codes, together with measures of self-employment and supervision, are then transferred into Erikson and Goldthorpe's (Erikson et al. 1979) tenfold EGP class typology. From the work started by the Utrecht Mobility Seminar and continued by Ganzeboom et al. (1989) and Ganzeboom and Treiman (1996), there are two

[180] The increased participation of women in the labour force largely explains the increased representation of women in the thirty-five surveys, listed in Table 14.A1. However, three studies had lower representation of women due to other features of their design. NET76j and NET87j are restricted to employed women and men (with an overrepresentation of the self-employed), while in NET82u women were undersampled.

[181] The differences between the 1971 and 1984 versions of this classification are very minor and consist of a few additional titles in the 1984 version.

[182] There is no one-to-one mapping between ISKO88 and SBC92, although the principles of revision were quite similar: in both classifications the occupational titles are organised by required skill level, and employment status is no longer taken into account.

separate conversions available to derive the EGP classification: via ISCO68, and via ISKO88 (Ganzeboom and Treiman 2003). The logic used in both conversions is identical. In a first step, each detailed occupation is assigned to an initial EGP category. In a second step, some initial assignments are reallocated by taking into account the information on self-employment and supervising status. The thirty-five datasets vary with respect to the availability and prevalence of self-employment and supervision measures for fathers and respondents. Generally speaking, these indicators are available from two sources: independently asked questions, and information implicit in the occupation codes. It is important to note that both the CBS7184 and ISCO68 reserve separate categories for the self-employed (shop owners, farmers), so that the omission of a separately asked question on self-employment constitutes no great danger to the validity of our measures. The omission of a separate question on supervision constitutes a bigger problem, as some of the distinctions in EGP are critically dependent upon such a measure. If there is no indication of supervision, it is impossible to distinguish between the self-employed with and without employees, and between supervising and skilled manual workers. As eighteen of the thirty-five surveys do not have independent information on supervision for fathers, and two do not have it for respondents, this leaves us with an eightfold version of the EGP classification:

1. Professionals, managers, and large proprietors (I).
2. Associate professionals and managers (II).
3. Routine non-manual workers (IIIab).
4. Small self-employed with and without employees (IVab).
5. Skilled manual workers and manual supervisors (V/VI).
6. Semi- and unskilled manual workers (VIIa).
7. Agricultural workers (VIIb).
8. Self-employed farmers (IVc).

While the two conversions, via ISCO68 and via ISKO88 into EGP, are meant to be identical, the results are not perfectly so. The inconsistencies arise for two reasons:

1. The original classifications in the data do not have one-to-one mappings with ISCO68 and ISKO88, nor is there a one-to-one mapping between the two ISCOs.
2. There are intrinsic differences between the ways in which the two ISCOs are mapped into the EGP classification, mostly due to the different roles employment statuses have in the two classifications.

Note that the combination of these two can work out differently depending upon the nature and distinction of the underlying source code. In our judgment, the ISCO68-to-EGP conversion can be expected to be more valid for separating out the self-employed and agricultural categories (IVab, IVc, VIIb), while ISKO88-to-EGP is definitely stronger in distinguishing between

skill levels in both the non-manual and manual categories. By consequence, we derive our final EGP classification by combining the two EGPs using the following rules:

1. Categories 1,2,3,5,6 are taken from the ISKO88-conversion.
2. Categories 4,7,8 are then taken from the ISCO68-conversion.

Note that by applying these *in sequence* the second rule prevails over the first one.

First, we will present descriptive analyses of observed mobility patterns. Subsequently, we will conduct our log-linear analyses of relative mobility patterns.

Descriptive analyses

Table 14.1 displays the marginal distributions for men and women in the labour force over the six periods. We observe familiar differences between

TABLE 14.A1.*Data sources for men and women in the labour force in the Netherlands 1970–99*

Nr AK-RO	Abbreviated study title	Occupation code	No. of digits	No. of men	No. of women	Response rates
1 net70*	National Election Study 1970–73	cbs60	4	747.0	148.0	74
2 net71*	Parliamentary Election Study 1971	cbs7184	4	687.7	116.6	76
3 net74p*	Political Action Survey I 1974	isco68	3	348.0	109.0	67
4 net76j*	Justice of Income Survey 1976	cbs7184	4	512.3	85.6	69
5 net77*	CBS Life Situation Survey 1977	cbs7184	4	1,290.0	310.0	70
6 net77e*	Parliamentary Election Study 1977	cbs7184	4	509.0	95.0	64
7 net79p*	Political Action Survey II 1979	cbs7184	4	579.0	191.0	65
8 net81e	Parliamentary Election Study 1981	cbs7184	4	631.0	238.0	83
9 net82e	Parliamentary Election Study 1982	cbs7184	4	484.0	163.0	74
10 net82n*	National Labour Market Survey 1982	F: cbs71	2	847.0	325.0	n.a.
11 net82u*	National Prestige and Mobility Survey 1982	cbs7184	4	405.0	68.0	60
12 net85o*	Strategic Labour Market Survey 1985	cbs7184	4	967.1	363.8	41
13 net86e	Parliamentary Election Study 1986	cbs7184	4	492.0	202.0	83
14 net86l	CBS Life Situation Survey 1986	cbs84a	2	971.0	323.5	57
15 net87i	Cultural Changes [ISSP] 1987	cbs7184	4	519.0	175.0	82
16 net87j	Justice of Income Survey 1987	cbs7184	4	296.0	125.0	60
17 net87s	Primary and Social Relationships 1987	cbs7184	4	320.0	152.0	78
18 net88o	Strategic Labour Market Survey 1988	cbs7184	4	379.6	191.0	n.a.
19 net90o	Strategic Labour Market Survey 1990	cbs7184	4	430.3	214.1	n.a.
20 net90s	Social and Cultural Trends 1990	cbs7184	4	896.0	400.0	48
21 net91j	Justice of Income Survey 1991 [ISJP]	isco68	3	395.0	134.0	n.a.
22 net92f	Family Survey I 1992–93	cbs7184	4	754.4	346.8	43
23 net92o	Strategic Labour Market Survey 1992	cbs7184	4	441.7	251.4	n.a.
24 net94e	Parliamentary Election Survey 1994	cbs7184	2	520.9	172.9	52
25 net94h	Households in the Netherlands pilot 1994	cbs7184	4	425.1	260.3	58
26 net94o	Strategic Labour Market Survey 1994	cbs7184	4	380.9	236.0	n.a.
27 net95h	Households in the Netherlands 1995	cbs7184	4	850.0	503.0	40
28 net96	Social Inequality in the Netherlands 1996	cbs7184	4	285.0	204.7	36
29 net96c	National Crime Study 1996	c	1	409.0	263.0	37
30 net96o	Strategic Labour Market Survey 1996	cbs7184	4	586.3	389.2	n.a.
31 net98	Social and Economic Attitudes 1998	cbs7184	4	313.6	187.8	31
32 net98e	Parliamentary Election Study 1998	sbc92	5	491.4	341.2	50
33 net98f	Netherlands Family Survey II 1998	cbs7184	4	871.0	517.0	48
34 net98o	Strategic Labour Market Survey 1998	cbs7184	4	936.9	667.7	n.a.
35 net99	Use of Information Technology 1999	c	1	797.4	427.0	43
	Total			20,769.7	8,897.7	

Notes: cbs60, Dutch Census Classification 1960; cbs7184, Dutch four-digit Census Classification 1971/1984 (default); cbs84a, Aggregated version of cbs7184; sbc92, CBS Standard Occupational Classification 1992; isco68, Internal Standard Classification of Occupations 1968; F, Fathers only; c, Single digit class categories compatible with EGP-classification.

See also: www.scw.vu.nl/~ganzeboom/ismf

* 'Original ten'.

men and women: women are heavily under-represented among the higher managers and professionals and in skilled manual labour, somewhat under-represented in farm occupations, and take relatively large shares of routine non-manual work, semi-, and unskilled manual work, while being about equally represented at the associate managerial and professional level and small self-employed. When we look at the development of the class structure between 1970 and 1999 in Table 14.1, it is striking that there has been a huge increase in both classes I and II. For men both classes developed from about 15 to 25 percent; for women, we see a somewhat differential development for class I and class II. The share of class I increased slowly from about 7 to 11 percent; class II jumped from about 21 to 35 percent. Classes III, V/VI, and VIIb remain stable, whereas there is a marked decrease in the semi- and unskilled manual working class, VIIa, and in the self-employed, IVab, and farmers, class IVc.

Despite the dynamic development in the class structure, there is not much of a development in overall mobility in the Netherlands, but if there is one, it is towards more mobility. Using the eight-category class scheme, it develops from 69.2 to 74.7 percent for men and for women in the labour force from 78.0 to 82.4 percent (Table 14.2).

Analyses of the inflow percentages for the recruitment of men and women into occupational classes, and of the outflow percentages for the distribution of the occupational classes given the origin class, show very few surprises.[183] A somewhat striking feature is the low self-recruitment to self-employed farmers among women (only 62 percent has a farmer father), but this is counterbalanced by the somewhat larger inflow from farm labour origins than among men. Women also have lower self-recruitment than men among the self-employed, but show stronger self-recruitment in the two managerial/ professional classes. Overall, one gains the impression that recruitment patterns are somewhat different between genders.

TABLE 14.A2.*Number of cases, outflow, and inflow percentages for men 1970–99*

Origin	Destination									
		I	II	III	IVab	V + VI	VIIa	VIIb	IVc	Total
I	*N*	853.1	768.4	230.8	114.7	255.6	151.0	13.0	6.9	2,393.4
	Outflow	35.6	32.1	9.6	4.8	10.7	6.3	0.5	0.3	100.0
	Inflow	20.6	15.5	10.9	10.4	5.5	5.4	4.0	1.0	11.5
II	*N*	714.6	935.6	239.3	66.7	333.9	130.3	8.2	11.7	2,440.2
	Outflow	29.3	38.3	9.8	2.7	13.7	5.3	0.3	0.5	100.0
	Inflow	17.2	18.9	11.3	6.0	7.2	4.6	2.5	1.7	11.8
III	*N*	388.8	536.2	246.9	59.4	267.7	129.6	7.8	9.1	1,645.6
	Outflow	23.6	32.6	15.0	3.6	16.3	7.9	0.5	0.6	100.0
	Inflow	9.4	10.8	11.6	5.4	5.8	4.6	2.4	1.3	7.9
IVab	*N*	554.7	633.0	315.8	426.2	443.1	296.3	23.2	24.2	2,716.5
	Outflow	20.4	23.3	11.6	15.7	16.3	10.9	0.9	0.9	100.0
	Inflow	13.4	12.8	14.9	38.6	9.6	10.6	7.2	3.5	13.1
V + VI	*N*	777.2	1048.6	515.8	165.2	1546.1	704.1	38.8	19.3	4,815.1
	Outflow	16.1	21.8	10.7	3.4	32.1	14.6	0.8	0.4	100.0
	Inflow	18.8	21.1	24.3	15.0	33.5	25.1	11.9	2.8	23.2
VIIa	*N*	470.1	560.7	366.5	131.2	1114.6	845.4	59.7	24.2	3,572.4
	Outflow	13.2	15.7	10.3	3.7	31.2	23.7	1.7	0.7	100.0
	Inflow	11.3	11.3	17.3	11.9	24.2	30.1	18.4	3.5	17.2
VIIb	*N*	78.1	104.7	56.3	27.7	253.4	202.5	53.0	27.7	803.4
	Outflow	9.7	13.0	7.0	3.5	31.5	25.2	6.6	3.5	100.0
	Inflow	1.9	2.1	2.7	2.5	5.5	7.2	16.3	4.0	3.9
IVc	*N*	309.1	372.0	153.2	113.1	396.4	349.9	121.2	568.1	2,383.0
	Outflow	13.0	15.6	6.4	4.8	16.6	14.7	5.1	23.8	100.0
	Inflow	7.5	7.5	7.2	10.2	8.6	12.5	37.3	82.2	11.5
Total	*N*	4,145.7	4,959.1	2,124.6	1,104.3	4,610.9	2,809.1	324.9	691.1	20,769.7
	20.0	3.9	10.2	5.3	22.2	13.5	1.6	3.3	100.0	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

[183] Inflow and outflow percentages are presented in Table 14.A2 and 14.A3.

Log-linear models

How then can the association pattern in these cross-classifications be further characterised and what are the historical trends? In order to explore the pattern of association in cross-classified data, it is of some use to compute the full set of contiguous odds ratios in a table:

$$\theta_{ij} = \frac{f_{ij} * f_{(i+1)(j+1)}}{f_{(i+1)j} * f_{i(j+1)}},$$

where θ_{ij} is the odds ratio and f_{ij} represent the four adjacent (observed) frequencies in origin (row) *i* and destination (column) *j*.

It is well known that the full set of (in this case forty-nine) contiguous odds ratios constitute a complete account of the association pattern, the so-called saturated model or unconstrained association model. Log-linear models can be interpreted as steps towards constraining the odds ratios in the saturated model to a more parsimonious set in order to find a sociologically more meaningful and statistically more powerful account of the data. There are two directions to constrain the odds ratios. First, we can introduce constraints *between tables* to test for trends (without using within-table constraints). Secondly, we can introduce constraints *within tables,* in order to find a parsimonious and interpretable pattern of social mobility flows. As we will explain further below, combining within-table and between-table constraints potentially generates sociologically meaningful and statistically powerful models of the data.

Between-table constraints

The simplest constraint between tables is the assumption that similar odds ratios are identical between tables:

$$\theta_{ijk} = \theta_{ij(k+1)},$$

where *i* indices rows, *j* indices columns, and *k* indices tables (periods). This model is also known as the Constant Social Fluidity (CnSF) model and constitutes a very broad test to search for trends, as it requires no model of the within-table variation in odds ratios. It uses the full 49 degrees of freedom (in an 8 × 8 table) to 'model' the odds ratios that constitute the CnSF pattern itself. This may, of course, not be the most parsimonious and statistically powerful account of the data. Moreover, the CnSF model does not provide a meaningful interpretation of the association pattern itself.

Erikson and Goldthorpe (1992) and Xie (1992) have proposed an elaboration of the CnSF model to test for trends, the so-called Unidiff (uniform

difference) model or log-multiplicative layer effect model. Unidiff takes an intermediate position between CnSF (same pattern and strength of association in all tables) and the saturated model (different pattern and different strength of association for all tables), by using as a constraint that the set of odds ratios in one table differs from the set of odds ratios in the next table only by a (log-) multiplicative scaling factor:

$$\theta_{ijk} = \theta_{ij}^{\beta_k}$$

$$\ln \theta_{ijk} = \beta_k * \ln \theta_{ij},$$

where $\beta_1 = 1$. In other words, the log odds ratios (θ_{ij}) are equal for each table k except for a multiplicative scaling factor (β_k). While the Unidiff model goes a considerable way in bridging the space between CnSF model and the saturated model, it remains a disadvantage that this model does not lend interpretability to the pattern of odds ratios itself, and still uses a large number of degrees of freedom to model this pattern.

Within-table constraints

In order to look at the association in a more informative way, it is useful to introduce constraints on the pattern of the odds ratios within tables. A class of models that can be used to succinctly summarise the association has been proposed by Goodman (1979*b*): the scaled uniform association models. The starting point of such models can be found in the very restricted uniform association model that assumes all contiguous associations in a table to be identical:

$$\ln \theta_{ij} = \varphi .$$

The uniform association model uses a single degree of freedom to characterise all odds ratios in a table, which is a parsimonious but often too restrictive assumption to fit the data. The stringent assumption can be meaningfully relaxed in three ways:

1. By exempting diagonal cells from the association pattern by fitting distinct parameters δ_{ii} to these cells. Such representations are known as quasi uniform association models. Exempting diagonal cells (and separately modelling them) parallels the assumption that staying in one's origin class (i.e. class inheritance) is not necessarily governed by the same contingencies as the pattern of mobility for the mobile.
2. By scaling the distances between the row (μ_i) and column (ν_j) categories:

$$\ln \theta_{ij} = \varphi(\mu_{i+1} - \mu_i)(\nu_{j+1} - \nu_j),$$

where μ_i and ν_j are scaling parameters, subject to the constraints of mean 0 and, in this case, variance 8 (the number of origin and destination categories)[184], while ϕ is the scaled uniform association parameter that describes the association throughout the table, conditional upon the scaling parameters.

3. As a useful special restriction in this model we can introduce equal scalings for rows and columns:

$$\mu_i = \nu_i \, .$$

Taken together, these three specifications constitute the quasi equal scaled uniform association model, or Goodman–Hauser model after its principal inventors (Goodman 1979*b*; Hauser 1984*a, b*).

The Goodman–Hauser model is an extremely useful workhorse for comparative mobility analysis, as it combines statistical power and parsimony with a sociologically meaningful representation of the data. Its useful features can be summarised as follows:

1. The parameters of the Goodman–Hauser model have a nice sociological interpretation. The category scalings μ_i and ν_j can be interpreted as measures of the distance between, or similarity among, social categories with respect to mobility chances. If categories are identically scaled ($\mu_1 = \mu_2$), this suggests that they can be regarded as a single social class, but if the scalings are very different, this implies not only that mobility between them is extremely difficult, but also that they have very different mobility exchanges with other classes. We will constrain μ_i and ν_j to be the same for the different period tables.
2. The diagonal density parameters δ_{ii} represent within-class immobility over and above the immobility uniform to all categories. In previous analyses, these patterns have been found to be class-specific. We will model differences over time (δ_{iik}).
3. Finally, the scaled uniform association parameter ϕ constitutes a single measure of social fluidity and is its most parsimonious representation. We will model the differences over time (ϕ_k).

The model uses a limited number of degrees of freedom to characterise the pattern of association within tables. In our 8×8 tables, the forty-nine elementary odds ratios are summarised by eight scaling parameters (equal for row and columns), one overall scaled uniform association parameter, and eight diagonal cell parameters.

[184] Note that our standardisation constraint differs from the usual convention of fixing the variance in the scalings at 1.0. The particular advantage of our choice is that the scaled uniform association coefficients map into the metric of the Pearson correlation coefficient (−1.00 to 1.00) (Goodman 1981). Goodman shows that if the distribution of counts fits a bivariate normal distribution, the estimated value of w under this choice of constraint is numerically identical to Pearson's correlation coefficient.

Models of trends

Both the Unidiff and the scaled uniform association model can be applied in comparative analysis by introducing between-tables identity, linear, and/or curvilinear restrictions on (parts of) the model. For the Unidiff model, a linear time constraint can be introduced by restricting the scaling factor:

$$\beta_k = 1 + \beta Y,$$

where Y is the number of years since 1970: that is, we assume the multiplicative scaling factor β_k develops linearly over time. We can also let β_k develop curvilinearly over time, by using the following constraint:

$$\beta_k = 1 + \beta Y + \gamma Y^2 .$$

For the scaled association model, our primary tool of analysis will be to let the components of the association pattern ϕ_k and δ_{iik} vary over time:

$$\varphi_k = \varphi * (1 + \beta Y)$$

$$\varphi_k = \varphi * \left(1 + \beta Y + \gamma Y^2\right)$$

$$\delta_{iik} = \delta_{ii} * (1 + \beta Y)$$

$$\delta_{iik} = \delta_{ii} * \left(1 + \beta Y + \gamma Y^2\right) .$$

Regarding the diagonal effects, we assume that the development over time is the same for each diagonal cell *i,* but that the density per cell *i* differs.

Fit measures

As our primary measure of goodness-of-fit, we use the conventional log likelihood ratio χ^2 statistic (L^2). We also use the Bayesian information criteria (bic) statistic introduced to the social sciences by Raftery (1986). He argues that comparative mobility studies often have large sample sizes which make it difficult to find models that fit the data according to conventional probability levels. Both L^2 and bic were introduced in Chapter 2.

However, it is important to note that L^2 is sensitive to sparse tables, that is, tables in which many of the observed counts are zero or one. For that reason, we will restrict our interpretation to the *differences* between the statistics, not their absolute value (Wong 2001).

All our models are estimated using LEM (Vermunt 1997). This program provides a versatile tool to model both bivariate and partial association models, and has superseded earlier tools such as GLIM and ASSOC, used by Ganzeboom et al. (1989).

Analyses Part I: bivariate social mobility

Table 14.3 reports on the application of the models introduced above to the six tables for men and for women in the labour force.

Men

Model A in Panel A is that of conditional independence (or perfect mobility), which assumes that all odds ratios are equal to one, and thus that father's and respondent's class are unrelated. This is obviously not the case, given the highly significant L^2 value and the positive bic, which denotes that this model fits worse than the saturated model. Model B, the CnSF model, leaves the odds ratios unconstrained within tables, but constrains them to be equal between tables, and thus provides a (weak) test of the no change in relative mobility hypothesis proposed by Featherman et al. (1975). For men, the CnSF model does not fit the data by conventional test statistics. This confirms earlier findings that there are indeed significant over-time trends. To further test this claim, the CnSF model can be compared to Model C, the uniform difference model, that leaves the odds ratios unrestricted within tables, but scales them by a uniform constant between tables. Relative to common social fluidity, Model C consumes a single degree of freedom for each additional table. Both by conventional L^2 statistics and by bic standards, this model is a significant improvement over the model of no change. However, we can further trim the model by assuming that the between-table differences follow a metric trend: Model D, the linear uniform difference model, restricts the trend parameter to follow a straight line, while Model E, the curvilinear uniform difference model, applies a second-degree polynomial to constrain this parameter. Comparing Models D and E answers the question whether the trend towards more social fluidity has slowed down or has been reversed. Both models are clearly superior to the Unidiff model as well as the common social fluidity model, by L^2 and bic standards, but the linear trend fits marginally better than the curvilinear trend. In conclusion: social fluidity for men in the Netherlands still appears to be developing at a linear pace.

Panel B of Table 14.3 runs through a similar sequence of models, but now using the Goodman–Hauser scaled uniform association model as its way to represent the within-table structure of association. As explained above, scaled uniform association models are more parsimonious than unconstrained association models. This does not pay off for Model F in a better fit in terms of bic and certainly not in terms of L^2. Model F is that of quasi equal scaled uniform association, that is, we assume identical scalings between tables, as well as between rows and columns, but freely varying diagonal parameters δ_{iik}

TABLE 14.A3. *Number of cases, outflow, and inflow percentages for women in the labour force 1970–99*

Origin	Destination									
		I	II	III	IVab	V + VI	VIIa	VIIb	IVc	Total
I	*N*	232.6	571.4	419.0	41.2	36.1	46.9	2.2	1.3	1,350.7
	Outflow	17.2	42.3	31.0	3.1	2.7	3.5	0.2	0.1	100.0
	Inflow	28.1	19.7	12.0	10.4	11.2	5.7	3.4	1.8	15.2
II	*N*	173.8	586.7	492.6	33.4	33.0	42.0	3.3	2.5	1,367.4
	Outflow	12.7	42.9	36.0	2.4	2.4	3.1	0.2	0.2	100.0
	Inflow	21.0	20.3	14.1	8.4	10.3	5.1	5.3	3.4	15.4
III	*N*	66.0	270.9	362.2	26.9	20.3	50.4	2.0	0.7	799.5
	Outflow	8.3	33.9	45.3	3.4	2.5	6.3	0.3	0.1	100.0
	Inflow	8.0	9.4	10.4	6.8	6.3	6.1	3.3	1.0	9.0
IVab	*N*	94.7	386.4	406.7	110.8	24.4	71.4	2.0	4.1	1,100.4
	Outflow	8.6	35.1	37.0	10.1	2.2	6.5	0.2	0.4	100.0
	Inflow	11.4	13.4	11.6	27.9	7.6	8.7	3.2	5.6	12.4
V + VI	*N*	130.1	523.9	867.8	66.8	91.1	281.3	10.6	4.2	1,975.8
	Outflow	6.6	26.5	43.9	3.4	4.6	14.2	0.5	0.2	100.0
	Inflow	15.7	18.1	24.8	16.8	28.3	34.2	16.9	5.8	22.2
VIIa	*N*	70.3	274.2	599.5	65.4	75.6	223.1	8.1	8.8	1,325.1
	Outflow	5.3	20.7	45.2	4.9	5.7	16.8	0.6	0.7	100.0
	Inflow	8.5	9.5	17.1	16.5	23.5	27.1	13.0	12.1	14.9
VIIb	*N*	8.6	38.0	90.2	10.2	9.6	36.8	3.0	5.6	202.0
	Outflow	4.3	18.8	44.6	5.1	4.8	18.2	1.5	2.8	100.0
	Inflow	1.0	1.3	2.6	2.6	3.0	4.5	4.8	7.7	2.3
IVc	*N*	52.9	242.4	259.5	42.1	31.9	70.8	31.6	45.6	776.7
	Outflow	6.8	31.2	33.4	5.4	4.1	9.1	4.1	5.9	100.0
	Inflow	6.4	8.4	7.4	10.6	9.9	8.6	50.2	62.6	8.7
Total	*N*	828.9	2,894.0	3,497.4	396.9	322.1	822.8	62.9	72.8	8,897.7
	9.3	32.5	39.3	4.5	3.6	9.3	0.7	0.8	100.0	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

and strength of association ϕ_k. The six subsequent Models G through L test whether it is necessary to leave the diagonal parameters free and whether linear and curvilinear constraints to the diagonal parameters and overall association fit better. The best fitting model, by a small margin over the curvilinear trend Model L, is the linear trend Model J, that pools all the between-table differences in a single association parameter that follows a linear trend, while the classes differ only in immobility and scalings that remain constant over time. That is, there is no need, in these data, to postulate that diagonal frequencies (inheritance of class position) develop along different lines than the off-diagonal association.[185]

For reference with the partial analyses in Part II, we have added in Panel C of Table 14.3 the Models Fa–La. In these models the scalings of the categories are allowed to differ between rows and columns, and the association in each table is treated as asymmetric. None of these asymmetric models is superior to its symmetric counterpart, at least not if judged by bic, although by the conventional L^2 comparison the asymmetrical versions are to be preferred.

Women

The parallel analysis for women in the labour force shows very much the same picture as for men, but with some exceptions. First of all, it may be important to note that for the unconstrained association models, all but the conditional independence model fit the data as judged by the nominal L^2 statistic. By this evidence, one could conclude that there are *no* historical trends for women. However, a more powerful test for this conclusion is to be obtained by comparing fit statistics between models, as well as by finding the lowest bic. This exercise points again to Model D: linear uniform differences.

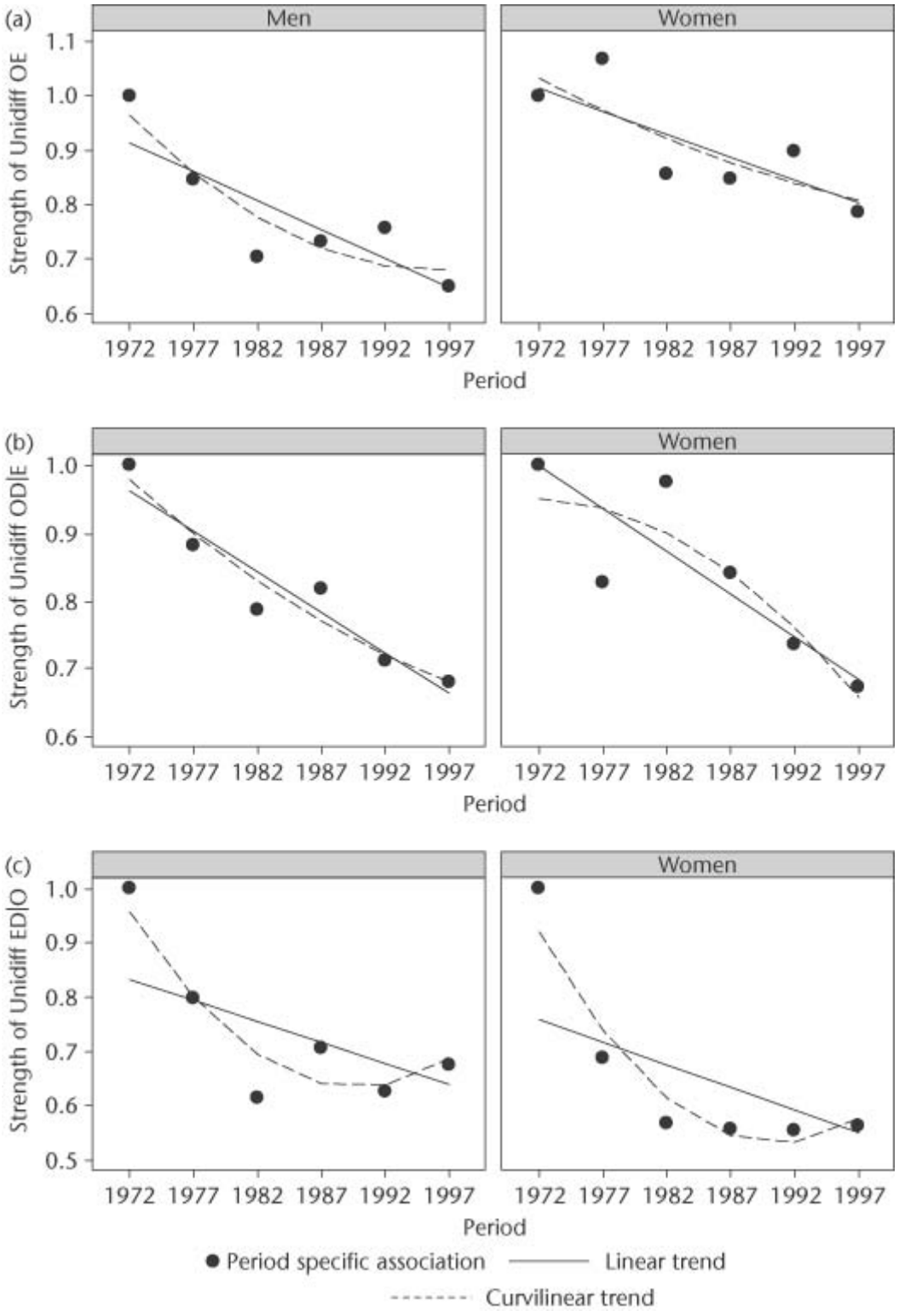
Turning to the scaled association models, again Model J (linear association and equal diagonals) is the best fitting model in terms of bic. We can safely conclude that for women the overall association pattern is developing almost linearly over time, and this happens at the same pace on and off the diagonal.

Time-constant parameters

Figure 14.2(a) displays the estimated time constant scaling parameters for the scaled uniform association Model J. For men and their fathers, we see that they almost perfectly scale the eight occupational classes at equal distance, in the order of the class number (Fig. 14.2(a)). If we would put class IVc between classes V–VI and VIIa, all the scalings would fall almost perfectly on a straight line. The scalings for women and their fathers follow a very similar pattern,

[185] In our earlier analysis of the 1970–85 data (Ganzeboom et al. 1987) we included an independently varying trend parameter for class inheritance, but we do not need it here, at least not by bic standards.

FIG. 14.5.*(a) Trends in Unidiff OE (men and women separately). (b) Trends in Unidiff OD | E (men and women separately). (c) Trends in Unidiff ED | O (men and women separately)*



but have interesting exceptions. For women and their fathers, the positions of the two managerial and professional categories I and II are reversed, and class III (routine non-manual) appears to be scaled lower than among men, while the female self-employed farmers (in fact a rare category) are scaled higher than among men and their fathers. Note that our analysis has been conducted separately for men and women, and that, as a consequence, fathers in the two analyses are differently scaled. While these diversions seem interesting and interpretable, we should not make too much of them, as a pooled analysis (not shown here) suggests that the scalings can be equalised between men and women and their fathers without significant loss of information.

The ordering of the classes for men is a familiar one, as it is almost perfectly linear with the socio-economic status of the respective occupations. Figure 14.2(b) plots the estimated scaling parameters against the average International Socio-Economic Index (ISEI) of occupational status of the EGP categories (Ganzeboom et al. 1992). ISEI and the scaling are almost perfectly colinear. For women, the interpretation is more complicated, as class II is scaled slightly higher than class I. Given that the estimated scalings derive primarily from the off-diagonal association, we can conclude that women's recruitment into class II and outflow from class II is more related to father's status than that in class I.

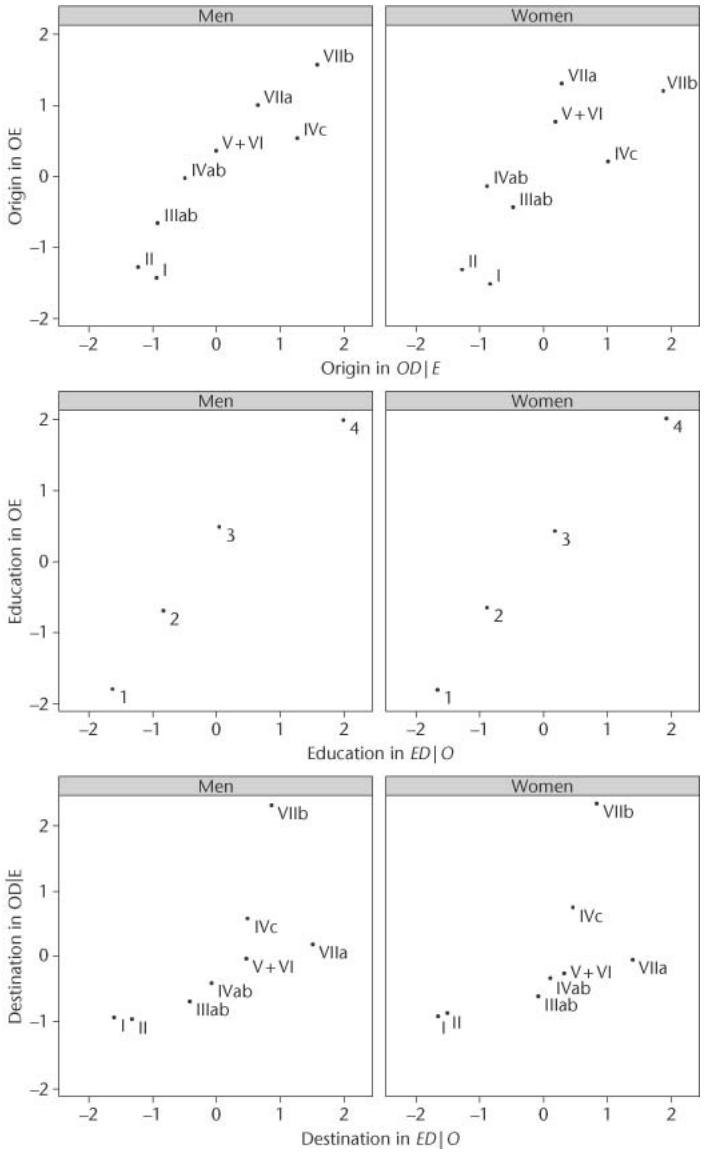
Figure 14.2(c) plots another time constant part of the scaled uniform association Model J, the diagonal or immobility parameters, as they differ between the eight classes. We see a familiar pattern for both men and women: direct immobility is particularly prevalent among self-employed farmers (IVc) and other small self-employed (IVab)—but distinctively less than among farmers. For men, the least immobile category is that of semi- and unskilled workers (VIIa). This pattern is in line with earlier findings, both in the Netherlands and elsewhere (Ganzeboom et al. 1987, 1989). The immobility coefficients are generally lower for women than for men, in particular in classes with strong inheritance (IVab and IVc). However, there is one exception to this rule, as higher professional and managerial status (class I) appears to be more inheritable from fathers to daughters than from fathers to sons. Note, however, that, as Fig. 14.2(a) showed, class I among women is actually scaled lower than class II, and has fewer female incumbents to begin with: we should not over-interpret this finding.

Trend parameters

Finally, we can turn towards the interpretation of the trend parameters in the models. What do they show about historical developments in social mobility patterns?

Figure 14.3(a) plots the values of the estimated Unidiff coefficients for men and women in the unconstrained model, taken from Model C, together with

FIG. 14.6.*(a) Origin scalings in OE and OD | E relation (men and women separately). (b) Education scalings in OE and ED | O relation (men and women separately). (c) Destination scalings in OD | E and ED | O relation (men and women separately).*



the linear and curvilinear trends estimated in Models D and E. We see a clear downward trend in the data, both for men and for women. The linear trend line implies that the Unidiff between the tables (for both men and women) went down by about 30 percent in twenty-five years (from mid-first to mid-last period), an almost 1.2 percent decline per year. This would confirm earlier conclusions (for men) that the mobility regime of the Netherlands will reach perfect openness before the middle of the twenty-first century.

A somewhat different picture emerges when we look at the trends in the estimated scaled uniform association model (Fig. 14.3(b)). Taken as a linear trend—for men—there is an even more dramatic decline of intergenerational reproduction—about 1.6 percent per year—but there is also some evidence of

curvilinearity, and the downward trend seems to have slowed since 1985, the last year of observation in most of our previously published analyses. The estimated polynomial is essentially flat around 1999. If this is the true model, we can expect no further decline in the future and the Netherlands will never see the dawn of perfect mobility!

The trends for women in Fig. 14.3(b) are similar, but less steep—about 1.1 percent per year—and with somewhat more variation around the curve. For women, there is a non-significant and very slight curvilinear trend in the observations for the scaled association models, but it suggests an acceleration of the trend.

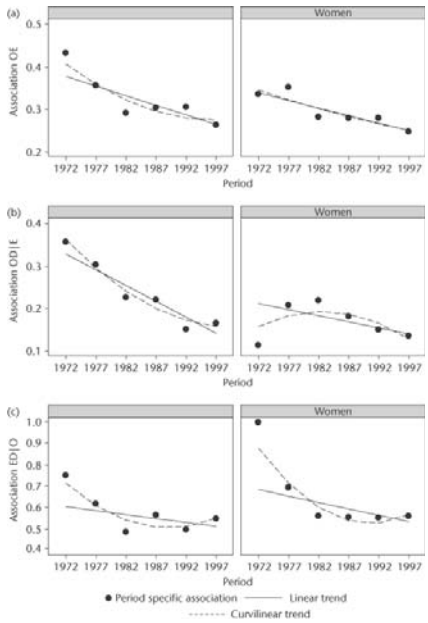
Analyses Part II: ascription and achievement in occupational attainment

Having established a definitive trend towards less social reproduction in the Netherlands between 1970 and 1999, we can now begin to disentangle the intergenerational occupational association. In line with the traditional status attainment model, pioneered by Blau and Duncan (1967), it is useful to think of the occupational mobility relationship as being composed of two pathways (cf. Fig. 14.4):

1. Fathers transfer their occupational status to their children via education. Social background influences educational attainment, and educational attainment to a large extent determines occupational outcomes.
2. Fathers also transfer their occupational status position directly to their children, partly by the immediate transfer of proprietorship and other employment statuses, and partly by providing their sons with occupational aspirations, access to employment via networks, etc.

The simple decomposition of occupational mobility into a direct and an indirect pathway leads to an important consequence for expectations about historical trends in intergenerational occupational mobility. Under the general expectation of increasing achievement and decreasing ascription—as derived from standard modernisation theory (Blau and Duncan 1967;

FIG. 14.7. *(a) Trends in OE uniform association (men and women separately). (b) Trends in OD | E uniform association (men and women separately). (c) Trends in ED | O uniform association (men and women separately).*



Treiman 1970)—*no definitive prediction can be derived on the total relationship* (Boudon 1974*b*). For reasons of declining ascription, we would expect relations (a) and (c) to be going down in strength, but by the spread of achievement values and meritocratic selection in the labour market, relationship (b) will become stronger. The result for the total effect ($a \times \beta + c$) is undetermined if we cannot further quantify our expectations. In other words: a decline in the direct effect of father's status on educational outcomes and occupational results may be counterbalanced by an increasing association between education and occupational outcomes. For this reason alone, studying the trends in the separate components of the intergenerational occupational reproduction pattern is theoretically more conclusive than studying the total relationship—as we did in the first part of this chapter. In our context, where we obviously find that the trend towards more social mobility is stronger than the trend towards less social mobility, the same issue arises, but now on the partial relationships. When controlling for the education– occupation relationship, the two remaining indicators should be purer measures of intergenerational social mobility, and show stronger trends than the total relationship in the bivariate data.

The analysis of direct and indirect effects in intergenerational occupational reproduction has traditionally been conducted with a status attainment model that expresses standardised effects in an ordinary least squares multiple linear regression framework (Blau and Duncan 1967). Such indirect effect models lead to an easily comprehensible quantification of the intergenerational occupational transfer process, and allow for the study of trends in the parameters. The classical status attainment model can only be calculated at the cost of some simplifying assumptions. A major assumption is that patterns of socio-economic reproduction can be adequately measured or summarised by continuous variables, and that correlation and regression coefficients are sufficient representations of these associations. The intergenerational occupational mobility literature of the past twenty-five years has conclusively established that this is *not* the case: occupations and (to a lesser extent) educational levels cannot be measured sufficiently by a single continuous status measure only, and their associations cannot be adequately summarised in a single correlation or covariance. On the contrary, research in this field has amply illustrated the discrete and multidimensional nature of these status positions. In the tradition of log-linear models, pioneered by Hauser (1978) and Goldthorpe (1980), it has in particular been shown: (1) that associations between father's and son's occupation, and between education and occupation, need to be modelled in a multi-parameter representation; and (2) that these parameters may show diverging trends when compared across countries or across time. Furthermore, this research literature has reached some consensus on adopting the EGP class categories as its international standard of measuring occupational status.

Education is added as a dimension in our analysis in four distinct categories that have a clear hierarchical order and are sufficient to represent the major differences in credentials that have been produced by the Dutch educational system over the past century:

(1) primary education until age twelve (LO);
(2) lower secondary education and lower vocational training, ages 13–15/16 (MAVO, LBO, VBO);
(3) higher secondary education, including the middle level of vocational training, ages 13–17/19 (HAVO, VWO, MBO); and
(4) tertiary education, ages 18–23 (HBO, WO).

We describe and use a set of partial association models that estimate trends and association patterns for the elementary status attainment model, consisting of the relationship between origin *O* (father's occupational class), *E* (respondent's education), and *D* (respondent's occupational class). In fact, we are analysing an 8*4*8*6 four-dimensional table, and generalise the Unidiff and Scaled Association models to a partial association context. Using a 'modified path analysis' (Goodman 1973), we estimate parameters for three relationships, using a simultaneous model:

$$O \longrightarrow E(\mathrm{a})$$
$$E \longrightarrow D|O(\mathrm{b})$$
$$O \longrightarrow D|E(\mathrm{c})$$

The causal order dictates that that the O → E relationship is modelled without conditioning on the third variable, while the other two relationships are modelled within categories of the third variable.

The approach we take here is similar in its aims incorporating log-linear constraints in a conditional multinomial logistic regression (CMLR) model, as applied by Hendrickx and Ganzeboom (1998) and Dessens et al. (2003) (cf. Breen (1994) for another application to social mobility data). However, while the CMLR methodology allows us to estimate or apply scalings on the social classes, as well as to exempt diagonal densities, it does not look at the origin, education, and destinations (*OED*) distribution as a simultaneous distribution that is modelled using a system of partial associations. In this respect, our current approach is very congruent with Blau and Duncan's use of causal models, in which a system of simultaneously estimated linear equations is used to model a correlation (or covariance) matrix. Also, estimating partial association models in LEM (Vermunt 1997) is much easier to accomplish than the complicated models proposed in the CMLR literature. However, as far as the *ED* | *O* and *OD* | *E* relationships are concerned, the estimated parameters are identical.

Apart from answering the old questions on pattern and trend in intergenerational status transfer, partial association models allow us to answer new

questions about social mobility that cannot be answered by classical status attainment models, or by bivariate log-linear models. The set of old questions includes those on trends in the partial associations, parallel to those we would ask in the traditional status attainment model. These questions are now answered using a more detailed and better fitting model of these associations. Another set of old questions concerns the pattern of social mobility, that are now answered for all relationships in the *OED* distribution, but this time in a partial framework. The new questions ask how different components of these partial associations react to changing historical circumstances. More specifically, we can observe how diagonal and off-diagonal parts of the association develop differentially, for men and women separately.

Partial uniform difference models

Panel A of Table 14.4 reports on uniform difference partial association models for the three-variable data, cross-classified by period. These models leave the set of elementary partial odds ratios unconstrained, but estimate the historical trends by constraining the differences between the six periods. Model A0 is the common social fluidity model: each of the three partial associations (*OE, ED | O,* and *OD | E*) is constant for all six periods. This model does not fit for men in terms of L^2, but does fit for women. However, a quick scan of Table 14.4 leads to the conclusion that all models fit for women and none for men (according to the L^2 criterion). For that reason, we will rely mainly on the bic measure to reach conclusions.

In Model A1, each of the three partial associations (*OE, ED | O,* and *OD | E*) is 'Unidiffed' over period; in other words, the historical differences in association patterns are unconstrained. Model A1 serves as a baseline. However, note that in terms of bic, this benchmark fits worse than the common social fluidity Model A0. The subsequent Models A1a–A1c constrain one of the partial relationships to develop linearly over time. Each of these models fits the data better than the unconstrained model for men and for women, except for Model A1c for men. For men, Model A1d with all partial relationships developing linearly fits best. Subsequently, Models A1e–A1g test specifically whether any of these trends can actually be constrained to be historically constant. This is not the case, as is shown by the comparison of the fit statistics to that of Model A1.

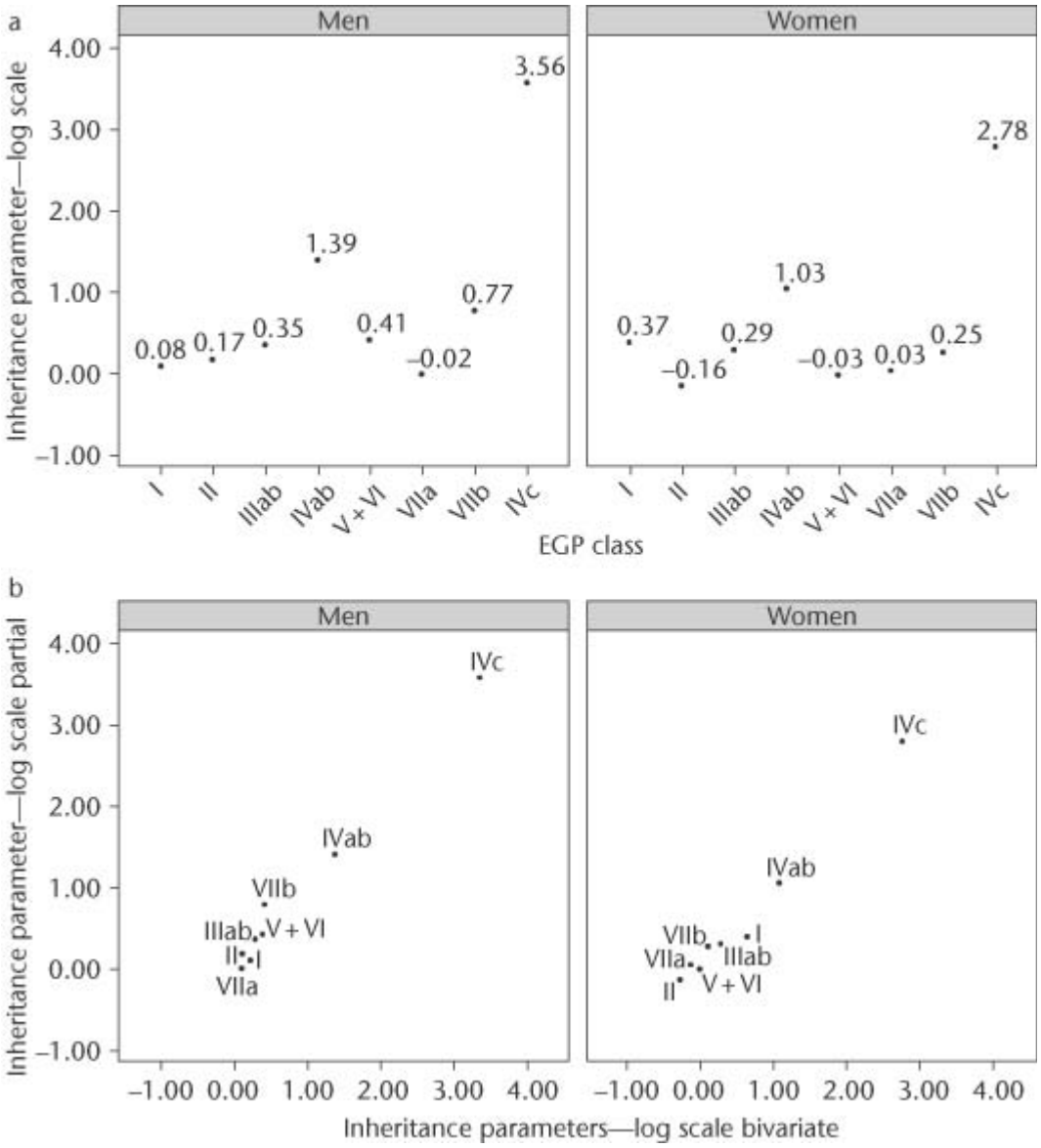
Figure 14.5(a)–(c) displays the association coefficients estimated in Model A1, together with the best-fitting linear trend Model A1d and the curvilinear trend Model A1h. In these figures, the first observation (1970–4) serves as the point of reference, and, using the linear trend line, we can find the proportional change over the twenty-five-year time window. As we can see, trends towards more fluidity are found in all three partial relationships for both men and women. However, the trend is strongest in the direct *OD* relationship,

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	Nether-lands
Men	↑–	↑↑	↑	↑↑	– –	– ↑	↑	–↑	↑↑	–	↑↑
Women	– –	↑↑	–	n.a.	? –	↑↑	↑	↑↑	↑↑	–	↑↑

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

FIG. 14.8.*(a) Estimated diagonal parameters (partial) (men and women separately). (b) Estimated diagonal parameters (partial versus bivariate) (men and women separately).*



which declines by about 30 percent over the twenty-five-year period for both men and women, while the other two relationships go down by about 20–25 percent. The downward trend is also strong in the *OE* relationship, which is in line (in fact a recalculation) of results from earlier research with some of the same data (De Graaf and Ganzeboom 1990). Finally, the trend in the partial *ED* relationship appears to be statistically different from zero, and negative. If interpreted to be of substantial importance, it implies that educational credentials have become *less* important over time, which is in contradiction to the ascription/achievement trend hypothesis.

Scaled partial association models

Uniform difference models are adequate to explore and to test general trends in partial associations. However, while they do show whether there are trends or not, and specify the direction of such trends, uniform difference models leave the patterns of partial associations themselves undisclosed. We now know that the strength of association in *OD | E* declines, but we do not know what this association looks like. In order to find a more informative model of the underlying structure, we adapt Goodman's (1979*b*) scaled association model RCII to partial associations. Each of the partial associations can now be characterised by a similar set of parameters as in part I of the analysis in this chapter:

$$\left.\begin{matrix}\mu'_i, \nu'_j, \xi'_k \\ \mu''_i, \nu''_j, \xi''_k\end{matrix}\right\} \text{the scalings of the origin, destination, and education categories}$$

$$\delta_{ii.l} \text{the diagonal effects}$$

$$\varphi'_l, \varphi''_l, \varphi'''_l \text{the scaled partial association parameters.}$$

By implication, each variable will have two sets of scalings, depending upon the partial relationship in which it occurs. We can conceive of the two scalings of father's occupation (μ'_i, μ''_i) as the optimal scalings to predict educational attainment and to predict the direct transfer of occupational status. The two scalings of education (ξ'_k, ξ''_k) reflect the optimal scaling of education as, respectively, a destination (reward), and as an origin (resource). Finally, the two scalings of class destination (ν'_j, ν''_j) represent the optimal orderings of respondents' occupations as derived from, respectively, educational resources and father's status.

In order to reach a simple representation of the partial scaled association model, it is necessary to constrain the parameters. There are many ways to do this, and each represents substantive hypotheses about the properties of status distributions and transfer of status positions in the Netherlands in this

period, and probably status attainment structures more generally. The most obvious constraints are:

1. The two scalings of *E* are equal to one another ($\xi'_k = \xi''_k$), representing the hypothesis that what people strive for in educational attainment is identical to what education brings them as a resource in the occupational attainment process.
2. The two scalings of *O* are equal to one another ($\mu''_i = \xi''_i$); that is, fathers are identically ordered with respect to their capabilities to promote the educational and the occupational opportunities of their children.
3. The two scalings of *D* are equal to one another ($\nu'_j = \nu''_j$), representing the assumption that occupational destinations are identically ordered when either education or father's occupational status is the resource of relevance.
4. The scalings of *O* and *D* are equal ($\mu'_i = \mu''_i = \nu''_i = \nu''_j$).

To us, assumption (1) appears to be the most likely one among these four to hold. Clearly, education can at some level be conceptualised as a single hierarchy that at the same time is a reward and a resource. Assumptions (2) and (3) are much less plausible. On the one hand, it may very well be that fathers with different statuses have different strategies to promote their children's careers (via education and in the labour market), and that access to occupations depends upon whether one's resources derive from one's father directly, or from educational attainment. On the other hand, assumptions (2) and (3) would be in line with one of the major conclusions of stratification research (Inkeles and Rossi 1956; Treiman 1977; Hout 2003), that occupational status is fairly stable across time and space. This is of course also the justification to formulate hypothesis (4), which, if true, implies that (2) and (3) are also true.

For each of the three partial associations, we can potentially define a set of diagonal coefficients (d). However, for the *OE* and *ED* relationships, these coefficients would have a complicated interpretation, specifying a special affinity between educational and occupational class categories. As the data are not constructed that way, it is rather hard to interpret what this would mean. By contrast, diagonal coefficients are easily conceptualised in the partial *OD* | *E* relationship, even more so than in the bivariate *OD* relationship. Moreover, a plausible assumption is that the *OD* partial association is primarily composed of direct transfer of occupation, as measured by the diagonal densities, and that the off-diagonal association is weak or non-existent. This is the implication of Yamaguchi's (1983) early argument about the role of specific and generalised resources in occupational mobility. As a consequence, we restrict the use of diagonal parameters to the *OD* | *E* relationship.

Panel B of Table 14.4 lists the models to test these assumptions about the structure of the parameters, while for the time being leaving the historical

trends unconstrained. Model B1 is again the benchmark model, similar in conception to Model A1, but this time using scaled association models to account for the partial associations. As we have observed for the bivariate case in the previous section, scaled association models fit the data less well than the uniform difference models—this seems to be the cost we pay for modelling the association in a more informative way.

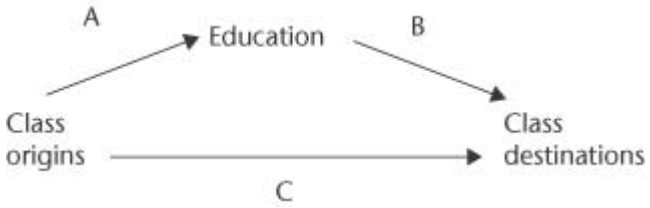
Model B1a constrains the educational scalings to be equal. Model B1b constrains the two scalings of father's occupation to be equal, Model B1c the two scalings of respondent's occupation, Model B1d constrains all occupational scalings for fathers and sons to be identical, and, finally, Model B1e constrains both the educational scalings and the occupational scalings to be equal. The hypotheses of constant scalings are more or less confirmed by the data for women, but need to be rejected for men. In other words, the classical hypothesis of historical constancy in occupational hierarchies is not confirmed. It holds best for educational categories.

Figure 14.6(a)–(c) plots, one against the other, the various pairs of scalings of the origin, education, and destination categories found in the baseline Model B1. We can note that even if the differences for men are statistically significant by any sensible test, the correlation between the scalings is still quite close. This is particularly so for the education scalings, that—despite their statistical deviation from it—appear to be essentially identical. This is less the case for the occupation scalings, which is somewhat erratic for women, but rather regular for men. For men, we can see that the major asymmetry in the scalings occurs for the farmer categories (IVc and VIIb). The substantive interpretation of these asymmetries is that the class origins of those who take up farming (other than by continuing father's farm status) is much higher than the destination classes for those sons who have left farming occupations. This asymmetry is a general feature of social mobility patterns and has been reported elsewhere for bivariate analyses as well (Ganzeboom et al. 1989: 50, n. 15) elsewhere, although we did not detect it in part I of the analysis here.

While the farm asymmetry is an interpretable feature of the data, there are other asymmetries in the scalings—in particular for women and their fathers—that cannot be interpreted in the scope of the current contribution. Most of these are marginal and do not imply a different ordering of the classes on the mobility dimension. We have therefore chosen to disregard the evidence of asymmetry for the time being and continue with symmetrically specified models, that is, we constrain all occupational (origin and destination) scalings, as well as the education scalings, to be equal between tables.

Panel C of Table 14.4 presents scaled association models with trends, in a similar fashion as trends are presented for the Unidiff models in Panel A. While we observe much higher fit statistics than for the unconstrained

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



1 2 2 2 2 2 2 * HI1	1 1 1 1 1 2 2 * HI2	2 1 1 1 1 1 1 * IN1
2 1 1 1 1 2 2	1 1 1 1 1 1 1	1 2 1 1 1 1 1
2 1 1 1 1 2 2	1 1 1 1 1 1 1	1 1 2 1 1 1 1
2 2 2 2 2 1 1	2 1 1 1 1 1 1	1 1 1 2 1 1 1
2 1 1 1 1 2 2	1 1 1 1 1 1 1	1 1 1 1 2 1 1
2 2 2 2 2 1 1	2 1 1 1 1 1 1	1 1 1 1 1 2 1
2 2 2 2 2 1 1	2 1 1 1 1 1 1	1 1 1 1 1 1 2
2 1 1 1 1 1 1 * IN2	1 1 1 2 1 1 2 * SE	1 1 1 1 1 1 2 * AF1
1 1 1 1 1 1 1	1 1 1 2 1 1 2	1 1 1 1 1 1 1
1 1 2 1 1 1 1	1 1 1 2 1 1 2	1 1 1 1 1 1 1
1 1 1 2 1 1 1	2 2 2 1 2 2 1	1 1 1 1 1 1 1
1 1 1 1 1 1 1	1 1 1 2 1 1 2	1 1 1 1 1 1 1
1 1 1 1 1 1 1	1 1 1 2 1 1 2	2 2 2 1 1 1 1
1 1 1 1 1 1 1	2 2 2 1 2 2 1	2 2 2 1 1 1 1

models, we find essentially the same pattern of results as in Panel A. The $ED \mid O$ partial association can be regarded as being approximately stable over the six periods (except for 1970–4), while both $OD \mid E$ and OE change significantly in a downward direction over time. However, in the OD relationships, there are now two parameters to capture the change, being the general diagonal association (inheritance of social class position) and the residual off-diagonal association. The important finding for this association is that all the historical change is concentrated in the off-diagonal part: for the diagonal densities the hypothesis of no change can be upheld.

Figure 14.7(a)–(c) displays the pattern of partial association coefficients found in Models C7, C6, and C5; these are the coefficients found in the separate tables and the linear and curvilinear trends implied by the model. The trends—for men—are more differentiated than they were for the uniform difference models. Most strikingly, we see that the major decline of intergeneration occupational class reproduction occurs in the direct effect ($OD|E$), but outside the diagonal (−2.3 percent on an annual basis for men and −1.3 percent for women). By contrast, the diagonal densities in this relationship can be constrained to be historically constant. Also, the densities for the diagonal parameters resemble very much the bivariate ones (see Fig. 14.8(a) and (b)). Remember, the direct effect concerns intergenerational status transfer outside the educational channel: it is how fathers and offspring relate, once the indirect effect via education has been taken into account. As it turns out, this effect is a mixture of two components that behave differently in the historical context. The first component consists of the cases in which the children are found in the same occupational class as their father; there are no historical changes in this component. The second component is how fathers help their children to obtain a job once the child has left the father's occupational class; it turns out that these transfers have almost vanished over the period of observation.

A second important finding from the scaled association model is that now the $ED \mid O$ effect is somewhat closer to historical constancy than in the uniform difference models. While the downward trend of −0.6 percent for men and −0.9 percent for women on an annual basis is still statistically significant, it is the component of the model that develops least strongly over time. In general, for women, the trends revealed by the scaled association models are very similar to those for men, but less pronounced.

Conclusions and discussion

How has the pattern of intergenerational occupational class mobility and class reproduction in the Netherlands changed over the last thirty years? Using data from thirty-five surveys that cover the 1970–99 period, and taking

2 1 1 1 1 1 1 * IN3	1 2 1 1 1 1 1 *AF2	1 1 1 1 1 1 1 * AFX
1 1 1 1 1 1 1	2 1 1 1 1 1 1	1 1 1 1 1 1 1
1 1 1 1 1 1 1	2 1 1 1 1 1 1	1 1 1 1 1 1 1
1 1 1 1 1 1 1	1 1 1 1 1 2 1	1 1 1 1 1 1 2
1 1 1 1 1 1 1	1 1 2 1 1 1 1	1 1 1 1 1 1 1
1 1 1 1 1 1 1	1 1 1 1 2 1 1	1 1 1 1 1 1 1
1 1 1 1 1 1 1	1 1 1 2 1 2 1	1 1 1 1 1 1 1

evidence from both unconstrained and constrained (scaled) association models, we are able to establish the following conclusions about bivariate intergenerational mobility patterns:

1. There is a clear downward trend in total social reproduction. The trend is stronger for men than for women. The annual decrease in scaled uniform association for men is estimated at −1.6 percent, for women only at −1.1 percent. However, women started at a lower level than men and by

the end of our time window (1999) social fluidity among men and women was about the same.

2. Somewhat against our expectations—derived from our previous assessment of trends using data up to 1992—we find no significant evidence that the historical trends towards more social fluidity are actually declining in pace. Although it remains to be seen in the long run whether our current extrapolations pan out, the evidence up to 1999 is still consistent with a stationary trend, which leads us to forecast that perfect social fluidity will be reached in the foreseeable future. Of course, we are well aware that such extrapolations are unjustified, and have no firm theoretical foundation.
3. Our conclusions on historical trends hold for both analytical models we use, the unconstrained uniform difference model and the constrained Goodman–Hauser scaled association model. The unconstrained model adds no other detail to our conclusion, but the scaled association model does. The scaling parameters of this model show a familiar gradient between the eight occupational classes: they closely resemble their socio-economic status. Densities on the diagonal of the intergenerational occupational mobility table are differentiated by class, with a familiar pattern: very high reproduction of farm occupation and high reproduction among the self-employed, while reproduction is particularly low among low status classes. Furthermore, with respect to trends, the results for the Goodman–Hauser scaled association model show that the between-table differences can be summarised adequately in one single coefficient and no distinct trends exist for the diagonal of the tables; this is similar to how we model trends in unconstrained association models.

The most important conclusion here is, of course, on the trend in social reproduction itself: it is clearly downward, with little sign of slowing down.

In the second part of the analysis, we applied partial association models to the relationships between the three variables of the elementary status attainment model. The conclusions can be summarised as follows:

1. When conceived as partial associations, the pattern of social mobility/ social reproduction shows significant asymmetries between occupations as resources and occupations as rewards. At the same time we find different scalings for fathers, daughters, and sons. We have chosen to disregard these asymmetries in the analysis here, but they appear to be interesting for future analysis.
2. Otherwise, the partial scaled association analysis for the pattern of association does not reveal substantive differences from the bivariate analysis. The scalings of the occupational classes and the diagonal densities are virtually identical to the bivariate case.

3. The general trend towards more social fluidity is also replicated in the partial analysis. The trends towards more openness do not only apply to the ascriptive parts of the status attainment patterns (fathers promoting their children's educational and occupational outcomes directly), but also to the achievement part (the partial association between education and occupation), which is in contradiction with common theories on the model.
4. In the scaled association model, we find evidence of somewhat diverging trends between the different components of intergenerational status transfer, as well as between men and women. For men, the direct intergenerational transfer of occupational class, as measured by the diagonal densities, is stronger than for women and historically stable; by contrast, there is a steep decline in the association between fathers and sons as far as the off-diagonal partial association is concerned. Father's class has become much less important for son's destination, once the latter has left the father's class. This pattern of historical changes also applies to women, but it is less pronounced.

The most important conclusion here is that the trend towards more social fluidity occurs in all partial relationships, including the one in which it was not expected: the *ED* | *O* relationship. This result was also found for France, Great Britain, and Sweden (see chapter 15).

To explain the finding of decreasing social reproduction, it appears to us of foremost importance to point out that it is consistent both with previous findings on the Netherlands and with received theories of social mobility. The downward trends we observe are predominantly what various forms of modernisation theory predict, and is also in line with what earlier research has concluded about the Netherlands. The explanatory question might thus be better formulated as why, if so, there are no such trends in other countries? There are different ways to answer this question, but an obvious one is to point to the importance of the multitude of data points we use, the long-term perspective we take, and the strict harmonisation of the data we applied, as a possible explanation for 'Dutch exceptionalism'. Note too that in an earlier contribution (Ganzeboom et al. 1989) we also found a massive rejection of CnSF, not only by showing systematic between-country differences, but also systematic trends towards more social fluidity. We anticipate that our 1989 conclusions will prove to hold true for the 1970s to 1990s comparison in this book, as long as a sufficient amount of comparative data points and comparatively sensitive statistical tests are used.

Secondly, we need to address the unexpected finding that the *ED* | *O* association is also declining over the period of observation: why did education become less important for recruitment on the labour market (as did father's

occupation)? Why would this be so? An obvious explanation would be that the claim of increasing meritocratic selection is too broad to explain developments within industrial and post-industrial countries like the Netherlands between 1970 and 1999. It has been argued that the way in which educational differentials operate as a device of selection depends to a large extent on the dispersion of the educational distribution (Rijken 1998). If the higher and lower educated are widely dispersed in terms of qualifications and competences, it is easier for employers to select on education, than if the higher and lower educated overlap in competences. It has been an important feature of the Dutch educational system—also compared to developments elsewhere—that educational dispersion indeed has decreased (Ganzeboom and Treiman 1993; Rijken 1998), due to an effective increase in the minimum school-leaving age and rather strict control over the length of higher education (four years). As a consequence of the policies educational credentials must have lost some of their discriminatory power. Some theorists (Bourdieu 1984 [1979]) have speculated that in such circumstances family background regains importance as a selection device. Our findings show that this has not been the case.

Finally, there remains the question of whether our extrapolations towards reaching perfect mobility will hold true. Will the intergenerational association reach a natural minimum, or will developments in Dutch society countervail the existing trend? The question of a 'natural minimum' falls outside the scope of this chapter. However, some evidence relevant to that issue can be found in cross-national comparative research. While we believe that the Netherlands have moved from a comparatively closed society in the 1950s towards a relatively open one around 2000, we do not anticipate that the Dutch have reached the pinnacle of social fluidity yet. We believe that proper comparisons with some of the traditional immigration societies (Israel, Australia, New Zealand), as well as with some of the Nordic welfare states, would show the Netherlands to be at best a runner up in the league of nations. Thus we expect that there is still room to move. It seems more plausible to us that conditions of changing social inequality may slow the pace of meritocratisation. There is evidence that the Dutch have shared in the global upward trend towards more income inequality, with rising poverty rates and an increase in unemployment and self-employment. There is also evidence that the Dutch higher education system has become less accessible to children of low and middle income groups, with stronger exclusionary effects of economic resources (Janssen and Ultee 1994). In sum, we feel that periodical future research is called for, to establish conclusively whether the trend towards more social fluidity remains. However, up to the most recent point of observation covered by our current time window (1999), we have found no convincing evidence of a reversal of trend.

Appendix

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 $R^2 = 0.89$; $F_{11.12} = 17.46$.

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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.

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
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)

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

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

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15 Conclusions

Richard Breen and Ruud Luijkx

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.[186] 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.[187]

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.[188] 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

[186] 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.

[187] 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).

[188] 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.[189] Absolute mobility flows converged because their main determinants did.

This convergence chiefly occurred between the 1970s and 1980s (see Table 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

[189] 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.[190] 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.[191] 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

[190] 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.

[191] 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.[192] 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:

[192] 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.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

> … 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).[193]

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.

[193] 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.[194] For women the picture is very similar. Of seventeen

[194] 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

2 1 1 1 1 1 1 * IN3	1 2 1 1 1 1 1 * AF2	1 1 1 1 1 1 1 * AFX
1 1 1 1 1 1 1	2 1 1 1 1 1 1	1 1 1 1 1 1 1
1 1 1 1 1 1 1	1 2 1 1 1 1 1	1 1 1 1 1 1 1
1 1 1 1 1 1 1	1 1 1 1 1 2 1	1 1 1 1 1 1 2
1 1 1 1 1 1 1	1 1 2 1 1 1 1	1 1 1 1 1 1 1
1 1 1 1 1 1 1	1 1 1 1 2 1 1	1 1 1 1 1 1 1
1 1 1 1 1 1 1	1 1 1 2 1 2 1	1 1 1 1 1 1 1

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.[195]
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.[196] Our own analyses

[195] 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).

[196] 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.[197] 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 b, 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 b, 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.[198]

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

[197] Available at www.lisproject.org/keyfigures/ineqtable.htm .

[198] We obtain a similar non-significant effect when we omit the country dummy variables.

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

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).[199] 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

[199] 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.

Parameters estimated for the variant core model (s.e. in parentheses), by year of survey, and parameter values from core model given by Emkson and Goldthorpe (1992:135)

Model	HI1	HI2	IN1	IN2	IN3	SE	AF1	AF2
1974								
(C)	−0.23 (0.06)	−0.44 (0.12)	0.45 (0.10)	0.16 (0.13)	0.75 (0.37)	−0.48 (0.17)	−1.12 (0.59)	*0.47* (0.06)
(D)	−0.24 (0.05)	−0.49 (0.11)	0.53 (0.07)	n.s.	0.79 (0.37)	−0.51 (0.17)	n.s.	*0.48 (0.06)*
1991								
(C)	−0.16 (0.05)	−0.18 (0.08)	0.33 (0.08)	0.30 (0.11)	1.80 (0.75)	0.01 (0.37)	*−0.37 (0.12)*	*0.40 (0.05)*
(D)	−0.16 (0.05)	−0.18 (0.08)	0.33 (0.08)	0.30 (0.11)	1.79 (0.26)	n.s.	*−0.37 (0.12)*	*0.40 (0.05)*
Core	−0.22	−0.42	0.43	0.81	0.96	−1.03	−0.77	0.46

Note: Parameters in italics are modified as explained in appendix B.

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.[200]

[200] 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,[201] 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

[201] 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;[202] 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

[202] 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.[203]

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,[204] 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

[203] 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.

[204] 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.[205] 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).

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

Parameters estimated for the variant core model (s.e. in parentheses), by year of survey, and parameter values from core model given by Erikson and Goldthorpe (1992:135)

Model	HI1	HI2	IN1	IN2	IN3	SE	AF1	AF2
1974								
(C)	−0.09 (0.12)	−0.10 (0.16)	0.20 (0.20)	0.44 (0.22)	0.18 (1.10)	−0.73 (0.51)	−0.08 (1.06)	*0.29* (0.10)
1991								
(C)	−0.12 (0.07)	−0.26 (0.08)	0.19 (0.09)	0.16 (0.12)	−0.26 (0.69)	−0.67 (0.21)	*−0.42* (0.11)	*0.13* (0.06)
(D)	−0.14 (0.06)	−0.26 (0.08)	0.25 (0.08)	n.s.	n.s.	−0.64 (0.17)	*−0.44* (0.11)	*0.15* (0.06)
Core	−0.22	−0.42	0.43	0.81	0.96	−1.03	−0.77	0.46

Note: Parameters in italics are modified as explained in appendix B.

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	300	250	150
5	90	5	20	30	30
90	90	220	30	80	120
	A			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.[206]

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

[206] If we double the size of the rows we find that, doing this to row 1, we get β = 0.59, to row 2, β = 0.45, and to row 3, β = 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 βs 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).[207] 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.

[207] 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:[208]

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

Parameters estimated for the accepted model (s.e. in parentheses), by year of survey, and parameter values from core model given by Erikson and Goldthorpe (1992:135)

Model	HI1	HI2	IN1	IN2	IN3	SE	AF1	AF2
1974								
(C)	−0.24 (0.06)	−0.49 (0.11)	0.53 (0.07)	n.s	0.79 (0.37)	−0.51 (0.17)	n.s.	*0.48* (0.06)
(D)	−0.07 (0.06)	0.02 (0.14)	0.48 (0.07)	n.s.	0.71 (0.36)	−0.29 (0.17)	n.s.	*0.26* (0.07)
(E)	n.s.	n.s.	0.53 (0.06)	n.s.	1.10 (0.19)	n.s.	n.s.	*0.24* (0.06)
1991								
(C)	−0.16 (0.05)	−0.18 (0.08)	0.33 (0.08)	0.28 (0.11)	1.73 (0.26)	n.s.	*−0.39* (0.12)	*0.40* (0.05)
(D)	−0.02 (0.06)	0.26 (0.10)	0.39 (0.08)	0.07 (0.11)	1.77 (0.26)	n.s.	*−0.30* (0.14)	*0.30* (0.06)
(E)	n.s.	0.26 (0.10)	0.43 (0.05)	n.s.	1.78 (0.24)	n.s.	*0.30* (0.14)	*0.30* (0.05)
Core	−0.22	−0.42	0.43	0.81	0.96	−1.03	−0.77	0.46

Note: Parameters set in italics are modified as explained in appendix B.

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

Parameters estimated for the accepted model (s.e. in parentheses), by year of survey, parameter values from core model given by Erikson and Goldthorpe (1992:135)

Model	HI1	HI2	IN1	IN2	IN3	SE	AF1	AF2
1974								
(B)	−0.07 (0.13)	−0.10 (0.16)	0.23 (0.20)	0.44 (0.22)	0.18 (0.55)	−0.70 (0.55)	−0.07 (1.09)	*0.29* (0.10)
(D)	0.10 (0.13)	0.15 (0.19)	0.24 (0.21)	0.01 (0.25)	0.40 (1.15)	−0.54 (0.55)	1.30 (1.14)	*−0.08* (0.12)
1991								
(C)	−0.14 (0.07)	−0.27 (0.08)	0.24 (0.08)	n.s.	n.s.	−0.59 (0.19)	*−0.44* (0.11)	*0.12* (0.06)
(D)	−0.03 (0.07)	0.11 (0.10)	0.13 (0.09)	n.s.	n.s.	−0.59 (0.19)	*−0.25* (0.14)	*0.00* (0.06)
(E)	n.s.	n.s.	0.13 (0.06)	n.s.	n.s.	20.59 (0.19)	*−0.27* (0.13)	n.s.
Core	−0.22	−0.42	0.43	0.81	0.96	−1.03	−0.77	0.46

Note: Parameters in italics are modified as explained in appendix B.

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.

REFERENCES

Agresti, A. 1990. *Categorical Data Analysis*. New York: Wiley.

Aharoni, Y. 1991. *The Israeli Economy: Dreams and Realities*. New York: Routledge.

Allmendinger, J. 1989. 'Educational systems and labour market outcomes'. *European Sociological Review* 5: 231–50.

Andorka, R. 1983. 'Age, cohort and historical factors influencing inter- and intragenerational social mobility of men and women in Hungary'. *Research in Social Stratification and Mobility* 2: 197–248.

—— 1990*a*. 'Changes in social mobility in Hungary, 1930–1983'. Pages 198–232 in M. Haller ed. *Class Structure in Europe*. Armonk—London: M.E. Sharpe.

—— 1990*b*. 'Half a century of trends in social mobility in Hungary'. Pages 5–30 in J. L. Peschar ed. *Social Reproduction in Eastern and Western Europe*. Nijmegen: Institute for Applied Social Sciences.

—— 1997. 'Changes in social mobility between 1973 and 1992'. *Hungarian Statistical Review* (Special English Number) 75: 46–64.

—— and Zagorski, K. 1980. *Socio-occupational mobility in Hungary and Poland*. Warsaw: Polish Academy of Sciences.

Arbeidsdirektoratet 1989. *Nordisk yrkesklassifisering*.

Banerjee, A. V. and Newman, A. F. 1991. 'Risk-bearing and the theory of income distribution'. *Review of Economic Studies* 58: 211–35.

Barbagli, M. 1988. 'Da una classe all'altra'. *Polis* 2: 125–50.

Baudelot, C. and Establet, E. 2000. *Avoir 30 ans en 1968 et en 1998*. Paris: Éditions du Seuil.

—— and Glaude, M. 1989. 'Les diplômes se dévaluent-ils en se multipliant ?' *Économie et Statistique* 225: 3–16.

Becker, Gary S. and Tomes, N. 1979. 'An equilibrium theory of the distribution of income and intergenerational mobility'. *Journal of Political Economy* 87: 1153–89.

Becker, M. P. 1990. 'Algorithm AS253: maximum likelihood estimation of the RC(M) association model'. *Applied Statistics* 39: 152–67.

—— 1994. 'Analysis of cross-classifications of counts using models for marginal distributions: an application to trends in attitudes on legalized abortion'. *Sociological Methodology* 24: 229–65.

Bell, D. 1972. 'On meritocracy and equality'. *The Public Interest* 29: 29–68.

—— 1973. *The Coming of Post-Industrial Society*. New York: Basic Books.

Ben-Porath, Y. and Gronau, R. 1985. 'Jewish mother goes to work: trends in the labour force participation of women in Israel, 1955–80'. *Journal of Labor Economics* 31: 310–27.

Bernardi, F., Layte, R., Schizzerotto, A., and Jacobs, S. 2000. 'Who exits unemployment? Institutional features, individual characteristics and chances of getting a job: a comparison of Britain and Italy'. In D. Gallie and S. Paugam eds. *Welfare Regimes and the Experience of Unemployment*. Oxford: Oxford University Press.

Bialecki, I. 1996. *Edukacja w zmieniającym sięśpołeczeństwie* [Education in a Changing Society]. Warszawa: Ministerstwo Edukacji Narodowej.

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

Blau, P. M. and Duncan, O. D. 1967. *The American Occupational Structure*. New York: Wiley.

Blossfeld, H.-P. 1993. 'Changes in educational opportunities in the Federal Republic of Germany. A longitudinal study of cohorts born between 1916 and 1965'. Pages 51–74 in Y. Shavit and H.-P. Blossfeld eds. *Persistent inequality: Changing educational stratification in thirteen countries*. Boulder, CO: Westview Press.

Boudon, R. 1974*a*. *Education, Opportunity, and Social Inequality: Changing Prospects in Western Society*. New York: Wiley.

—— 1974*b*. 'Educational growth and economic inequality'. *Quality and Quantity* 8: 1–10.

Bourdieu, P. 1984 [1979]. *Distinction: a social critique of the judgement of taste*. London: Routledge and Kegan Paul.

Bowles, S. and Gintis, H. 2002. 'The inheritance of inequality'. *Journal of Economic Perspectives* 16: 3–30.

Braun, M. and Müller, W. 1997. 'Measurement of education in comparative research'. *Comparative Social Research* 16: 163–201.

Brauns H., Müller, W., and Steinmann, S. 1997. 'Educational expansion and returns to education. A comparative study on Germany, France, the UK, and Hungary. MZES-Arbeitspapier/Working Paper, Arbeitsbereich I Nr. 23. Mannheim: Mannheim Centre for European Social Research.

Brauns, H. and Steinmann, S. 1999. 'Educational reform in France, West Germany and the United Kingdom: updating the CASMIN educational classification'. *ZUMA-Nachrichtung* 44: 7–44.

—— —— Kieffer, A., and Marry, C. 1999. 'Does education matter? France and Germany in comparative perspective'. *European Sociological Review* 15: 61–89.

Braverman, H. 1974. *Labour and Monopoly Capitalism*. New York: Monthly Review Press.

Breen, R. 1985. 'A framework for comparative analyses of social mobility'. *Sociology* 19: 93–107.

—— 1987. 'Sources of cross-national variations in mobility regimes: English, French and Swedish data reanalysed'. *Sociology* 21: 75–90.

—— 1994. 'Individual level models for mobility tables and other cross-classifications'. *Sociological Methods and Research* 23: 147–73.

—— 1997. 'Inequality, economic growth and social mobility'. *British Journal of Sociology* 48: 429–49.

—— 1998. 'The persistence of class origin inequalities among school leavers in the Republic of Ireland, 1984–1993'. *British Journal of Sociology* 49: 275–98.

—— forthcoming. 'A Weberian approach to class analysis' In E. O. Wright ed. *Approaches to Class Analysis,* Cambridge: Cambridge University Press.

—— and Goldthorpe, J. H. 1997. 'Explaining educational differentials. Towards a formal rational action theory'. *Rationality and Society* 9: 275–305.

—— —— 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: the experience of two British birth cohorts'. *European Sociological Review* 17: 81–101.
—— Hannan, D. F., and O'Leary, R. 1995. 'Returns to education: taking account of employers' perceptions and use of educational credentials'. *European Sociological Review* 11: 59–73.
—— —— Rottman, D. B., and Whelan, C. T. 1990. *Understanding Contemporary Ireland: State, Class and Development in the Republic of Ireland*. London: Macmillan.
—— and Jonsson, J. O. 1997. 'How reliable are studies of social mobility? An investigation into the consequences of unreliability in measures of social class'. *Research in Social Stratification and Mobility* 15: 91–112.
—— —— 2003. 'Period and cohort change in social fluidity: Sweden 1976–1999'. Unpublished paper.
—— and Rottman, D. B. 1995*a*. *Class Stratification: A Comparative Perspective*. New York: Harvester Wheatsheaf.
—— —— 1995*b*. 'Class analysis and class theory'. *Sociology* 29: 453–73.
—— and Whelan, C. T. 1992. 'Explaining the Irish pattern of social fluidity: The role of the political'. Pages 129–52 in J. H. Goldthorpe and C. T. Whelan eds. *The Development of Industrial Society in Ireland: Proceedings of the British Academy 79*. Oxford: Oxford University Press.
—— —— 1993. 'From ascription to achievement? Origins, education and entry to the labour force in the Republic of Ireland during the twentieth century'. *Acta Sociologica* 36: 3–18.
—— —— 1994. 'Modelling trends in social fluidity: the core model and a measured-variable approach compared'. *European Sociological Review* 10: 259–72.
—— —— 1999. 'Social mobility in Ireland: A comparative analysis'. Pages 323–43 in A. F. Heath, R. Breen, and C. T. Whelan eds. *Ireland North and South, Perspectives from Social Science: Proceedings of the British Academy 98*. Oxford: Oxford University Press.
Bukodi, E. and Róbert. P. 1999. 'Historical changes, human capital, and career patterns as class determinants in Hungary'. *Review of Sociology* (Hungarian Sociological Association, Special Issue): 42–65.
Bygren, M. 2001. 'What you see is not always what you get: Imperfect information in the job-worker matching process, and its consequences for the attainment of occupational prestige'. Pages 160–83 in J. O. Jonsson and C. Mills eds. *Cradle to Grave: Life-Course Change in Modern Sweden*. Durham: Sociology Press.
Callan, T., Nolan, B., Whelan, B. J., Hannan, D. F., and Creighton, S. 1989. *Poverty, Income and Welfare*. Dublin: Economic and Social Research Institute.
—— —— and Whelan, C. T. 1993. 'Resources, deprivation and the measurement of poverty'. *Journal of Social Policy* 22: 141–72.
Carlsson, G. 1958. *Social Mobility and Class Structure*. Lund: CWK Gleerup.
—— Erikson, R., Löfwall, C., and Wärneryd, B. 1974. 'Socio-ekonomiska grupperingar'. *Statistisk tidskrift 1974*: 381–401.
Carmi, S. and Rosenfeld, H. 1974. 'The origin of the process of proletarianization and urbanization of Arab peasants in Palestine'. *Annals of the New York Academy of Science* 220: Article 6.

Casaccia, M. and Seroussi, G. 2000. *Séries longues sur les salaries: Édition 2000*. Insee Résultats nº 735. Paris: Insee.
Centraal Bureau voor de Statistiek. 1960. *Beroepenclassificatie 1960*. Voorburg: Centraal Bureau voor de Statistiek.
—— 1971. *Beroepenclassificatie 1971*. Voorburg: Centraal Bureau voor de Statistiek.
—— 1984. *Beroepenclassificatie 1984*. Voorburg: Centraal Bureau voor de Statistiek.
—— 1992. *Standaard Beroepenclassificatie 1992*. 's-Gravenhage: SDU.
Central Bureau of Statistics. 1977. *Labour Mobility Survey, 544,* Jerusalem.
—— 1991. *Statistical Abstract of Israel, (42),* Jerusalem.
—— 1999. *Statistical Abstract of Israel,* (*50*), Jerusalem.
—— 2000. *Statistical Abstract of Israel,* (*51*), Jerusalem.
Chauvel, L. 1998*a*. *Le destin des générations. Structure sociale et cohortes en France au XX*^{e} *siècle*. Paris: Presses Universitaires de France.
—— 1998*b*. 'La seconde explosion scolaire : diffusion des diplômes, structure sociale et valeur des titres'. *Revue de l'OFCE* 66: 5–36.
Chiesi, A. M. 1997. *Lavori e professioni*. Roma: La Nuova Italia Scientifica.
Cleveland, W. S. 1979. 'Robust locally weighted regression and smoothing scatterplots'. *Journal of the American Statistical Association* 74: 829–36.
Clogg, C. C. 1982. 'Some models for the analysis of association in multiway cross-classifications having ordered categories'. *Journal of the American Statistical Association* 77: 803–15.
Cobalti, A. 1988. 'Mobili e disuguali'. *Polis* 2: 53–82.
—— and Schizzerotto, A. 1994. *La mobilità sociale in Italia*. Bologna: Il Mulino.
Cohen, Y., Bechar S., and Raijman, R. 1987. 'Occupational sex segregation in Israel, 1972–1983'. *Israel Social Science Research* 5: 97–106.
Colbjørnsen T., Birkelund G. E., Hernes, G., and Knudsen, K. 1987. *Klassesamfunnet på hell*. Olso: Universitetsforlaget.
Collins, R. 1979. *The Credential Society*. New York: Academic Press.
Cox, D. 1995. 'The relation between theory and application in statistics'. *Test* 4: 207–61.
De Graaf, P. M. and Ganzeboom, H. B. G. 1990. 'Intergenerational educational mobility in the Netherlands for birth cohorts from 1891 through 1960'. *Netherlands' Journal of Social Sciences* 26: 35–50.
Dessens, J. A. G., Jansen, W. Ganzeboom, H. B. G., and Van der Heijden, P. G. M. 2003. 'Patterns and trends in occupational attainment of first jobs in the Netherlands, 1930–1995: ordinary least squares regression *versus* conditional multinomial logistic regression'. *Journal of the Royal Statistical Society A* 166: 63–84.
DiPrete, T. A. and Grusky, D. B. 1990. 'Structure and trend in the process of stratification for American men and women'. *American Journal of Sociology* 96: 107–43.
De Lillo, A. 1988. 'La mobilità sociale assoluta'. *Polis* 2: 19–51.
Domański, H. 1989. 'Przemiany struktury społecznej ludności w Polsce'. Pages 12–110 in H. Domański and J. Witkowski eds. *Struktura społeczno-zawodowa a ruchliwość społeczna i przestrzenna ludności w Polsce*. Warszawa: SGPiS.
—— 2000. *Hierarchie i bariery społeczne w latach dziewięćdziesiątych*. Warszawa: Instytut Spraw Publicznych.
Duncan, O. D. 1966. 'Methodological issues in the analysis of social mobility.' Pages 51–97 in N. J. Smelser and S. M. Lipset eds. *Social Structure and Mobility in Economic Development*. Berkeley: University of California Press.

—— —— and Hodge R. W. 1963. 'Education and occupational mobility: A regression analysis'. *American Journal of Sociology* 68: 629–44.
Eisenstadt, S. N. 1967. *Israeli Society*. London: Weidenfeld and Nicolson.
Erikson, R. 1983. 'Changes in social mobility in industrial nations: the case of Sweden'. *Research in Social Stratification and Mobility* 2: 165–95.
—— 1984. 'Social class of men, women and families'. *Sociology* 18: 500–14.
—— 1987. 'The class structure and its trends'. Pages 19–42 in R. Erikson and R. Åberg eds. *Welfare in Transition. A Survey of Living Conditions in Sweden* 1968–1981. Oxford: Clarendon Press.
—— 1996. 'Explaining change in educational inequality—economic security and school reforms'. Pages 95–144 in R. Erikson and J. O. Jonsson eds. *Can Education Be Equalized? The Swedish Case in Comparative Perspective*. Boulder, CO: Westview Press.
—— and Goldthorpe, J. H. 1987*a*. 'Commonality and variation in social fluidity in industrial nations. Part I: A model for evaluating the FJH hypothesis'. *European Sociological Review* 3: 54–77.
—— —— 1987*b*. 'Commonality and variation in social fluidity in industrial nations. Part II: The model of core social fluidity applied'. *European Sociological Review* 3: 145–66.
—— —— 1992. *The Constant Flux: A Study of Class Mobility in Industrial Societies*. Oxford: Oxford University Press.
—— —— and Portocarero, L. 1979. 'Intergenerational class mobility in three Western European societies: England, France and Sweden'. *British Journal of Sociology* 30: 415–41.
Erikson, R. and Jonsson, J. O. 1996*a*. *Can Education Be Equalized? The Swedish Case in Comparative Perspective*. Boulder, CO: Westview Press.
—— —— 1996*b*. 'Introduction. explaining class inequality in education: The Swedish test case'. Pages 1–64 in R. Erikson and J. O. Jonsson eds. *Can Education Be Equalized? The Swedish Case in Comparative Perspective*. Boulder, CO: Westview Press.
—— —— 1996*c*. 'The Swedish context: educational reform and long-term change in educational inequality'. Pages 65–93 in R. Erikson. and J. O. Jonsson eds. *Can Education Be Equalized? The Swedish Case in Comparative Perspective*. Boulder, CO: Westview Press.
—— —— 1998. 'Social origin as an interest-bearing asset: Family background and labour market rewards among employees in Sweden'. *Acta Sociologica* 41: 19–36.
Esping-Andersen, G. 1990. *The Three Worlds of Welfare Capitalism*. Cambridge: Polity Press.
Evans, G., 1992. 'Testing the validity of the Goldthorpe class schema'. *European Sociological Review* 8: 211–32.
—— and Mills, C. 1998. 'Identifying class structure: a latent class analysis of the criterion-related and construct validity of the Goldthorpe class schema'. *European Sociological Review* 14: 87–106.
—— —— 2000. 'In search of the wage-labour/service contract: New evidence on the validity of the Goldthorpe class schema'. *British Journal of Sociology* 51: 641–61.
Fazekas K. ed. 2000. *Munkaerőopiac tükör 2000*. Budapest: MTA Közgazdaságtudományi Kutatóközpont.
Featherman, D. L. and Hauser, R. M. 1978. *Opportunity and Change*. New York: Academic Press.

—— Jones, F. L., and Hauser, R. M. 1975. 'Assumptions of mobility research in the United States: the case of occupational status'. *Social Science Research* 4: 329–60.

Firth, D. 1998. 'LLAMA: An object-oriented system for log multiplicative models'. Pages 305–10 in R. Payne and P. Green eds. *Proceedings in Computational Statistics*. Heidelberg: Physica-Verlag.

—— and Kuha, J. 1998. 'Comments on "A Critique of the Bayesian Information Criterion for Model Selection"'. *Sociological Methods and Research* 27: 398–42.

Forsé, M. 1997. 'La diminution de l'inégalité des chances scolaires ne suffit pas à réduire l'inégalité des chances sociales'. *Revue de l'OFCE* 63: 229–39.

—— 1998. 'French trends in social and educational opportunities, 1982–1997'. *The Tocqueville Review* 19: 173–86.

Fredriksen, D. F. 1993. 'Strukturelle endringer i arbeidsmarkedet 1950–1990'. In *Sosialt utsyn*. Oslo: Statistics Norway.

Fritzell, J. 2001*a*. 'Inkomstfördelningens trender under 1990-talet'. Pages 131–81 in *Välfärdens finansiering och fördelning, SOU 2001: 57*. Stockholm: Fritzes.

—— 2001*b*. 'Still different? Income distribution in the Nordic countries in a European comparison'. In M. Kautto, J. Fritzell, B. Hvinden, J. Kvist, and H. Uusitalo eds. *Nordic Welfare States in the European Context*. London: Routledge.

—— and Henz, U. 2001. 'Household income dynamics. Mobility out of and into low income over the life-course'. Pages 184–210 in J. O. Jonsson and C. Mills eds. *Cradle to Grave: Life-Course Change in Modern Sweden*. Durham: Sociology Press.

Gadourek, I. 1963. *Riskante gewoonten*. Groningen: Wolters.

Galgerud, Å. 1973. 'Yrkesmobilitet i Norge' (Occupational mobility in Norway). *Tidsskrift for samfunnsforskning* 14: 179–93.

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

Galor, Oded and Joseph Zeira 1993. 'Income distribution and macroeconomics'. *Review of Economic Studies* 60: 35–52.

Ganzeboom, H. B. G. 1984. 'Path models for the transmission of social inequality in the Netherlands in 1958 and 1977'. Pages 109–22 in B. F. M. Bakker, J. Dronkers, and H. B. G. Ganzeboom eds. *Social stratification and mobility in the Netherlands*. Amsterdam: SISWO.

—— and De Graaf, P. M. 1984. 'Loglinear models for intergenerational occupational mobility in the Netherlands in 1954 and 1977'. Pages 71–89 in B. F. M. Bakker, J. Dronkers, and H. B. G. Ganzeboom eds. *Social stratification and mobility in the Netherlands*. Amsterdam: SISWO.

—— —— and Treiman, D. J. 1992. 'A standard international socio-economic index of occupational status'. *Social Science Research* 21: 1–56.

—— and Luijkx, R. 1995. 'Intergenerationele beroepsmobiliteit in Nederland: patronen en historische veranderingen'. Pages. 14–30 in J. Dronkers and W. C. Ultee eds. *Verschuivende ongelijkheid in Nederland. Sociale gelaagdheid en mobiliteit*. Assen: Van Gorcum.

—— —— Dessens, J., Jansen, W., De Graaf, P. M., De Graaf, N. D., and Ultee, W. C. 1987. 'Intergenerationele klassenmobiliteit in Nederland tussen 1970 en 1985'. *Mens en Maatschappij* 62: 17–43.

—— —— and Róbert, P. 1991. 'Trends in intergenerational occupational mobility in Hungary between 1930 and 1989'. Department of Sociology, Tilburg University, Working Paper Series 58. Also published as Chapter 3 in R. Luijkx 1994 ed. *Comparative log-linear analysis of social mobility and heterogamy.* Tilburg: Tilburg University Press.
—— —— and Treiman, D. J. 1989. 'Intergenerational class mobility in comparative perspective'. *Research in Social Stratification and Mobility* 8: 3–84.
—— and Nieuwbeerta, P. 1999. 'Access to education in six eastern European countries between 1940 and 1985. Results of a cross national survey'. *Communist and Post-Communist Studies* 32: 339–57.
—— and Treiman, D. J. 1993. 'Preliminary results on educational expansion and educational achievement in comparative perspective'. In H. Becker and P. L. J. Hermkens eds. *Solidarity of Generations: Demographic, Economic and Social Change and its Consequences, Vol. 1.* Amsterdam: Thesis.
—— —— 1996. 'Internationally comparable measures of occupational status for the 1988 International Standard Classification of Occupations'. *Social Science Research* 25: 201–39.
—— —— 2003. 'Three internationally standardised measures for comparative research on occupational status'. Pages 159–93 in Jürgen H. P. Hoffmeyer-Zlotnik and Christof Wolf eds. *Advances in cross-national comparison. A European working book for demographic and socio-economic variables.* New York: Kluwer Academic Press.
Gerber, T. and Hout, M. forthcoming. 'Intergenerational Class Mobility in Russia, 1998–2000: Stronger Origin Effects During Market Transition.' *American Sociological Review.*
Giddens, A. 1994. *Beyond Left and Right.* Cambridge: Polity Press.
Goldthorpe, J. H. 1980. *Social Mobility and Class Structure in Modern Britain.* Oxford: Clarendon Press.
—— 1983. 'Women and class analysis: In defence of the conventional view'. *Sociology* 17: 465–88.
—— 1985. 'On economic development and social mobility'. *British Journal of Sociology* 36: 549–73.
—— 1987. *Social Mobility and Class Structure in Modern Britain (second edition).* Oxford: Clarendon Press.
—— 1992. 'The theory of industrialism and the Irish case'. Pages 411–31 in J. H. Goldthorpe and C. T. Whelan eds. *The Development of Industrial Society in Ireland: Proceedings of the British Academy 79.* Oxford: Oxford University Press.
—— 1995. 'Le « noyau dur » : fluidité sociale en Angleterre et en France dans les années 70 et 80'. *Revue française de sociologie* 36: 61–79.
—— 1996*a*. 'Problems of "Meritocracy"'. Pages 255–87 in R. Erikson. and J. O. Jonsson eds. *Can Education Be Equalized? The Swedish Case in Comparative Perspective.* Boulder, CO: Westview Press.
—— 1996*b*. 'Class analysis and the reorientation of class theory: The case of persisting differentials in educational attainment'. *British Journal of Sociology,* 47: 481–512.
—— 2000. *On Sociology: Numbers, Narratives and the Integration of Research and Theory.* Oxford: Oxford University Press.
—— and Portocarero, L. 1981. 'La Mobilite social en France, 1953–1970: Nouvel examen'. *Revue Francaise de Sociologie,* 22: 151–66.
—— Yaish, M., and Kraus, V. 1997. 'Class mobility in Israeli society: A comparative perspective'. *Research in Social Stratification and Mobility* 15: 3–27.

Gollac, M. and Laulhé, P. 1987. 'La transmission du statut social : l'échelle et le fossé'. *Économie et Statistique* 199–200: 85–93.

Gooderham, P., Lindbekk, T., and Ringdal, K. 1994. 'Erikson og Goldthorpes klasse inndeling: norsk versjon'. ISS Rapport 41. Trondheim: Dept. of Sociology and Political Science.

Goodman, L. A. 1973. 'Causal analysis of data from panel studies and other kinds of surveys'. *American Journal of Sociology* 78: 1135–91.

—— 1979*a*. 'Simple models for the analysis of association in cross-classifications having ordered categories'. *Journal of the American Statistical Association* 74: 537–52.

—— 1979*b*. 'Multiplicative models for the analysis of occupational mobility tables and other kinds of cross-classification tables'. *American Journal of Sociology* 84: 804–19.

—— 1981. 'Three elementary views of log linear models for the analysis of cross-classifications having ordered categories'. *Sociological Methodology* 12: 193–239.

—— 1986. 'Some useful extensions of the usual correspondence analysis approach and the usual log-linear models approach in the analysis of contingency tables'. *International Statistical Review* 54: 243–309.

—— and Hout, M. 1998. 'Statistical methods and graphical displays for analyzing how the association between two qualitative variables differs among countries, among groups or over time: A Modified Regression-type Approach'. *Sociological Methodology* 28: 175–230.

Goux, D. and Maurin, É. 1994. 'Éducation, expérience et salaire : tendances récentes et évolution de long terme'. *Économie et Prévision* 116: 155–78.

—— —— 1997. 'Meritocracy and social heredity in France: some aspects and trends'. *European Sociological Review* 13: 159–77.

—— —— 1998. 'From education to first job: the French case'. Pages 103–41 in Y. Shavit and W. Müller eds. *From School to Work: A Comparative Study of Educational Qualifications and Occupational Destinations*. Oxford: Clarendon Press.

Grawe, Nathan D. and Mulligan, Casey B. 2002. 'Economic interpretations of intergenerational correlations'. *Journal of Economic Perspectives* 16: 45–58.

Grundmann, M. 1992. *Familienstruktur und Lebensverlauf. Historische und gesellschaftliche Bedingungen individueller Entwicklung*. Frankfurt: Campus.

Grusky, D. B. and Hauser, R. M. 1984. 'Comparative social mobility revisited: Models of convergence and divergence in 16 countries'. *American Sociological Review* 49: 19–38.

Gustafsson, J.-E., Andersson, A., and Hansen, M. 2000. 'Prestationer och prestations-skillnader i 1900-talets skola'. Pages 135–211 in *Välfärd och skola. SOU 2000: 39*. Stockholm: Fritzes.

Haberfeld, Y. and Cohen, Y. 1998. 'Earnings gaps between Israel's native-born men and women: 1982–1993'. *Sex Roles* 39: 855–72.

Hall, A. 1997. 'Abbau sozialer Barrieren? Zur Entwicklung der Muster sozialer Mobilität in Westdeutschland'. Pages 111–35 in W. Müller ed. *Soziale Ungleichheit. Neue Befunde zu Strukturen, Bewusstsein und Politik*. Opladen: Leske1Budrich.

Haller, M. and Mach, B. W. 1984. 'Structural changes and mobility in a capitalist and a socialist society: Comparison of men in Austria and Poland'. Pages 43–103 in M. Niessen, J. Peschar, and Ch. Kourilsky eds. *Social Structures and Public Institutions in Eastern and Western Europe*. Oxford: Pergamon Press.

Hanaki, H. S. Rabushka, E., and Plesner, Y. 1989. 'The war of Israel against capitalism'. *Nati,* 3:51–9.

Handl, J. 1996. 'Hat sich die berufliche Wertigkeit der Bildungsabschlüsse in den achtziger Jahren verringert? Ein Analyse der abhängig erwerbstätigen, deutschen Berufsanfänger auf der Basis von Mikrozensusergebnissen'. *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 48: 249–73.

—— and Herrmann C. 1994. *Soziale und berufliche Umschichtung der Bevölkerung in Bayern nach 1945*. München: Judicium.

Hansen, M. N. 1995. *Class and Inequality in Norway*. Rapport 95:15. Oslo: ISF.

—— 1997. 'Social and economic inequality in the educational career: Do the effects of social background characteristics decline?' *European Sociological Review* 13: 305–21.

—— 1999. 'Utdanningspolitikk og ulikhet. Rekruttering til høyere utdanning 1985–1996'. *Tidsskrift for samfunnsforskning* 40: 172–203.

Hartmann, P. 1998. 'Intergenerationale berufliche Mobilität in West- und Ostdeutschland'. Pages 43–76 in M. Braun and P. Ph. Mohler eds. *Blickpunkt Gesellschaft 4. Soziale Ungleichheit in Deutschland*. Opladen: Westdeutscher Verlag.

Hauser, R. and Becker, I. 2001. Einkommensverteilung im Querschnitt und im Zeitverlauf 1973–1998. *Studie (der erste Armuts – und Recchumsbericht der Bundesregierung)*. Bonn: Bundesministerium für Arbeit und Sozialordnung.

Hauser, R. M. 1976. 'Review essay: on Boudon's model of social mobility'. *American Journal of Sociology* 81: 911–28.

—— 1978. 'A structural model of the mobility table'. *Social Forces* 56: 919–53.

—— 1984*a*. 'Vertical class mobility in England, France, and Sweden'. *Acta Sociologica* 27: 87–110.

—— 1984*b*. 'Corrigenda: "Vertical Class Mobility in England, France, and Sweden"'. *Acta Sociologica* 27: 387–90.

—— 1995. 'Better rules for better decisions'. *Sociological Methodology* 25: 175–84.

—— and Grusky D. B. 1988. 'Cross national variation in occupational distribution, relative mobility chances, and intergenerational shifts in occupational distributions'. *American Sociological Review* 53: 723–41.

—— and Huang, M.-H. 1997. 'Verbal ability and socioeconomic success: A trend analysis'. *Social Science Research* 26: 331–76.

Hayek, F. 1960. *The Constitution of Liberty*. London: Routledge.

—— 1976. *Law, Legislation and Liberty*. London: Routledge.

Hazelrigg, L. E. and Garnier, M. A. 1976. 'Occupational mobility in industrial societies: a comparative analysis of differential access to occupational ranks in seventeen countries'. *American Sociological Review* 41: 498–511.

Heath, A. 1981. *Social Mobility*. London: Fontana.

—— and Ridge, J. 1983. 'Schools, examinations and occupational attainment'. Pages 239–57 in J. Purvis and M. Hales eds. *Achievement and Inequality in Education*. London: Routledge and Kegan Paul.

—— and McDonald S. K. 1987. 'Social change and the future of the left'. *Political Quarterly* 53: 364–77.

—— and Payne, C. 2000. 'Social mobility'. Pages 254–81 in A. H. Halsey ed. *Twentieth Century British Social Trends*. London: Macmillan.

—— Mills, C., and Roberts, J. 1992. 'Towards meritocracy? Recent evidence on an old problem'. Pages 217–43 in C. Crouch and A. F. Heath eds. *Social Research and Social Reform*. Oxford: Clarendon Press.

Heckscher, E. F. 1941. *Svenskt arbete och liv från medeltiden till nutiden*. Stockholm: Bonniers.

Hendrickx, J. and Ganzeboom, H. B. G. 1998. 'Occupational status attainment in the Netherlands, 1920–1990. A multinomial logistic analysis'. *European Sociological Review* 14: 387–403.

Henz, U. and Maas, I. 1995. 'Chancengleichheit durch Bildungsexpansion?' *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 47: 605–33.

Herrnstein, Richard J. and Murray, Charles. 1994. *The Bell Curve: intelligence and class structure in American life*. New York: Free Press.

Heyns, B. and Bialecki, I. 1993. 'Educational inequalities in postwar Poland'. Pages 303–36 in Y. Shavit and H.-P. Blossfeld eds. *Persistent Inequality. Changing Educational Attainment in Thirteen Countries*. Boulder, CO: Westview Press.

Hope, Keith. 1982. 'Vertical and non-vertical class mobility in three countries'. *American Sociological Review* 47: 99–113.

Hout, M. 1983. *Mobility Tables*. Thousand Oaks, CA: Sage.

—— 1984. 'Status, autonomy, and training in occupational mobility'. *American Journal of Sociology* 89: 1379–409.

—— 1988. 'More universalism, less structural mobility: the American occupational structure in the 1980s'. *American Journal of Sociology* 93: 1358–400.

—— 1989. *Following in Father's Footsteps: Social Mobility in Ireland*. Cambridge, MA: Harvard University Press.

—— 2003. 'What we have learned: RC28's contributions to knowledge'. Paper presented at RC28 conference in Tokyo, March 2003.

—— Brooks, C., and Manza, J. 1995. 'The democratic class struggle in the United States: 1948–1992'. *American Sociological Review* 60: 805–28.

Inkeles, A. and Rossi, P. A. 1956. 'National comparisons of occupational prestige'. *American Sociological Review* 61: 234–51.

Institut National de la Statistique et des Études Économiques. 1987. *Données sociales 1987*. Paris: Insee.

—— 1993. *Données sociales 1993*. Paris: Insee.

—— 1996. *Données sociales 1996*. Paris: Insee.

—— 1999. *Données sociales 1999*. Paris: Insee.

International Labour Office. 1969. *International Standard Classification of Occupations: ISCO68*. Geneva: ILO.

—— 1990. *International Standard Classification of Occupations: ISCO88*. Geneva: ILO.

Ishida, H., Müller, W., and Ridge, J. 1995. 'Class origin, class destination, and education: A cross-national study of industrial nations'. *American Journal of Sociology* 101: 145–93.

Jackson, M., Goldthorpe, J. H. and Mills, C. forthcoming. 'Education Employers and Class Mobility'. *Research in Social Stratification and Mobility*.

Janssen, J. P. G., and Ultee, W. C. 1994. 'De cultuur of de centen … Een nieuwe toetsing van hypothesen over culturele en economische hulpbronnen in de intergenerationele overdracht van onderwijs'. *Mens en Maatschappij* 69: 400–19.

Jones, F. L. 1992. 'Common social fluidity: a comment on recent criticisms.' *European Sociological Review* 8: 233–37.

Jonsson, J. O. 1988. *Utbildning, social reproduktion och social skiktning*. Stockholm: Almqvist & Wiksell International.

—— 1992. 'Towards a merit-selective society?' Stockholm: Swedish Institute for Social Research.

—— 1993. 'Education, social mobility and social reproduction in Sweden: Patterns and changes'. Pages 91–118 in E. J. Hansen, S. Ringen, H. Uusitalo, and R. Erikson eds. *Welfare Trends in the Scandinavian Countries*. Armonk, NY: M.E Sharpe.

—— 1996. 'Stratification in post-industrial society: are educational qualifications of growing importance?' Pages 113–44 in R. Erikson and J. O. Jonsson eds. *Can education be equalized? The Swedish case in comparative perspective*. Boulder, CO: Westview Press.

—— 1998. 'Class and the changing nature of work: Testing hypotheses of deskilling and convergence among Swedish employees'. *Work, Employment, and Society* 12: 603–33.

—— and Erikson, R. 1997. 'Klasstruktur och social rörlighet under 1900-talet'. Pages 491–511 in L. Häll and J. Vogel eds. *Välfärd och ojämlikhet i ett tjugoårsperspektiv, 1975–1995*. Stockholm: SCB.

—— —— and Erikson, R. 2000. 'Understanding educational inequality: the Swedish experience'. *L'Année sociologique* 50: 345–82.

—— and Mills, C. 1993. 'Social mobility in the 1970s and 1980s—a study of men and women in England and Sweden'. *European Sociological Review* 9: 229–48.

—— —— and Müller, W. 1996. 'A half century of increasing educational openness? Social class, gender and educational attainment in Sweden, Germany and Britain'. Pages 183–206 in R. Erikson and J. O. Jonsson eds. *Can education be equalized? The Swedish case in comparative perspective*. Boulder, CO: Westview Press.

—— and Östberg, V. in collaboration with Evertsson, M. and Låftman, S. B. 2001. *Barns och ungdomars välfärd. SOU 2001:55*. Stockholm: Fritzes.

Keller, S. and Zavalloni, M. 1964. 'Ambition and social class: A respecification'. *Social Forces* 43: 58–70.

Kelley, J. and Klein, H. S. 1977. 'Revolution and the rebirth of inequality. A theory of stratification in postrevolutionary society'. *American Journal of Sociology* 83: 78–99.

—— —— 1981, *Revolution and the rebirth of inequality. A theory applied to the national revolution in Bolivia*. Berkeley: University of California Press.

Kerr, C., Dunlop, J. T., Harbison, F. H., and Myers, C. A. 1960. *Industrialism and Industrial Man*. Cambridge, MA: Harvard University Press.

King, G., Tomz, M., and Wittenberg, J. 2000. 'Making the most of statistical analyses: improving interpretation and presentation'. *American Journal of Political Science* 44: 347–61.

Kipnis, B. 1990. 'Did we abandon the principle of population dispersion?' *Geography* 2: 6–7 (Hebrew).

Kjeldstad, R. and Lyngstad, J. 1993. *Arbeid, lønn og likestilling*. Oslo: Universitetsforlaget.

Kocka, J. 1981. *Die Angestellten in der deutschen Geschichte 1850–1980. Vom Privatbeamten zum angestellten Arbeitnehmer*. Göttingen: Anderhoeck & Ruprecht.

König, W., Lüttinger, P., and Müller, W. 1988 'A comparative analysis of the development and structure of educational systems. Methodological foundations and the construction of a comparative educational scale'. CASMIN Working Paper No. 12. Mannheim: Universitat Mannheim

Kraus, V. 1992. 'Industrial transformation and occupational change in the Israeli labour force'. *Israel Social Science Research* 7: 1–14.

—— and Hodge, R. W. 1990. *Promises in the Promised Land: Mobility and Inequality in Israel*. New York: Greenwood Press.

—— Shavit, Y., and Yaish, M. 1998. 'Gender and ethnic differences in the transition from school to work in Israel'. Pages 221–52 in Y. Shavit and W. Müller eds. *From School to Work: A Comparative Study of Educational Qualifications and Occupational Destinations*. Oxford: Clarendon Press.

Kraus, V. and Toren, N. 1992. 'Changes in opportunity structure and stratification patterns in Israel 1974–1991: Trends in mobility and social inequality'. Unpublished Report for the Ford Foundation.

Lang, J. B. and Agresti, A. 1994. 'Simultaneously modeling the joint and marginal distributions of multivariate categorical response data'. *Journal of the American Statistical Association* 89: 625–32.

—— and Eliason, S. R. 1997. 'Application of association-marginal models to the study of social mobility'. *Sociological Methods and Research* 26: 183–212.

Lewin-Epstein, N. and Semyonov, M. 1986. 'Ethnic group mobility in the Israeli labor market'. *American Sociological Review* 51: 342–51.

—— —— 1993. *The Arab Minority in Israel's Economy. Patterns of Ethnic Inequality*. Boulder, CO: Westview Press.

Lindbekk, T. 1983. *Samfunnsendring og sosial mobilitet i Trøndelag*. Oslo: Universitetsforlaget.

—— 1993. 'School reforms in Norway and Sweden, and the redistribution of educational attainments'. *Scandinavian Journal of Educational Research* 37: 129–49.

—— 1998. 'The education backlash hypothesis'. *Acta Sociologica* 41: 151–62.

Lipset, S. M. and Bendix, R. 1959. *Social Mobility in Industrial Society*. Berkeley: University of California Press.

—— and Zetterberg, H. L. 1959. 'Social mobility in industrial societies'. Pages 11–75 in S. M. Lipset and R. Bendix eds. *Social Mobility in Industrial Society*. Berkeley: University of California Press.

Logan, J. A. 1983. 'A multivariate model for mobility tables'. *American Journal of Sociology* 89: 324–49.

Luijkx, R. 1994. *Comparative Log-linear Analyses of Social Mobility and Heterogamy*. Tilburg: Tilburg University Press.

—— and Ganzeboom, H. B. G. 1989. 'Intergenerational class mobility between 1970 and 1986'. Pages 5–30 in W. Jansen, J. Dronkers, and K. Verrips eds. *Similar or Different?* Amsterdam: SISWO.

—— Róbert, P., De Graaf, P. M., and Ganzeboom, H. B. G. 1998. 'From ascription to achievement: the status attainment process in Hungary from 1910 to 1991'. Pages 93–119 in H. B. G. Ganzeboom and P. Nieuwbeerta eds. *Proceedings of Workshop on Transformation Processes in Eastern Europe. Part II. Social Stratification*. The Hague: ESR.

—— —— —— —— 2002. 'Changes in status attainment in Hungary between 1910 and 1989: trendless fluctuation or systematic change?' *European Societies* 4: 107–40

Lüttinger, P. 1986. 'Der Mythos der schnellen Integration. Eine empirische Untersuchung zur Integration der Vertriebenen und Flüchtlinge in der Bundesrepublik Deutschland bis 1971'. *Zeitschrift für Soziologie* 15: 20–36.

—— and Rossmann, R. 1989. *Integration der Vertriebenen: eine empirische Analyse*. Frankfurt: Campus.

Lynn, P., Buck, N., Burton, J., Jackle, A., and Laurie, H. 2004. 'A review of methodological research pertinent to longitudinal surveys'. Working Papers of the Institute for Social and Economic Research. Colchester: University of Essex.

Macdonald, K. I. and Ridge, J. M. 1988. 'Social mobility'. Pages 202–25 in A. H. Halsey ed. *British Social Trends since 1900*. London: Macmillan.

Mach, B. W. and Peschar, Jules. 1990. 'On the changing role of education in social reproduction in different sociopolitical systems; A comparative analysis between the

Netherlands and Poland'. Pages 92–120 in Max Haller ed. *Class Structure in Europe: New Findings from East-West Comparisons of Social Structure and Mobility*. Armonk, NY: M.E. Sharpe.

—— and Slomczynski, Kazimierz M. 1995. 'Occupational structure and mobility in the transition from communism to post-communist capitalism'. Pages 135–51 in Edmund Wnuk-Lipinski ed. *After Communism: A Multidisciplinary Approach to Radical Social Change*. Warsaw: ISP Publishers.

Marchand, O. and Thélot, C. 1997. *Le Travail en France 1800–2000*. Paris: Nathan.

Marshall, G. and Swift, A. 1996. 'Merit and mobility: A reply to Peter Saunders'. *Sociology* 30: 375–86.

—— —— and Roberts, S. 1997. *Against the Odds? Social Class and Social Justice in Industrial Societies*. Oxford: Clarendon Press.

Martin, J. and Roberts, C. 1984. *Women and Employment: A Lifetime Perspective*. London: HMSO.

Matras, J. 1963. 'Some data on intergenerational occupational mobility in Israel'. *Population Studies* 17: 167–86.

—— Simha, N., and Weintraub, D. 1975. 'Intergenerational mobility in Israel: A national study'. Paper presented at the American Sociological Association Annual Meeting, San Francisco.

—— and Weintraub, D. 1977. 'Ethnic and other primordial differentials in intergenerational mobility in Israel'. Brookdale Institute Discussion Paper No. 25–77, Jerusalem.

Mayer, K. U. 1977. *Fluktuation und Umschichtung empirische Untersuchungen zu Strukturen sozialer Ungleichheit und Prozessen sozialer Mobilität in der Bundesrepublik Deutschland*. Mannheim: Universität Mannheim, Habilitations-Schrift.

—— 1991. *Lebensverlauf und Bildung. Ergebnisse aus dem Forschungsprojekt 'Lebensverläufe und gesellschaftlicher Wandel' des Max-Planck-Insituts für Bildungsforschung*. Unterrichtswissenschaft 19: 313–32.

—— Henz U., and Maas I. 1991. *Social Mobility between Generations and across the Working Life: Biographical Contingency, Time Dependency and Cohort Differentiation—Results from the German Life History Study*. Berlin: Max-Planck-Institut für Bildungsforschung.

—— and N. B. Tuma eds. 1990. *Event History Analysis in Life Course Research*. Madison: University of Wisconsin Press.

McClendon, M. J. 1980*a*. 'Occupational mobility and economic development: a cross-national analysis'. *Sociological Focus* 13: 331–42.

—— 1980*b*. 'Structural and exchange components of social mobility: a cross-national analysis'. *Sociological Quarterly* 21: 493–509.

McRae, S. 1990. 'Women and class analysis'. Pages 117–33 in J. Clark, C. Modgil, and S. Modgil eds. *John H. Goldthorpe: Consensus and Controversy*. London: Falmer.

Merllié, D. and Prévot, J. 1997. *La mobilité sociale*. Paris: La Découverte.

Mills, C. and Payne, C. 1989. 'Service class entry in worklife perspective'. ESRC Social Change and Economic Life Initiative, Working Paper 10.

Moen, K. L., Øyangen I., and Jenssen, A. T. 1996. The Norwegian 1994 EU referendum study. ISS report no. 45. Trondheim: Norwegian University of Science and Technology.

Mohr, L. B. 1990. *Understanding Significance Testing*. Thousand Oaks, CA: Sage.

Müller, W. 1978. 'Der Lebenslauf von Geburtskohorten'. Pages 54–77 in M. Kohli. ed. *Soziologie des Lebenslaufs*. Darmstadt: Luchterhand.

Müller, W. 1999. 'Institutional context and labor market outcomes of education in Germany'. Pages 82–188 in A. Jasinska-Kania, M. Kohn, and K. Somoczynski eds. *Power and social structure: essays in honor of Wlodzimierz Wesolowski*. Warszawa: Wydawnictwa Uniwersytetu Warszawskiego

—— and Haun D. 1994. 'Bildungsungleichheit im sozialen Wandel'. *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 46: 1–42.

—— Lüttinger, Paul, König, W., and Wolfgang, K. 1989. 'Class and education in industrial nations'. *International Journal of Sociology* 19: 3–39.

—— and Shavit, Yossi 1998. 'The institutional embeddedness of the stratification process: A comparative study of qualifications and occupations in thirteen countries'. Pages 1–48 in Y. Shavit and W. Müller eds. *From School to Work: A Comparative Study of Educational Qualifications and Occupational Destinations*. Oxford: Oxford University Press.

—— Steinmann, S., and Ell, R. 1998. 'Education and labour-market entry in Germany'. Pages 143–88 in Y. Shavit. and W. Müller eds. *From School to Work: A Comparative Study of Educational Qualifications and Occupational Destinations*. Oxford: Oxford University Press.

O'Connell, P. 1999, 'Sick man or tigress? The labour market in the Republic of Ireland'. Pages 215–50 in A. F. Heath, R. Breen, and C. T. Whelan eds. *Ireland North and South: Perspectives from Social Science: Proceedings of the British Academy 98*. Oxford: Oxford University Press.

—— 2000. 'The dynamics of the Irish labour market in comparative perspective'. Pages 58–89 in B. Nolan, P. O'Connell, and C. T. Whelan eds. *Bust to Boom? The Irish Experience of Growth and Inequality*. Dublin: Institute of Public Administration.

—— and Rottman, D. B. 1992. 'The Irish welfare state in comparative perspective'. Pages 205–40 in J. H. Goldhtorpe and C. T. Whelan eds. *The Development of Industrial Society in Ireland: Proceedings of the British Academy 79*. Oxford: Oxford University press.

—— and Shortall, S. 1999. 'Does the border make a difference? Variations in women's paid employment, North and South'. Pages 285–318 in A. F. Heath, R. Breen, and C. T. Whelan eds. *Ireland North and South: Perspectives from Social Science: Proceedings of the British Academy 98*. Oxford: Oxford University Press.

Ossowski, S. 1963. *Class Structure in the Social Consciousness*. London: Routledge and Kegan Paul.

Parsons, T. 1960. *Structure and Process in Modern Societies*. Glencoe, IL: Free Press.

Pisati, M. 1995. 'Disuguaglianze di genere e mercato del lavoro: il caso italiano alla metà degli anni Ottanta'. Pages 165–202 in A. Nardi ed. *Lavoro d'Europa*. Milano: Angeli.

—— 1997. 'Mobility regimes and generative mechanisms: a comparative analysis of Italy and the United States'. *European Sociological Review* 13: 179–98.

—— 2000. *La mobilità sociale*. Bologna: Il Mulino.

—— and Schizzerotto, A. 1999. 'Pochi promossi, nessun bocciato. La mobilità di carriera in Italia in prospettiva comparata e longitudinale'. *Stato e Mercato* 56: 249–79.

—— —— 2000. 'Structural constraints on career mobility in Italy: a longitudinal analysis'. Paper presented at the Annual Spring Conference of ISA Research Committee 28, Libourne, 11–14 May 2000.

Pohoski, M. 1984. 'Ruchliwość społleczna w Polsce w latach 1972–1982'. Report on the work done under Project 11.2. Warsaw: Institute of Philosophy and Sociology, Polish Academy of Sciences.

—— —— and Mach Bogdan W. 1988. 'Trends in social mobility in Poland: 1972–1982'. *Polish Sociological Bulletin* 3: 19–37.

Pollak, R. 2001. Bildung und soziale Mobilität in Deutschland. Institutionelle und historische Ursachen für die Entwicklung sozialer Mobilität über fünf Geburtskohorten 1920–1969. Mannheim: Universität Mannheim, Diplomarbeit.

Pöntinen, S. 1983. 'Social mobility and social structure: A comparison of Scandinavian Countries'. *Commententationes Scientiarum Socialium 20*. Helsinki: Finnish Society of Sciences and Letters.

Powers, D. A. and Xie, Y. 2000. *Statistical methods for categorical data analysis*. London: Academic Press.

Prost, A. 1986. *L'enseignement s'est-il démocratisé? Les élèves des lycées et collèges de l'agglomération d'Orléans de 1945 à 1980*. (2e édition 1992). Paris: Presses Universitaires de France.

—— 1992. *Éducation, société et politiques. Une histoire de l'enseignement en France, de 1945 à nos jours*. (2e édition 1997). Paris: Éditions du Seuil.

Raftery A. E. 1986. 'Choosing models for cross-classifications'. *American Sociological Review* 51:145–6.

—— and Hout, M. 1993. 'Maximally, maintained inequality: Expansion, reform and opportunity in Irish education, 1921–1975'. *Sociology of Education* 66: 42–62.

Remba, O. 1971. 'Economy of Israel'. Pages 1068–72 in R. Patai ed. *Encyclopaedia of Zionism and Israel*. New York: Herzl and McGraw-Hill.

Rijken, S. 1998. 'Educational expansion and status attainment. A cross-national and over-time comparison'. Ph.D. Thesis, Utrecht Univeristy.

Ringdal, K. 1990. Labour Markets Structures and Social Mobility in Norway. A study of homogeneity and segmentation. Trondheim: Dept. of Sociology and Political Science.

—— 1994. 'Intergenerational class mobility in post-war Norway: A weakening of vertical barriers?' *European Sociological Review* 10: 273–88.

—— and Birkelund G. E. 2001. 'Social background and educational attainment, Norway 1973–95'. Paper presented at the Mannheim conference of ISA's RC 28 Social Stratification, April 2001.

Róbert, P. 1991. 'Educational transition in Hungary from the post-war period to the end of the 1998s'. *European Sociological Review* 7: 213–36.

—— 1998. 'Occupational class structure: Theoretical and methodological problems'. *Review of Sociology*. Hungarian Sociological Association, Special Issue: 58–76.

Rogoff, R. N. 1977. *Sosial mobilitet i Norge*. Oslo: Tiden.

Rommetveit A. 1997. 'Levekårundersøkelser 1981/1983/1987/1991/1995'. NSD report no. 110. Bergen: Norsk samfunnsvitenskaplig datatjeneste.

Rosenfeld, H. 1978. 'The class situation of the Arab National Minority in Israel'. *Comparative Studies in Society and History* 20: 374–407.

Saunders, P. 1995. 'Might Britain be a meritocracy?' *Sociology* 29: 34–41.

SCB 1982. *Socio-ekonomisk indelning SEI. MiS 1982:4*. Stockholm: Statistics Sweden.

—— 1988. *Svensk utbildningsnomenklatur SUN. Del 1. Systematisk version. Reports on Statistical Co-ordination, 1988:4*. Stockholm: Statistics Sweden.

Schizzerotto, A. 1988. 'Il ruolo dell'istruzione nei processi di mobilità'. *Polis* 2: 83–124.

—— 1997. 'Perché in Italia ci sono pochi diplomati e pochi laureati? Vincoli strutturali e decisioni razionali degli attori come cause della contenuta espansione della scolarità superiore'. *Polis* 11: 345–65.

Schizzerotto, A. ed. 2002. *Vite ineguali. Disuguaglianze e corsi di vita nell'Italia contemporanea*. Bologna : Il Mulino,.

Semyonov, M. and Kraus, V. 1983. 'Gender, ethnicity and income inequality: The Israeli experience'. *Social Forces* 59: 649–66.

Shavit, Y. 1992. 'Arabs in the Israeli economy: A study of the enclave hypothesis'. *Israel Social Science Research* 7: 45–66.

—— and Blossfeld, H.-P. eds. 1993. *Persistent Inequality: Changing Educational Attainment in Thirteen Countries*. Boulder, CO: Westview Press.

—— and Müller, W. eds. 1998. *From School to Work: A Comparative Study of Educational Qualifications and Occupational Destinations*. Oxford: Clarendon Press.

Simkus, A. A. 1981. 'Historical changes in occupational inheritance under socialism: Hungary 1930–1973'. *Research in Social Stratification and Mobility* 1: 171–203.

—— 1984. 'Structural transformation and social mobility in Hungary: 1938–1973'. *American Sociological Review* 49: 291–307.

—— and Andorka, R. 1982. 'Inequalities in education in Hungary 1923–1973'. *American Sociological Review* 47: 740–51.

—— —— Jackson, J., Yip, K., and Treiman, D. J. 1990. 'Changes in social mobility in two societies in the crux of transition: A Hungarian-Irish comparison, 1943–1973'. *Research in Social Stratification and Mobility* 9: 33–78.

Slomczynski, Kazimierz M., Bialecki, I., Domanski, H., Janicka, K., Mach, Bogdan, Sawinski, Z., Sikorska, J., and Zaborowski, W. 1989. *Struktura Spoleczna: Schemat Teoretyczny i Warsztat Badawczy*. Warsaw: Institute of Philosophy and Sociology, Polish Academy of Sciences.

Smith, H. L. and Garnier, M. A. 1986. 'Association between background and educational attainment in France'. *Sociological Methods and Research* 14: 317–44.

Smooha, S. and Kraus, V. 1985. 'Ethnicity as a factor in status attainment in Israel'. *Research in Social Stratification and Mobility* 4: 151–76.

Sobel, M. E., Hout, M., and Duncan, O. D. 1985. 'Exchange, structure, and symmetry in occupational mobility'. *American Journal of Sociology* 91: 359–72.

Sorokin, P. A. 1959. *Social Mobility*. Glencoe, IL: Free Press.

—— 1964. *Social and Cultural Mobility*. New York: Free Press.

SOU, 2001, 79. *Välfärdsbokslut för 1990-talet. Main report from Kommittén Välfärdsbokslut*. Stockholm: Fritzes.

Statistics Norway 1994. *Historical Statistics 1994*. Oslo: Statistics Norway.

—— 2000. *Statistical Yearbook of Norway 2000*. Oslo: Statistics Norway.

Swift A. 2000. 'Class analysis from a normative perspective'. *British Journal of Sociology* 51: 663–79.

Szelényi, Sz. 1998. *Equality by Design. The Grand Experiment in Destratification in Socialist Hungary*. Stanford: Stanford University Press.

—— and Aschaffenburg, K. 1993. 'Inequalities in educational opportunity in Hungary'. Pages 273–302 in Y. Shavit and H.-P. Blossfeld eds. *Persistent Inequality: Changing Educational Attainment in Thirteen Countries*. Boulder, CO: Westview Press.

Szulkin, R. and Tåhlin, M. 1994. 'Arbetets utveckling'. Pages 87–116 in J. Fritzell and O. Lundberg eds. *Vardagens villkor*. Stockholm: Brombergs.

Thélot, C. 1982. *Tel père, tel fils? Position sociale et origine familiale*. Paris: Dunod.

—— and Vallet, L.-A. 2000. 'La réduction des inégalités sociales devant l'école depuis le début du siècle'. *Économie et Statistique* 334: 3–32.

Treiman, D. J. 1970. 'Industrialization and social stratification'. Pages 207–34 in E. O. Laumann ed. *Social Stratification: Research and Theory for the 1970s*. Indianapolis: Bobbs-Merril.

—— 1977. *Occupational prestige in comparative perspective*. New York: Academic Press.

Tyree, A., Semyonov, M., and Hodge, R. W. 1979. 'Gaps and Glissandos: inequality, economic development, and social mobility in 24 countries'. *American Sociological Review* 44: 410–24.

UNDP 2000. *Human Development Report 2000*. www.undp.org/hdr2000.

Vallet, L.-A. 1986. 'Activité professionnelle de la femme mariée et détermination de la position sociale de la famille. Un test empirique : la France entre 1962 et 1982'. *Revue française de sociologie* 27: 655–96.

— 1991. La mobilité sociale des femmes en France. La participation des femmes aux processsus de mobilité sociale intergénérationnelle. Thèse de doctorat, Université de Paris-Sorbonne.

—— 1992. 'La mobilité sociale des femmes en France. Principaux résultats d'une recherche'. Pages 179–200 in L. Coutrot and C. Dubar eds. *Cheminements professionnels et mobilités socials*. Paris: La Documentation Française.

—— 1999. 'Quarante années de mobilité sociale en France. L'évolution de la fluidité sociale à la lumière de modèles récents'. *Revue française de sociologie* 40: 5–64.

—— 2001. 'Forty years of social mobility in France. Change in social fluidity in the light of recent models'. *Revue française de sociologie*. An annual English selection 42, Supplement: 5–64.

Van Tulder, J. J. M. 1962. *De beroepsmobiliteit in Nederland van 1919 tot 1954*. Leiden: Stenfert Kroese.

Vårdal, L. 1978. 'Levekårundersøkelsens intervjuundersøkelse. Kodebok med fordelinger'. NSD report no. 20. Bergen: Norsk samfunnsvitenskaplig datatjeneste.

Vermunt, J. K. 1993. LEM: Log-linear and event history analysis with missing data using the EM algorithm. WORC Paper. Tilburg: Tilburg University.

—— 1997. 'LEM: A general program for the analysis of categorical data'. Tilburg: Tilburg University.

Vogel, J., Andersson, L.-G., Davidsson, U., and Häll, L. 1988. *Inequality in Sweden: Trends and Current Situation. Report no. 58 in the Series Living Conditions,* Stockholm: Statistics Sweden.

Weakliem, D. L. 1999. 'A critique of the Bayesian information criterion for model selection'. *Sociological Methods and Research* 27: 359–97.

Wesolowski, Wlodzimierz and Mach, Bogdan W. 1986. 'Unfulfilled systemic functions of social mobility: II. The Polish Case'. *International Sociology* 1 :173–87.

Western M. and Wright E. O. 1994. 'The permeability of class boundaries to intergenerational mobility among men in the United States, Canada, Norway and Sweden'. *American Sociological Review* 59: 606–29.

Whelan, C. T., Breen, R., and Whelan, B. J. 1992. 'Industrialisation, class formation and social mobility in Ireland'. Pages 105–28 in J. H. Goldthorpe and C. T. Whelan, eds. *The Development of Industrial Society in Ireland*. Oxford: Oxford University Press.

—— and Layte, R. 2002. 'Late industrialisation and the increased merit selection hypothesis: Ireland as a test case'. *European Sociological Review* 18: 35–50.

Wong, R. S.-K. 1994. 'Postwar mobility trends in advanced industrial societies'. *Research in Social Stratification and Mobility* 13: 121–44.

Wong, R. S.-K. 2001. 'Multidimensional association models: A multilinear approach'. *Sociological Methods and Research* 30:197–240.

—— and Hauser, R. M. 1992. 'Trends in occupational mobility in Hungary under socialism'. *Social Science Research* 21: 419–44.

Wright, Erik O. 1976. 'Class boundaries in advanced capitalist societies'. *New Left Review* 98: 3–41.

—— 1985. *Classes*. London: Verso.

Wrigley, E. A. 1972. 'The process of modernization and the industrial revolution in England'. *Journal of Interdisciplinary History* 3: 225–59.

Xie, Y. 1992. 'The log-multiplicative layer effect model for comparing mobility tables'. *American Sociological Review* 57: 380–95.

Yaish, M. 1995. Class and Class Mobility in Israel. M.A. Thesis, University of Haifa.

—— 1998. Opportunities, Little Change: Class Mobility in Israeli Society, 1974–1991. D.Phil Thesis, Nuffield College, Oxford.

—— 2000. 'Old debate, new evidence: Class mobility in Israeli society, 1974–1991'. *European Sociological Review* 16: 159–83.

—— 2001. 'Class structure in a deeply divided society: Class and ethnic inequality in Israel, 1974–1991'. *British Journal of Sociology* 52 (3): 409–40.

—— 2002. 'The consequences of immigration for social mobility: The experience of Israel'. *European Sociological Review* 18: 449–72.

Yamaguchi, K. 1983. 'The structure of intergenerational occupational mobility: Generality and specificity in resources, channels, and barriers'. *American Journal of Sociology* 88: 718–45.

—— 1987. 'Models for comparing mobility tables: toward parsimony and substance'. *American Sociological Review* 52: 482–94.

Zagórski, K. 1976. *Zmiany struktury i ruchliwość społeczno-zawodowa w Polsce*. Warszawa: GUS.

—— 1978. *Rozwój, struktura i ruchliwość społeczna*. Warszawa: PWN:

Zloczower, A. 1973. 'Mobility and status conceptions in Israel'. Pages 329–57 in W. Müller and K.-U. Mayer eds. *Social Stratification and Career Mobility*. Paris: Mouton.

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