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COMPARATIVE INTERGENERATIONAL STRATIFICATION RESEARCH: Three Generations and Beyond

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Abstract

In this article we review 40 years of cross-national comparative research on the intergenerational transmission of socioeconomic advantage, with particular attention to developments over the past 15 years—that is, since the transition between (what have become known as) the second and third generations of social stratification and mobility research. We identify the genera-

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tions by a set of core studies and categorize them with respect to data collection, measurement, analytical models, research problems, main hypotheses, and substantive results. We go on to discuss a number of new topics and approaches that have gained prominence in the research agenda in the last decade. We conclude that the field has progressed considerably with respect to data collection and measurement; that shifts across generations with respect to data analytic and modelling strategies do not unambiguously represent advances; and that with respect to problem development and theory formulation the field has become excessively narrow.

INTRODUCTION

The study of the transmission of socioeconomic advantage from generation to generation is one of the core problems in sociology. From the turn of the century, empirical material has been collected on this topic (Perrin 1904). From the outset, cross-national and cross-temporal comparisons have had a central role, since such comparisons provide the only way to determine whether, to what extent, and in what ways the intergenerational transmission of advantage is dependent upon other aspects of social organization, and what its consequences are.

The history of intergenerational stratification research is commonly divided into three generations (Featherman et al 1974): a first (post-war) generation of broad social stratification studies using relatively simple statistical techniques, and in which occupational mobility figured as only one issue among many; a second generation dominated by path models of educational and occupational status attainment; and a third generation dominated by loglinear models of occupational mobility. The three generations differ most substantially with respect to (a) methods of data collection, (b) measurement procedures, and (c) methods of data analysis. Development has been more gradual with respect to (d) the definition of research problems and (e) the specification of major hypotheses. These five dimensions will be the lines along which we identify significant developments.

We are well aware that the three generations are not distinct with respect to all five dimensions, nor are they very clearly separated in time. Nevertheless, it remains instructive to review the history of this field by characterizing each generation by a core of exemplary studies and by considering the successive generations in developmental perspective. We are relatively brief in our discussion of the first and the second generations, since they have been dealt with elsewhere (Hazelrigg 1974, Mayer 1979, Matras 1980, Featherman 1981, Simkus 1981, Campbell 1983, Kerckhoff 1984), and more detailed in our review of the third generation and subsequent developments. Our review of the third generation covers part of the same ground as Kurz & Müller (1987), but with different conclusions.

Our topic, intergenerational stratification research (or “social mobility” as understood by the first generation), includes both bivariate accounts of the transfer of status positions from parents to their offspring and multivariate accounts of the same processes, where, minimally, educational achievement is studied as an intervening variable. We also include some discussion of the consequences of social mobility. We exclude those issues in stratification research that do not have immediate intergenerational aspects, such as income attainment and worklife mobility (Kurz & Müller 1987, Kalleberg 1988). Unfortunately, we also have to exclude from review the intergenerational transfer of material possessions (other than through occupational inheritance), not because it does not occur but because this topic has scarcely been dealt with in the literature (Cheal 1983).

THE FIRST GENERATION

Although Sorokin’s (1959 [1927]) *Social Mobility* is generally acknowledged as the starting point of (comparative) social stratification and mobility research in modern sociology (Heath 1981), only after the Second World War did systematic national studies begin to appear. A monograph by Glass (1954) on 1949 data for England and Wales was the impetus for the establishment of the Research Committee on Social Stratification and Social Mobility of the International Sociological Association, which since its founding has been a major locus of scientific exchange, data sharing, and international collaboration. At Glass’s instigation, a group of researchers from 12 countries decided in 1950 to collect data using a common framework (Rokkan 1951). This common framework included, among other elements, periodic national social stratification and mobility surveys in each of the countries, to investigate the determinants of social mobility and its consequences for “class identification and class antagonism” (Svalastoga 1959:22), and the creation of an occupational prestige scale in each country as a basis for measuring intergenerational relationships. These plans were realized in some, but not all, of the countries. Svalastoga’s (1959) monograph on Denmark based on his 1953 survey remains the best known example, but similar plans were carried through in 1955 in Japan (JSSRC 1956, 1958) and in 1954 in the Netherlands (van Tulder 1962). Monographs following the main lines of the agenda were written on 1954 Puerto Rican data (Tumin & Feldman 1961) and 1954 Swedish data (Carlsson 1958). The first generation research gained a comparative thrust through the work of Lipset & Zetterberg (1956), Lipset & Bendix (1959), and, in particular, Miller (1960). Lipset and Zetterberg compiled a set of fourteen 3*3 and 2*2 intergenerational mobility tables for 10 countries and concentrated only on manual/nonmanual mobility; the Miller analysis included 20 tables of varying size and breadth of coverage for 17 countries and investigated more detailed types of social mobility (e.g. elite mobility).

Research in the style of the first generation continued well after the main focus shifted to second generation research. Several researchers have compiled collections of published mobility tables and analyzed them with methods more or less similar to those utilized by Lipset & Bendix and by Miller. The Miller collection of tables was extended and reanalyzed by several researchers (Marsh 1963, Fox & Miller 1965, Svalastoga 1965, Lenski 1966, Cutright 1968, Jones 1969, McClendon 1980, Raftery 1985). An entirely new collection of tables from studies conducted subsequent to 1960 was created by Hazelrigg (Hazelrigg 1974, Hazelrigg & Garnier 1976). Some of the same data were employed by Tyree et al (1979), who analyzed 24 2*2 tables, and Grusky & Hauser (1984), who analyzed 16 3*3 tables. However, whereas the last two articles employ some of the data and data collection methods of the first generation, they used third generation analytic methods.

Although the common framework for the first generation studies included national occupational prestige inquiries as a basis for determining occupational status, in the end most published tables were not based on prestige scale scores. Instead, each researcher produced an ad hoc occupational classification. As a result, comparability across studies could only be obtained by collapsing the original occupational classifications into three highly aggregated categories: farm, manual, and nonmanual occupations; moreover, in some studies only a manual/nonmanual distinction was made. Collapsing into these two or three category schemes proved for many years to be the only means of obtaining comparability between published mobility tables from different countries. But in some cases comparability could not be achieved even in this way. Interestingly, the tables most often used to illustrate new mobility models—those for England & Wales and Denmark—cannot be collapsed into nonmanual, manual, and farm occupations and are therefore mostly excluded from later comparative studies.¹

Methodologically, much of the analysis in the first generation involved little more than the inspection of inflow and outflow percentages (Lipset & Zetterberg 1956, Miller 1960). However, some researchers recognized that observed mobility rates are a function of the marginal distributions and therefore cannot be used for comparative analyses. Several proposals were put forward to distinguish *observed* mobility rates from mobility *chances* net of differences in marginal distributions. The renowned “mobility ratio” was more or less independently arrived at by Glass (1954), Goldhamer & Rogoff (Rogoff 1979 [1953]), and Carlsson (1958), but it turned out to be inadequate to accomplish the separation of net mobility chances from the marginal distributions (Tyree 1973, Hauser 1978).

¹The reason for this, ironically, was that Glass and Svalastoga *did* use prestige for occupational scaling (as envisioned in the original ISA plan).

The basic comparative question of this generation was to what extent and in what ways countries differ in their mobility patterns. The best remembered conclusion is that of Lipset & Zetterberg (in Lipset & Bendix 1959; see also Lipset & Zetterberg 1956) that "*the overall pattern of social mobility appears to be much the same in the industrial societies of various Western countries,*" which was offered in reaction to the prevailing assumption that the United States, as a "new" nation, would exhibit more intergenerational mobility than other western industrial nations. But the conclusion has not withstood early (Miller 1960) and later (Jones 1969, Hazelrigg 1974) reanalyses.

A second important hypothesis was that mobility rates tend to be higher in industrialized societies than in nonindustrialized societies (Fox & Miller 1965, Lenski 1966:410–17). Fox & Miller, Lenski, and several other researchers as well, found a positive relationship between indicators of economic development and indicators of social mobility (Marsh 1963, Cutright 1968, Hazelrigg 1974), but their substantive conclusions have been contested by Goldthorpe (1985).

A third concern of the first generation researchers was the effect of political structure on the extent of intergenerational mobility. Fox & Miller (1965) claimed to find a relation between the degree of political stability and the amount of mobility. Connor (1979) argued that state socialist regimes promote social mobility and found some support for this proposition in an analysis of intergenerational mobility rates in Eastern European countries.

Interestingly, there were many ancillary research questions in this generation, but only two were addressed comparatively. One was the consequences of mobility for voting behavior. Lipset & Bendix's (1959) five country comparison claimed to find clear evidence of a mobility effect. Some subsequent comparative studies also have dealt with this issue (Barber 1970, Abramson 1973), but this topic migrated from stratification research to political science and has received little subsequent attention in either discipline. The other was whether occupational prestige hierarchies in different countries are similar; the tentative answer of Inkeles & Rossi (1956), later confirmed rigorously by Treiman (1977), was that they are.

Many other ancillary research questions were posed in one country or another but received little comparative attention, e.g. the extent of assortative mating by social origins and by education (Hall 1954), the effect of social mobility on fertility (Berent 1954), and the effect of social status on life style (Svalastoga et al 1956, Svalastoga 1959). Finally, many researchers were aware of the pivotal role of educational attainment in the intergenerational transmission of advantage (Glass 1954, Carlsson 1958, Tumin & Feldman 1961); but, given the limited statistical models available then, they were not able to answer the crucial question: how much (im)mobility is mediated through education.

THE SECOND GENERATION

The inception of the second generation of social mobility research was prompted by three related innovations connected with the name of O. D. Duncan. First, Blau & Duncan's (1967) US study (OCG I) set new standards for data collection. An important innovation was the coding of occupations into the categories of the US Census three-digit occupational classification scheme. This created the possibility of detailed comparative analysis. Second, Duncan (1961) introduced a new scale for occupational status to be used with continuous data analysis techniques, his renowned SEI. It measured the status of each occupational category by the average education and income of incumbents of that occupation, thus tapping the major resources of individuals in the process of stratification. Third, and most important, the introduction of indirect effects (path) models into sociology (Duncan & Hodge 1963, Duncan 1966b) led to the formulation of the Blau & Duncan (1967:Ch. 5) status attainment model, which made it possible to assess the relative importance of education and family background for status attainment. The model also included respondent's first occupation, thus allowing the assessment of occupational career mobility and creating the possibility of assessing historical trends via cohort analysis. An obvious extension of this approach was to measure occupational status at several points in the career and to estimate career chain models (Blau & Duncan 1967:184, Featherman 1971, 1973, Kelley 1973a,b).

Unlike Glass's example, Duncan's research was never explicitly adopted as the agenda of the ISA Research Committee on Stratification. Nevertheless, the reaction to Duncan's work at the comparative level was swift and extensive. Comparisons of status attainment models in two or three countries were soon published by Machonin (1970), Jones (1971), and a number of other researchers (see Treiman & Ganzeboom 1990). National stratification and mobility surveys similar to or even broader in scope than the OCG-I study were conducted in Australia in 1965 (Broom & Jones 1969, 1976), Japan in 1965 (Odaka & Nishihira 1966), and Czechoslovakia in 1967 (Machonin 1969, Safar 1971), but the major emulation of Blau & Duncan's work in other countries was in the early 1970s, simultaneously with the 1973 OCG replication directed by Featherman and Hauser (see Featherman et al 1974 and Broom & McDonnell 1974). National social stratification and mobility surveys were conducted in at least thirteen countries: in 1970, France (Thelot 1982); in 1972, England and Wales (Goldthorpe 1987) and Poland (Andorka & Zagorski 1980); in 1973, Australia (Jones & Davis 1986), Canada (Boyd et al 1985), Hungary (Andorka 1983), Ireland and Northern Ireland (Hout & Jackson 1986, Hout 1989), and the United States (Featherman & Hauser 1978); in 1974, Israel (Kraus & Hodge 1990) and Scotland (Payne 1987); and

in 1975, Italy (Ammassari 1978) and Japan (Tominaga 1979). All these studies were designed as stratification and mobility studies; they all contain detailed occupational codes, and, with a few exceptions,² unit record data files were prepared for public distribution.

For measurement, the studies of this generation relied upon continuous scales. The gradual accumulation of occupational prestige scales finally resulted in a large-scale comparative study by Treiman (1977). The national prestige measures turned out to be highly comparable, and the Standard International Occupational Prestige Scale that integrates them has gradually become accepted as a valid measure of occupational prestige for comparative analysis. However, at the same time Featherman & Hauser (1976) showed that prestige measures underestimate the true degree of intergenerational transmission of occupational status and cast doubt on the usefulness of prestige as a measure of occupational status for the study of social mobility. The crucial difference between prestige and socioeconomic status is the position of farmers. Whereas farmers enjoy about average prestige around the world, they tend to be near the bottom of socioeconomic status scales such as Duncan's SEI. Since the sons of farmers who leave farming tend to be concentrated in low status (and low prestige) unskilled or semiskilled jobs, SEI scales show more intergenerational association than do prestige scales. SEI scales were constructed for a number of countries: e.g. Canada (Blisshen 1967) and Australia (Broom et al 1977), but no international counterpart of Duncan's SEI has yet been published (but see Ganzeboom et al 1989a).

The research questions of this second generation were quite different from those in the first generation. The Blau-Duncan model reformulated the old question of how much intergenerational occupational mobility there is in a country into the new ones of how the (direct) influence of father's occupation on son's occupation³ compares with that of other background factors, especially education, and how much it is mediated by the status of the son's first job. For the United States in 1962, the total correlation between son's current occupation and father's occupation was .405. This total correlation can be decomposed into an indirect effect via education of .227 (57%) and an effect net of education (direct or through the first job) of .178 (43%). The decomposition of the effect net of education reveals that .063 (16% of the total) arises from the effect of the status of father's occupation on the status of the son's first job, and the status of the first job on that of the current job, whereas .115 (28%) arises from the direct effect of father's occupational status on the status of the current occupation. Another meaningful parameter in this

²The Canadian data are accessible but, because of concerns of Statistics Canada regarding confidentiality, the public use files do not contain detailed occupational codes. The French data are sold at a prohibitively high price. The Italian data have yet to enter the public domain.

framework is the ratio of the effect of education on current occupation to the effect of father's occupation on current occupation (omitting consideration of the first job). For the Blau-Duncan model it is 2.9:1, thus warranting the conclusion that in mid-century United States, achievement was more important than ascription in determining occupational status. The answer to the question of the extent to which educational attainment promotes social mobility thus turned out to be compound: Respondent's occupational status is more related to education than to father's occupation, and most of the effect of education is independent of social origins, so the main role of education is to promote social mobility; but at the same time a majority of what social reproduction there is is transmitted through education, so education is also the main vehicle of social reproduction.

The main hypothesis of Blau & Duncan was similar to one of the major hypotheses of the first generation: industrialization promotes achievement and reduces ascription (Parsons 1940, Kerr et al. 1960, Lenski 1966). However, whereas researchers of the first generation thought that such a shift implied an increase in the overall rate of intergenerational mobility, Blau & Duncan (1967:429) offered a more refined hypothesis: as societies industrialize, the importance of achievement processes, i.e. the influence of respondent's education relative to that of parental characteristics, increases, and the importance of ascriptive processes, i.e. the influence of family background, decreases. They sought to test this hypothesis for the United States via cohort comparisons, by studying the determinants of education and the status of the first job, and found no clear trend over time.

A number of hypotheses about how status attainment varies across societies were proposed by Treiman (1970). Among the most important of these was the conjecture that in more economically developed countries the direct effect of parental status on respondent's education and the status of the current occupation is weaker than in less developed countries. These ideas were not tested on a large scale, but a number of limited studies contrasting the United States with less developed countries were carried out (see Treiman & Ganzeboom 1990:110-15 for a summary). Apart from the obvious weakness of testing hypotheses about specific societal variations on the basis of two or at most a handful of cases, the use of the United States as the contrast confounded the effect of economic development with the (possible) distinctiveness of the United States.

Just as the effect of industrialization on mobility reemerged as an issue in the second generation, so did the effect of political structure. Heath (1981) suggested, and provided support for, the hypothesis that in communist and

³For reasons that will be elaborated below, most of the analysis to date of intergenerational status transmission has been limited to men.

social-democratic nations the effect of father's occupation on son's occupation tends to be smaller and the effect of son's education on son's occupation to be larger than in politically conservative countries. In an analysis of the 1952 Bolivian revolution, Kelley & Klein (1981) argued that in the short run (but not in the long run) revolutions promote social mobility.

Duncan's work stimulated a number of ancillary research questions. Duncan et al (1972) sought to broaden the scope of status attainment research by introducing cognitive ability and motivational variables. This effort was taken up in a long-term investigation of a cohort of high school graduates by Sewell and his associates, which generated a major literature on the social psychological aspects of the status attainment process (Sewell & Hauser 1975). Other researchers explored such factors as the effect of place of residence, ethnicity, religion, and career contingencies such as age at marriage and child bearing, on status attainment. The first generation questions regarding homogamy (Blau & Duncan 1967:Ch 10) and fertility (Duncan 1966a, Blau & Duncan 196:Ch 11) also were addressed in the second generation, but with more sophisticated models. However, few of these ancillary issues were pursued on a comparative basis.

An important advance in the second generation, which flowed directly from the introduction of simultaneous structural equations as the modelling tool (Jöreskog 1970), was the assessment of and correction for measurement unreliability. Bielby et al (1977) were the first to show how to incorporate error corrections in intergenerational occupational attainment models. But, again, there was little echo of these efforts in the comparative literature.

Finally, one can categorize the second generation by the issues that were not addressed. One of the most conspicuous of these was how social mobility affects political formations, which had been of interest to the first generation. This problem would have been tractable in the second generation. This is so because political scientists (who have been much more successful than students of social mobility in establishing an internationally standard research design (e.g. Barnes et al 1979) have routinely included father's occupation as well as father's party affiliation in their surveys, a fact that has passed largely unnoticed by social mobility researchers. Less conspicuous, but equally important, was the virtual disappearance of items on life style and other consequences of social status from the data collected in the second generation. Actually, it might be more accurate to say that concern with life-style issues has hibernated in Eastern Europe, where a very strong interest developed in culturally defined social inequality (Wesolowski & Slomczynski 1968, Machonin 1969, 1970, Robert 1984). Via cultural reproduction theory (Bourdieu & Passeron 1977) this topic has returned to the center stage of intergenerational stratification research (DiMaggio 1982, DiMaggio & Mohr 1985, Robinson & Garnier 1985, De Graaf 1988), but has not yet become comparative.

It has been widely acknowledged that the status attainment model revolutionized social mobility research and, for that matter, sociology at large (Kurz & Müller 1987). However, it is also fair to say that the second generation of intergenerational stratification research has never fulfilled its comparative promise. Status attainment models now exist for many nations, not only in Europe and North-America, but also for a number of countries or regions in Latin America, East Asia, and sub-Saharan Africa (Treiman & Ganzeboom 1990). However, most comparative analyses of status attainment deal with only two to four countries and therefore have little discriminatory power. Comparing the coefficients from published status attainment models is not a viable strategy because such models tend to differ both in the variables included and in the way they are measured. For a long time the research effort needed to reanalyze data at the unit level turned out to be prohibitive, and only recently have really large-scale comparisons of status attainment models begun to appear. Treiman & Yip (1989) estimate an elementary occupational status attainment model for 21 countries, starting with unit record data and standardizing education (years of school completed) and occupational status (Treiman's international occupational prestige scale). On average, father's and son's occupations correlate .345 (median), with a minimum of .226 in Italy and a maximum of .547 in India (additional information provided by Treiman). The median percentage of direct transmission was 45%, with a high of 93% in India and a low of 13% in Sweden. The median ratio of the effect of respondent's education to that of father's occupation was 3.1, with a high of 16.0 for Sweden and a low of .3 for India. Treiman & Yip included explicitly measured contextual variables in their analysis, and they show rather strong relationships between industrialization and the components of the status attainment model.

THE THIRD GENERATION

The third generation of stratification research got underway before the second generation really finished. This is literally true, since in the beginning of the 1970s, members of the ISA Research Committee, working within the status attainment approach, had already agreed to conduct the above described series of (loosely coordinated) national surveys (Broom & McDonnell 1974, Featherman et al 1974). These surveys were conducted between 1972 and 1976. However, by the time the data became available for comparative analysis, the new exemplary studies of Hauser (Hauser et al 1975a,b, Hauser 1978, Featherman & Hauser 1978), and Goldthorpe (Goldthorpe & Llewellyn 1977a,b, Goldthorpe et al 1978, Goldthorpe 1987) had prompted a massive shift in the dominant thrust of stratification research. Multivariate linear regression models were replaced by a variety of loglinear models, among

which the levels (or “topological”) model introduced by Hauser (1978) is dominant. The methodological advantages of loglinear models over continuous data models such as correlation and regression are believed by their advocates to be twofold. First, loglinear models provide a technically adequate way to distinguish absolute mobility from relative mobility chances (social fluidity). Second, such models make it possible to treat a bivariate association as a multidimensional pattern (Hout 1984) and, in particular, to model the diagonal (which represents class immobility) separately from the off-diagonal cells.

Some analysts have turned to loglinear modelling for mundane methodological reasons, but others have made a substantive case for doing so (Goldthorpe 1987). Class theorists in the field of social mobility argue that social classes are intrinsically discrete and unordered, and hence that exchange relationships between social classes are not properly modelled using “hierarchical” measures and the linear models of the second generation of stratification research. Loglinear levels models make it possible to deal with pairwise and asymmetric exchange relations between social classes, without any assumptions regarding the ordering of the classes.

The unofficial program of the third generation of social mobility research in the late 1970s and the 1980s became more or less institutionalized in the CASMIN project (Comparative Analysis of Social Mobility in Industrial Nations), directed by Goldthorpe and Müller (1982), with Erikson as their main collaborator. The CASMIN project extended the comparison of intergenerational mobility patterns to 13 industrial nations (7*7 tables), both Western and East-European, and constituted the first attempt to conduct cross-national intergenerational mobility research by recoding and standardizing detailed high quality unit data from national social mobility surveys in a substantial number of countries.

The substantive results from the CASMIN project are several. First, a common system of broad class categories (the EGP categories, after Erikson, Goldthorpe & Portocarero 1979) came into use. These categories have been widely accepted as a standard classification of occupational *classes* for comparative research.⁴ Similar efforts are underway for the measurement of educational status, an even more difficult problem (Lüttinger & König 1988).

Second, the model of class mobility proposed by the CASMIN researchers has conclusively established the existence of multidimensionality and discontinuities in intergenerational occupational mobility patterns. Erikson &

⁴Their relationship to the International Standard Classification of Occupations (ILO 1969) was documented in Ganzeboom et al (1989c). The International Standard Classification of Occupations (ISCO), developed by the International Labor Office, is used widely—either exactly or with minor modifications—by central statistical agencies and census bureaus in many countries. Hence, using it greatly facilitates data comparability and, thereby, comparative research.

Goldthorpe (1987a) have arrived at the CASMIN "core model", which consists of a loglinear model with superimposed levels that are associated with substantively interpretable parts of the mobility pattern: inheritance effects, hierarchical effects, sectoral effects, and (somewhat less interpretable) (dis)affinity effects.

Third, the CASMIN researchers claim support for a number of specific substantive conclusions (Erikson & Goldthorpe 1985, 1987a,b): (a) Inheritance effects and sectoral effects are more important than hierarchical effects in explaining relative mobility patterns. This directly challenges the assumption made in the status attainment literature (but see below). (b) Relative intergenerational occupational mobility patterns do not differ much between countries. The core model of relative mobility ("common social fluidity") is applicable to all industrial nations; specific deviations from this model occur in various countries, but these deviations are to be accounted for in terms of peculiarities of each country's history. However, relative mobility is slightly higher in Sweden (a nation with a long-term social-democratic tradition) and the United States (until recently the economically most advanced country) than in the other countries they analyzed.

However, other researchers have arrived at quite different conclusions, sometimes using the same data. Wong (1990) compared data from the 1970s from the United States, England, Hungary, Japan, Poland, and Brazil, and concluded that the intergenerational occupational mobility pattern between these countries varies strongly. Ganzeboom et al (1989c) compared 149 6*6 tables from 35 countries and found large between-country variation in the parameters of mobility tables, thus strongly challenging the thesis of common social fluidity. Other evidence suggests that in at least some countries relative intergenerational mobility chances have increased over time: Goldthorpe & Portocarero (1981) on France; Erikson (1976, 1983) on Sweden; Hout (1988) on the United States; Ganzeboom et al (1989b) on Hungary; Ganzeboom & De Graaf (1984) and Luijckx & Ganzeboom (1989) on the Netherlands. Also, Ganzeboom et al (1989c) found significantly increasing relative mobility chances for 16 of the 18 countries for which they had replicate data and estimated a decline in the relevant parameters of between one and two per cent per year.

The loglinear levels models utilized in the CASMIN research have some drawbacks, which may account for the contradictory conclusions. Their most unattractive property is that they do not yield an over-all characterization of the mobility regime. For example, the CASMIN core model disaggregates the association in the relative mobility distribution into eight different parameters (Erikson & Goldthorpe 1987a). From a statistical point of view, the discriminatory power of levels models is limited, since they spread the differences in association between tables among multiple degrees of freedom,

which is a crucial weakness for comparative research (Hauser 1984a, Yamaguchi 1987). The scaled association models introduced by Goodman (1979) and first applied in comparative mobility research by Hauser (1984a) have much greater discriminatory power. The Goodman-Hauser model estimates an a posteriori mobility dimension upon which classes are ordered with respect to the relative mobility chances between them; also, separate parameters can be estimated for some or all of the diagonal densities (which represent the probability of remaining immobile).

To our knowledge all existing analyses of intergenerational occupational mobility patterns that derive scale scores a posteriori from the extent of exchange between occupational categories, whether in the form of the Goodman-Hauser model (Hauser 1984a, Ganzeboom et al 1989c), multi-dimensional scaling (Laumann & Guttman 1966, Blau & Duncan 1967), or canonical correlation analysis (Klatzky & Hodge 1971, Domanski & Sawinski 1986, 1987), have found a single or very strong dimension that resembles the rank order of occupational classes with respect to socioeconomic status, with professionals, managers and owners of large businesses at one extreme and agricultural workers at the other. If anything is constant across time and societies, it seems to be this simple pattern of relationships between occupational classes with respect to their relative mobility chances: the main determinant of the probability of exchange between occupational categories is their similarity with respect to socioeconomic status. The explanation for this finding is that the socioeconomic status of occupations is a good proxy for the myriad of resources that promote the intergenerational transmission of advantage, and also for the extent of advantage gained. It is to be noted that three of the four components of the CASMIN core model (hierarchy, sector, (dis-)affinity) are related to socioeconomic status, which leaves inheritance effects as the main form of discreteness.

The third generation of social mobility research has considerably narrowed the scope of the field. Through loglinear modelling we have learned more about what is, in fact, only a bivariate distribution. Earlier multivariate research questions, as well as most of the ancillary research questions of the first and second generations, have been dropped from the agenda of the third generation (although studies addressing these questions continue to appear in the literature). There is some work by third generation researchers on the relation between father's occupational class, the class of the respondent's first job, and respondent's present class (the question of *intragenerational* mobility) (Hope 1984, Erikson & Goldthorpe 1987c), on the role of education in the transmission of class from father to son (Yamaguchi 1983, Hout 1988, Müller et al 1988, Semyonov & Roberts 1989), and on homogamy (Ultee & Luijkx 1990), but comparative research in these areas is underdeveloped. Oddly, though, the third generation, with its predilection for class concepts,

has ignored even the research problem that gave rise to the class approach, the question of class mobility and political formation (Kurz & Müller 1987). Finally, the issue of data reliability has simply been forgotten. One is well justified in the assertion that many of these questions have not been resolved by earlier research and should therefore be considered as prematurely aborted.

On the theoretical level, not many new ideas have emerged. Interestingly, in their pre-CASMIN work, Erikson & Goldthorpe (Erikson et al 1979) were concerned with the influence of political institutions on mobility regimes, arguing that France, England, and Sweden are similar in economic development but different in political climate. Moreover, most of their post-hoc arguments on differences between the CASMIN countries (Erikson & Goldthorpe 1987b) deal with factors other than economic and industrial development: legally institutionalized relationships between education and the labor market (the German *Lehrstelle* [apprenticeship] system), which are claimed to create a particularly wide gap between manual and nonmanual classes; welfare transfers and low income inequality in Sweden, which are claimed to promote social mobility across the board; and the socialist abolition of proprietorship in Hungary and Poland, which is claimed to have decreased the degree of occupational class inheritance. There seems to be some opportunity for an institutional theory of social mobility, but this literature has not produced a concise or coherent formulation of it.

NEW DEVELOPMENTS

Subsequent to (and to some extent alongside) the shift of emphasis to log-linear modelling, there have been a number of additional developments in intergenerational stratification research. In addition, there have been a number of suggestions for new analytic strategies that merit greater attention than they have thus far received. We here highlight developments and suggestions in six areas.

New Data Collection

Although the core surveys analyzed in the first three generations were explicitly designed as stratification studies, datasets collected for other or general purposes increasingly have been utilized for comparative analysis. In an increasingly large number of countries annual or bi-annual general social surveys are conducted, e.g. the US General Social Survey. Most of these surveys originate within the field of attitude and value research. Researchers from (by now) 12 countries with an interest in these subjects have joined forces in the International Social Survey Program (Becker et al 1990) and have agreed to include a common module on a specific topic in each annual survey, plus a common set of social, demographic, and family background

characteristics directly pertinent to students of intergenerational mobility. Second, surveys in two other fields have turned out to be rich sources of intergenerational stratification data, namely demographic surveys and—even more so—election surveys (Niemi et al 1985). In both fields, international coordination has been much more successful than in stratification research.

The abundance of existing data from which elementary intergenerational stratification models can be estimated is certainly desirable, since exploitation of such data will sharply increase the statistical power of comparative analyses, not only by adding new countries to the pool of evidence but even more so by adding over-time replicates. This will not only lead to better historical comparisons, but also to a reduction of random variance in within-country patterns. Reducing error variance and increasing statistical power should be of great concern to comparative stratification analysts (as well as to other comparative analysts), since true variability in mobility rates across time and space is probably modest (but substantial in the long run). Future analyses of more extensive bodies of data might well lead to the conclusion that substantively important differences simply have been swamped by random error in previous analyses.

Event History Models

Meanwhile, the field of stratification is responding once again to a methodological innovation: event history models. Although earlier stratification surveys sometimes included detailed educational and occupational histories, until the introduction of event history analysis into sociology (Tuma & Hannan 1984, Blossfeld et al 1989) not many analysts had found a proper way to analyze such data (although the Blau-Duncan model provided an elementary way to study careers by including both the first and current occupations). The collection of information on each job in the career and the treatment of job spells or time periods as the units of analysis makes possible the simultaneous analysis of the career structure and historical effects (Blossfeld 1986). It also provides a solution to one of the difficulties common to mobility tables and status attainment models: The moves implied by these models are not located in historical time and hence it is impossible to relate them precisely to historical circumstances (Sørensen 1986).

To date, not many comparative analyses of work histories have appeared; Allmendinger (1989) is a notable exception. In addition, the authors of event history analyses have tended to ignore the central questions about intergenerational stratification patterns. Although nothing forbids the inclusion of family background in career analyses (this would amount to a detailed analysis of the point in the respondent's career and the historic time when the influence of fathers occurs), not many articles have reported on this (an exception is Sørensen & Blossfeld 1989). A final peculiarity of this approach

is that three of the still small number of datasets that contain life history data—the US, Norwegian, and German studies (Allmendinger 1988)—are restricted to a limited set of birth cohorts.

Multiple Indicator and Sibling Models

An interesting dead-end in stratification research in the last decade appears to have been the multiple indicator approach. It is obvious that stratification data suffer from unreliability and invalidity, as do other data. Reporting errors, coding errors, recoding errors, and incomparability of measures between studies each take their toll. This leads to overestimation of direct effects in status attainment models, relative to indirect effects (Kelley 1973a). The standard reaction has been to refine measures or throw away unreliable data, instead of repeating the measurement via multiple indicator designs. Nevertheless, several interesting and viable multiple indicator analyses have appeared in the literature, but none of them has inspired much replication. Bielby et al (1977) and Hauser et al (1983) implemented a multiple measurement design using repeated measurements from interviews conducted at different points in time. Others have reinterviewed part of their sample or have gone back to marriage records in order to assess the reliability of the measurement of parent's status (Broom et al 1978, Massagli & Hauser 1983); an obvious strategy for using such data would be to apply known or estimated reliability coefficients to status attainment models. Another noteworthy proposal is to overcome incomparabilities across countries by estimating multiple indicator models with both indigenous and internationally comparable indicators (Krymkowski 1988).

Strongly related to the multiple indicator approach and even less well developed is the use of sibling models (Taubman 1977, Hauser & Mossel 1985, Hauser & Sewell 1986), which include two (or more) descendants of the same parental family in intergenerational stratification models. Sibling models provide an unbiased estimate of the total parental influence on offspring's outcomes whereas the standard designs suffer from omitted variable bias (Hauser 1984b, Hauser & Mossel 1985). Sibling models are therefore capable of directly addressing the central question of intergenerational mobility research: the extent and determinants of social reproduction. (Interestingly, Duncan anticipated this development because he included variables for respondent's oldest brother in path models to obtain better estimates of parental effects—Blau & Duncan 1967:Ch 9). If information is independently collected from at least two siblings, multiple indicator measurement comes as an additional advantage of the sibling approach, since each person interviewed can provide an independent measurement of all the information in the model (Hauser & Wong 1989). To our knowledge, there has as yet been no comparative work on this topic, although some data are available.

Multivariate Models with Categorical Variables

The obvious next step in intergenerational stratification research is to combine the virtues of the second and third generation of research, estimating relatively complex multivariate models and at the same time adequately treating the discreteness and non-uniformity of the core variables of social stratification. It is obvious that a full categorical treatment of all variables is still beyond the state of the art; at present, the best we can do is to estimate mixed models that treat some of the variables as continuous (Winship & Mare 1983). One way to do this is to reformulate loglinear models as logit models with continuous (as well as categorical) covariates (Logan 1983). This will reintegrate the intervening variables from the Blau-Duncan model, in particular educational attainment, with intergenerational occupational mobility models.

One variety of these models, ordered logit models, has gained prominence as a way of carrying out cohort analyses of a part of the status attainment model—educational attainment. Mare (1981) applied ordered logit models to transitions between subsequent levels of educational attainment in order to separate marginal effects (educational growth over cohorts) from the influence of parental background on the probability of making each transition. He shows for the United States that the influence of parental status on educational outcomes is substantially weaker for higher than for the lower transitions. This observation has been substantiated in a number of subsequent studies: Smith & Cheung (1986) on the Philippines, Shavit & Kraus (1990) on Israel, and for a dozen additional countries in a series of papers presented at the 1990 Madrid World Congress of Sociology (to be published in Shavit & Blossfeld 1991). Given this pattern of effects and the ubiquitous growth of educational attainment over cohorts in virtually all countries, it follows that the metric regression of educational attainment on parental background will decrease over cohorts (assuming that the compositional effects are not compensated by historically increasing inequality of educational opportunities at the higher level transitions). This provides one possible explanation for the cross-temporal increase in relative mobility that has been observed in intergenerational occupational mobility studies. Moreover, in another multivariate study on the United States, Hout (1988) shows that the influence of father's occupation on respondent's occupation is larger for the less educated, thus providing another hypothesis as to how educational growth can promote increased societal openness.

Women and Families

Given the strong concentration on occupational status, stratification researchers have found it difficult to deal with women (Acker 1973). To begin with, for the respondent's generation, many married women are outside the labor force. This is even more true for women in the parental generation (mothers). An additional impediment is that the occupational distribution of women is so

different from that for men that applying existing status or class categories to women is problematic (Bielby & Baron 1986). Faced with these problems, many of the major data collection efforts in the first two generations simply excluded women from the sample altogether. Most of our comparative knowledge on the intergenerational mobility of women therefore stems from other sources than the major social mobility surveys (Roos 1985). Roos shows that throughout the world the process of educational and occupational *status* attainment is similar for men and women, except that the direct effect of father's occupation on occupational status is weaker for women. However, women's occupational *class* position is quite different from that of men and is somewhat less associated with father's class position than is true of men, particularly with respect to class immobility (Portocarero 1983a,b). As compared to their fathers, women are on average more upwardly mobile than are men (i.e. they enjoy higher social status than do men from similar origins), but this conclusion is likely to be contingent upon the exclusion of non-employed women and upon the (male based) status measure that is used (Blisshen & Carroll 1978, Boyd 1982).

One of the traditional arguments for the exclusion of women from social mobility research has been that the unit of stratification is the family, and not the individual, in conjunction with the argument that the husband's status dominates the family's life chances. This latter assumption has become more and more questionable, if it was ever applicable. In recent years, the relation between the effect of husband's and wife's status on the family's social characteristics has stirred a hot debate in Britain (Goldthorpe 1983, 1984, Erikson 1984, Heath & Britten 1984, Stanworth 1984, Goldthorpe & Payne 1986).

Although it is a commonplace that women should be included in all future stratification research, some additional remarks can be made with respect to why and how women's statuses should be considered. An unresolved issue here is the measurement of women's occupational status. The fact that women are concentrated in a smaller number of occupations than are men should be incorporated in both measurement and structural models. Apart from this, future research should take the issue of the family as the unit of stratification not as a debate about definitions but as an empirical problem. This requires developing models of how the status characteristics (and social origins) of each member combine to produce status outcomes measured at the level of the family rather than at the level of the individual (Haller 1981). This agenda provides a new role for the old problem of homogamy (Ultee & Luijkx 1990). Paradoxically, such questions gain importance as more women enter the labor market and the traditional nuclear family is in decline, since in such circumstances the stratification of individuals and the stratification of families is truly different.

Consequences of Social Mobility

As noted above, questions about the consequences of social mobility received less attention in the second generation than in the first (but see Hodge & Treiman 1966 on racial prejudice and Hodge et al 1986 on income) and were essentially ignored by the researchers of the third generation. Nevertheless, there has been an important technical advance, Sobel's (1981) "diagonal mobility" models, which provide a means of assessing the relative importance of two identically categorized variables (e.g. father's and son's occupation) on a dependent variable, as well as an estimate of the effect of any combination of categories. By this means it is possible to assess whether mobility per se has consequences above and beyond the additive effects of origins and destinations, as claimed in a number of early theoretical arguments (e.g. Janowitz 1958, Lipset 1960). Sobel (1985) applied this model to fertility. Another recent application is to voting behavior (De Graaf & Ultee 1990). Cross-national comparisons of mobility effects are an obvious next step.

CONCLUSIONS

The developments in comparative social mobility research over the past 40 years can be summarized as follows:

With respect to *data collection*, much progress has been made. Data available for comparative analysis has gone from small numbers of highly aggregated published bivariate tables based on nonrepresentative or unknown samples from a few Western countries to unit record data containing many variables and highly detailed occupational and educational classifications compiled from large high quality sample surveys conducted in many countries throughout the world, often with several surveys available for a given country. To date, however, many of the available data sets have not yet been exploited for comparative mobility or status attainment research.

With respect to *measurement* much has been achieved as well. In particular, the measurement of occupational position is well on the way to standardization across countries. Increasingly, data sets are coded (or recoded) into the detailed categories of the International Standard Classification of Occupations (ILO 1969). With the ISCO as a framework, several standardized measurement schemes have been developed. To a lesser extent, the problem of the comparative measurement of educational attainment has also been solved.

With respect to *techniques of data analysis*, the field has moved from comparisons of inflow and outflow percentages, first to regression techniques and then to loglinear models. This is a considerable advance with respect to the treatment of bivariate relationships. It is now possible to decompose

intergenerational occupational mobility tables into meaningful components and to model association patterns independent of marginal distributions. Seen from a different angle, however, there has been substantial retrogression from the second to the third generation since analyses to date based on loglinear procedures have not been able adequately to cope with multivariate problems, whereas the models of the second generation could do so easily.

With respect to substantive issues, that is, *problem development*, considerable constancy appears across the three generations. If there is a trend in this respect, it is an unfortunate one: the array of questions addressed in the first generation was much wider than in the second generation, and narrowed down still further in the third generation. There is also substantial continuity across generations in the *theories* investigated: hypotheses about economic development (modernization) compete with hypotheses about institutional factors. In our judgment, however, the modernization theory of social mobility has been more substantially developed than the various ideas about institutional influences on social mobility patterns, which are at present underdeveloped.

Finally, with respect to *results*, we find that some important insights have been secured (although far too few). In our opinion, three generations of research have led to the following firmly established conclusions about the general pattern of intergenerational stratification:

- a. Throughout the world, intergenerational occupational mobility is driven by socioeconomic status as measured by scales of the Duncan SEI-type; there is debate about the existence and nature of other dimensions, but it is clear that these are secondary to the effect of socioeconomic status.
- b. Throughout the world, there is intergenerational occupational *immobility* in excess of what would be expected on the basis of the distribution of socioeconomic status. Most of it occurs in classes with significant proprietorship (farms, businesses, and professional practices) and, in part, can be attributed to the direct transfer of ownership. The excessive amount of occupational inheritance constitutes the main discreteness in the process of stratification.
- c. Intergenerational occupational mobility patterns differ across time and countries. In most countries, there has been a slow but systematic trend toward increasing relative mobility in the years since the Second World War. Some countries have shown persistently higher relative mobility rates than others (in particular the United States and Sweden). However, there is as yet no conclusive evidence regarding the contextual factors that determine these changes and differences.
- d. Research on status attainment suggests strongly that education is a more important determinant of occupational status than is parental occupation

and that the bulk of the effect of education is independent of social origins. At the same time education is an important mechanism for the transfer of advantage from generation to generation.

It is evident that firmly established conclusions regarding societal variations and similarities in the structure and process of intergenerational social mobility are not numerous. There is much work to be done.

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