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Objektyp: **Article**

Zeitschrift: **Schweizerische Zeitschrift für Soziologie = Revue suisse de sociologie = Swiss journal of sociology**

Band (Jahr): **29 (2003)**

Heft 2

PDF erstellt am: **23.07.2024**

Persistenter Link: <https://doi.org/10.5169/seals-814978>

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## Intergenerational Educational and Social Mobility in Switzerland\*

Dominique Joye,\*\* Manfred Max Bergman,\*\*\* Paul S. Lambert\*\*\*\*

### 1 Introduction

According to the logic of industrialism as advanced by liberal theory, modern societies follow certain social and economic principles in order to ensure efficiency, rationality, and justice. Due to technological advances and sectorial dynamics, occupations in modern society have become progressively complex and, thus, require from its labor force advanced skills, specialization, flexibility, and expertise. In order to maximize resources, modern societies must ensure that social opportunities are distributed according to meritocratic principles. In other words, the influence of the social origin and other ascriptive positions of individuals ought not play an important role in determining their socio-economic destinations. Most societies, however, engage in inefficient and irrational practices, and inheritance of advantage is widespread. The two institutions charged with the task of countering the influence of inheritance of social and economic advantage are public education and the welfare state. As both institutions have expanded steadily in Switzerland, liberal theory would predict a steady movement toward meritocracy, detectable in an increase in social mobility.

Marxist theorists, in contrast, emphasize the degradation of the occupational structure through proletarianization. This occurs in at least three ways: as skilled manual occupations are replaced by unskilled and semi-skilled non-manual jobs; a new proletariat is formed in the extensive service-based sectors of modern societies; and the petty bourgeoisie is driven into wage labor. Bourgeois advantage is transferred from one generation to another not only through economic inheritance, but also through significant investment in the offsprings' education as well as control of educational access.

Both liberal and Marxist theories suggest changes in social mobility. The former predicts a steady growth in intergenerational mobility as modern societies abandon inherited advantage in order to become more efficient and exploit

\* This paper was made possible by a research grant from the Swiss National Science Foundation (grant 5004-58473).

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technological advances. In contrast, the latter predicts a steady decrease in collective mobility. It is debatable whether the move from ascription to achievement is best accomplished through the liberal theory of industrialism, or whether, in line with Marxism, liberal economics and politics are merely ways in which inequalities are institutionalized, sanctioned, and justified (cf. Bourdieu, 1983; Bourdieu and Passeron, 1990; Goldthorpe, 1992; Karabel and Halsley, 1977; Parkin, 1974). In either case, the study of patterns of social mobility in Switzerland examines evidence of moves toward the societies anticipated by either theory.

In this paper, we investigate the degree and type of intergenerational social mobility in Switzerland from large-scale survey data collected between 1975 and 1999. There exist at least six reasons for studying social mobility. At its most basic level, social mobility reveals the degree of transfer of relative advantage between generations within a given society. It can expose societal changes in the occupational and socio-economic structure over time, such as the rise of the service sector in industrial nations and the concomitant decline of traditional forms of self-employment, occupations in agriculture, and skilled manual work. As either an exogenous or endogenous construct, the degree of social mobility may form associations with other constructs in a variety of models in the social and political sciences. For example, predictors of social mobility often include educational attainment, age, cohort, historical period, ability, effort, predominant political arrangements, and national context. In terms of normative studies, social mobility indicators have been used to measure the degree of an egalitarian opportunity structure, meritocracy, or social justice. Due to this irreducible link to the liberal theory of industrialism, policy, and political intervention, mobility data are often employed strategically to support social, economic, educational, and political reform. Finally, the legacy of the founders of the discipline, particularly that of Émile Durkheim, Karl Marx, Herbert Spencer, and Max Weber, left indelible footprints in contemporary works on social stratification and mobility. Inversely, the study of the works of these founders will often lead to an inquiry into the very nature of the social structure and of its change (Blau and Duncan, 1967; Breen and Goldthorpe, 2001; Erikson and Goldthorpe, 1992; Marshall, Swift, and Roberts, 1997; Prandy, Lambert, and Bottero, 2002; Rytina, 2000a; Saunders, 1997).

Although social mobility can be described most generally as the study of transformations in the distribution of resources or social positions among individuals, families, groups, or collectives within a given structure, in practice, it tends to be limited to the patterns of *intergenerational* or *intragenerational* mobility exhibited by individuals. Intergenerational mobility usually describes the changes between individuals' current social position and that of their parents, while intragenerational mobility is mostly concerned with changes of individuals' social position over the life course.

## 2 Empirical Evidence for the Constancy of Social Mobility

The scope of empirical examinations of social mobility is formidable but three distinct moments in the history of this topic can be differentiated, all of which, in contrast to liberal and Marxist theory, have found surprisingly little change in intergenerational social mobility over time and national context.

Early comparative studies by Lipset (Lipset and Zetterberg, 1959; Lipset and Bendix, 1963) found that approximately 30% of all sons moved from their fathers' manual occupations to non-manual occupations in the USA, West Germany, Sweden, Japan, France, and Switzerland. Accordingly, the Lipset-Zetterberg hypothesis claimed that

*(...) the overall pattern of social mobility appears to be much the same in industrial societies of various Western countries. (...) our tentative interpretation is that the social mobility of societies becomes relatively high once their industrialization, and hence their economic expansion, reaches a certain level. (Lipset and Bendix, 1963, 13)*

No association was found between the degree of industrialization and social mobility rates among industrial societies. Subsequent analyses have devalued the Lipset-Zetterberg hypothesis because, first, the degree of similarity in mobility rates was overestimated due in part to cross-national differences in mobility relating to agricultural occupations and, second, the authors did not sufficiently differentiate between social change, i. e. the overall changes in occupational and industrial patterns over time, also referred to as structural mobility or observed mobility; and social mobility, i. e. the net intergenerational flux, also referred to as circulation mobility or exchange mobility.

In conjunction with an increase in availability of more detailed data on occupational classifications, as well as improved analytical tools which applied statistical modeling techniques to differentiate between social change and social mobility, subsequent research led to the Featherman-Jones-Hauser hypothesis, which proposed that

*the genotypical pattern of mobility (circulation mobility) in industrial societies with market economies 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 (...) by (...) technological change, the supply and demand for specific kinds of labor (...), and changing social values. (Featherman, Jones, and Hauser, 1975, 340)*

Some of the implications of this hypothesis are similar to the Lipset-Zetterberg hypothesis because, here also, social mobility is found to be minimal in modern

societies, once a certain level of industrialization is reached (Grusky and Hauser, 1984, 20).

The constant flux hypothesis (Erikson and Goldthorpe, 1992), the culmination of the Comparative Analysis of Social Mobility in Industrial Nations (CASMIN) research project into social mobility structures across thirteen countries, is consistent with Featherman and his colleagues in terms of the stability in relative social mobility over time and between countries. The “flux,” however, describes how this general stability coexists with specific, though largely inconsequential, variations across nations. In this sense, Goldthorpe wrote that there is

*no shortage of evidence (...) that in industrial societies the amount of class mobility is substantial (...) However, what is here neglected is the possibility that rising rates of upward social mobility are not merely favored by the changing shape of the class structure but are attributable almost entirely to such structural shifts, and that little if any change need therefore be supposed in openness or fluidity. (Goldthorpe, 1992, 136)*

For many, the constant flux hypothesis has become the standard position in modern stratification research, although further developments in social mobility research have led some researchers to reexamine its central tenets. For instance, a number of investigators have gradually extended the complexity of models and analyses as they were conducted by the CASMIN project, leading to partial reassessments of the constancy of intergenerational social mobility across modern societies. Thus, authors such as Vallet (1999 and 2001) and Xie (1992) have been able to demonstrate from reanalysis of existing data or new data a moderate increase in social mobility over time. Elsewhere, Treiman and Ganzeboom (2000) have described a new generation of mobility studies which explore advanced multivariate structures in the way current stratification positions may be explained through individuals' parental origins, their educational attainment, and any other available information.

This paper considers evidence of trends in social mobility in Switzerland, a country hitherto excluded from comparative evaluations of social mobility structures. Focussing on loglinear modeling of intergenerational mobility, our study is part of the third generation of social mobility studies (cf. Featherman and Hauser, 1978; Ganzeboom, Treiman, and Ultee, 1991; Treiman and Ganzeboom, 2000). In this vein, this paper examines the constancy of flux of intergenerational social mobility in Switzerland, following largely the modeling techniques advanced by Yu Xie and Louis-André Vallet.

### 3 Occupational Categorization based on ISCO-88 and CASMIN

As the concept of social mobility is irreducibly tied to theoretical and empirical assumptions about social stratification (e. g. Sorokin, 1927[1959]), an empirical investigation of mobility patterns will have to clarify the stratification schema on which it is based. In this paper we will examine intergenerational social mobility in Switzerland based on father-to-son transitions in occupational and educational locations. Of the former, we consider two classifications of occupation-based stratification: the major groups of the International Standard of Classification of Occupations (ISCO-88; International Labour Office, 1990; Elias, 1997a and 1997b), and the CASMIN scheme of John Goldthorpe and Robert Erikson's Comparative Analysis of Social Mobility in Industrial Nations project (Erikson and Goldthorpe, 1992). Both schemata are based on the nature of the work performed by a worker, which has been used widely as a factor that can be grouped in meaningful ways so as to reflect social stratification within a society (Bergman and Joye, 2001). These two classification systems were developed for mobility and cross-national studies in particular. They are sufficiently detailed so as to account for the tremendous variety of work performed by workers, sufficiently restrictive so as to permit a quantitative analysis with a limited number of categories, sufficiently standardized so that work tasks can be meaningfully compared across time and context, and sufficiently stable so that temporal or geographic variations may be attributed to variations in stratification, rather than to variations in the classification of work. By studying social mobility with two such divergent schemata, we are able to examine the extent to which our findings may be a function of the particularities of a schema.

ISCO-88, the successor of two previous efforts – ISCO-58 and ISCO-68 – was developed to facilitate international comparison of occupational data and is now the most widely used occupational classification standard. Work is classified according to tasks and duties related to a particular occupation, as well as relevant skills that are necessary for fulfilling the formal and practical requirements of that occupation (International Labour Office, 1990; Elias, 1997a and 1997b). In all, 390 unit groups of occupations are sorted into 10 major groups. The most recent version emphasizes four skill levels (1: primary education; 2: secondary education; 3: tertiary education not leading to a university degree; 4: tertiary education leading to a university degree), encompassing both formal education and informal training, along with work experience as important criteria of classification. The links between education, qualification, and skill levels across the major occupational groups are summarized by the following table (International Labour Office, 1990):

Table 1: Major Groups and Skill Levels of ISCO-88

Code	Major Groups	Skill Level
1	Legislators, senior officials, and managers	n/a
2	Professionals	4 <sup>th</sup>
3	Technicians and associate professionals	3 <sup>rd</sup>
4	Clerks	2 <sup>nd</sup>
5	Service workers and shop and market sales workers	2 <sup>nd</sup>
6	Skilled agricultural and fishery workers	2 <sup>nd</sup>
7	Craft and related trades workers	2 <sup>nd</sup>
8	Plant and machine operators and assemblers	2 <sup>nd</sup>
9	Elementary occupations	1 <sup>st</sup>
0	Armed forces	n/a

The advantage of this schema is its explicit emphasis of skills and educational attainment. Among its disadvantages is its general scope, which does not incorporate more explicitly theoretical considerations relating to stratification and mobility (cf. Elias 1997a; 1997b).

We chose to include the CASMIN approach as a second classification schema because of our intention to integrate this work into a well-established tradition of cross-national social mobility studies. This choice, of course, delimits how social mobility is theorized, defined, measured, analyzed, and interpreted (Bergman and Joye, 2001; Ganzeboom, Treiman and Ultee, 1991; Treiman and Ganzeboom, 2000). Despite numerous theoretical and empirical criticisms of CASMIN (see, for example, Abbott and Payne, 1990; Bergman and Joye, 2001; Britten and Heath, 1983; Hout and Hauser, 1992; Marshall [et al.], 1988; Prandy, 1998a, 2002; Rytina, 2000b), it is nevertheless well-tested (cf. Erikson and Goldthorpe, 1992; Evans, 1992; Evans and Mills, 1998) and certainly the most widespread schema in mobility studies today (Ganzeboom, Treiman and Ultee, 1991; Treiman and Ganzeboom, 2000).

In essence, CASMIN rests on a tripartite thematic division: employers, who purchase labor from employees and thus have authority over them; self-employed workers without employees, i. e. those who neither buy nor sell labor; and employees, who sell their labor to employers and are thus under their authority. From this starting point, various adjustments and elaborations were made to expand on this triad. Considerations which entered into the construction of Goldthorpe's class schema include: transformation of property into corporate forms; bureaucratization of labor and organizations; authority, specialized knowledge, and expertise; sectorial divisions of occupations, especially with regard to agriculture vs. other sectors; job rewards and job-entry requirements; and the nature of the labor contract and the conditions of employment.

John Goldthorpe insists that CASMIN is not hierarchically ordered (Erikson and Goldthorpe, 1992; Chan and Goldthorpe, 2002) although popular usage of this schema routinely adopts the language of hierarchy. A number of authors have questioned the validity and desirability of this property (Bergman and Joye, 2001; Hout and Hauser, 1992; Penn, 1981; Prandy, 1998a, 2002). However, should this class schema be indeed merely a structure, then linking normative concepts such as merit and social justice to intergenerational mobility (e. g. Breen and Goldthorpe, 2001) may become conceptually rather complicated. Nevertheless, Goldthorpe proposes not a “definitive ‘map’ of the class structures of individual societies, but essentially (...) an instrument de travail” (Erikson and Goldthorpe, 1992, 46), based on an “eclectic” and “selective” application of these considerations.

CASMIN has gone through a number of incarnations and exists today in a number of different versions. We chose to work with the 8-class schema because of its popularity in international research on social mobility. Furthermore, it is the most conducive to available data in Switzerland, and a reputable adaptation exists from the four digit ISCO-88 unit groups to the CASMIN class schema (Ganzeboom and Treiman, 1996). This 8-class schema includes higher grade professionals, managers in large enterprises, and large proprietors; lower grade associate professionals and supervisors; routine non-manual workers in administration and commerce; small proprietors, including artisans; skilled manual workers and lower grade technicians; semi- and non-skilled manual workers; self-employed farmers; agricultural laborers and others working in primary production (Erikson and Goldthorpe, 1992).

## 4 Variables, Data, and Design

### 4.1 Variables

Our investigation of intergenerational mobility between fathers and sons over time will be limited to analyses of occupational titles of fathers and sons as classed by ISCO-88 and CASMIN, fathers’ and sons’ educational attainment, and age/generation.

#### *4.1.1 Occupational Titles*

Occupational titles are one of the most reliable indicators for the measurement of social position, status, prestige, power, class, and mobility (e. g. Coxon and Jones, 1979; Erikson and Goldthorpe, 1992; Marsh, 1986; Stewart [et al.], 1980), and they are frequently collected in modern representative social science surveys. This preponderance is likely to continue not only because of the centrality of work in relation to resource allocation in modern societies, but also due to historical developments in sociology, as well as researchers’ habits and the culture established



in this field. Alternative approaches to an occupation-based classification have been proposed (e. g. Gershuny, 2002; Marsh, 1986) but none can be considered sufficiently accessible, reliable, or rigorous for our purpose. One of the major disadvantages of occupation-based stratification schemata relates to the fact that only those who have an occupational title are conventionally classified, thus neglecting particularly the unemployed and retired, homemakers, students, and children. Although many researchers go to great lengths to infer the social position of those who have not stated a current occupational title from, for example, the occupational title of the spouse, head of household, formerly held occupation, parent, or guardian, we share our reservations with others about this practice (e. g. Abbott and Payne, 1990; Britten and Heath, 1986; Stewart [et al.], 1980). Following in the footsteps of others conducting this type of research, we therefore restricted our analysis to men who were formally employed at the time of being surveyed (e. g. Ganzeboom and Luijkx, 2001; Ganzeboom, Luijkx and Treiman, 1989; Goldthorpe and Portocarero, 1981; Western and Wright, 1994). We are well aware of the limits that this decision imposes on our ability to make more general population inferences, but we chose this step explicitly, rather than adopt less rigorous alternatives. Such “shortcuts” when studying a relatively complicated and under-investigated problem in this field seem problematic to us. Future research in this field needs to become far more sensitive to social groups that are currently either neglected or attributed the position or status of others.

#### *4.1.2 Educational Attainment*

Educational attainment is notoriously difficult to code and compare across place and time. One difficulty arises from the fact that survey designers tend to have different opinions about the detail and kind of educational data that are to be collected and how they are to be coded. In addition, educational reforms took place in Switzerland between 1975 and 1999, and in some cases the same label may be subsumed under different categories, or different labels may refer to the same educational category. Similarly, educational trajectories and achievements vary across cantons and language regions so that a particular educational level may contain a different meaning and subsume a different career potential across Switzerland. Finally, we would expect interactions between place, time, and education, in the sense that the associations between educational attainment and time may vary across geographic region. To standardize such variations, we decided to use an international standard of educational classification by Müller (1998; cf. Brauns and Steinmann, 1999) constructed particularly for applications in the CASMIN project. It is based on two primary classification criteria: the length and type of the educational experience, and the differentiation between general and vocational education. Furthermore, it distinguishes between elementary, secondary, and tertiary education with regard to the educational certificate.

Combined, these distinctions produce the following system of educational classification:

Table 2: CASMIN Educational Classification

Code	Educational Class
1a	incomplete elementary (compulsory) education
1b	elementary (compulsory) education
1c	elementary (compulsory) education and basic vocational training
2a	secondary intermediate vocational qualifications
2b	secondary intermediate general qualifications
2c	full maturity certificate (general or vocational)
3a	lower tertiary education including technical diplomas
3b	higher tertiary education

Due to data limitations, we were unable to apply this schema fully. For example, the investigation of 1991 does not contain a detailed distinction of the sub-levels of secondary educational achievements. Nevertheless, the educational coding in the datasets of our study was sufficiently detailed as to permit an analysis of the educational mobility from father to son, in an equivalent form to our occupational mobility models. In conjunction with the empirical results of our analyses of intergenerational social class and occupational group mobility, they provide additional and confirmatory evidence for the degree of social mobility in Switzerland.

#### *4.1.3 Age / Generation*

Due to the wide age range of respondents in our data sets, we decided to divide the samples into two age groups, wherever possible. More precisely, we divided respondents into a younger generation, i. e. between 35 to 49 years of age, and an older generation, i. e. between 50 and 65 years of age. This subdivision prevents the confounding of mobility between generations within one data set. In addition, we decided to limit our analyses to respondents aged between 35 and 65. These demarcations correspond roughly to occupational and career development in that those younger than 35 are more likely to be either upwardly mobile or at least unstable in their occupation, while those over 65 are usually in retirement.

## 4.2 Data

Data sets suitable for the analysis of social mobility in Switzerland are rare. The earliest national surveys relating to our subject matter were collected in the 1960s although they have been only partially reconstructed and are, thus, of limited

value. The first readily available and adequately documented investigation that included the occupational category of respondents and their fathers was an electoral investigation by the Universities of Geneva and Zurich in 1971. Unfortunately, the occupations were not measured in sufficient detail but instead used a French social and economic classification grid which limits comparability with subsequently collected data sets. In 1975, the Department of Political Science at the University of Geneva conducted another electoral study, and this time occupational titles were collected in sufficient detail, using the ISCO-68 categories (cf. Hoffmann, 2000). Although no detailed information was collected on the occupational status of the respondents' fathers, it represents our first reliable and comprehensive data source and is thus the first data set that is part of our investigation.

Large-scale national surveys were rare also in the 1980s. However, in 1981 an investigation was devoted to spatial mobility and included data on professional experiences. In this case, it was not possible to reconstruct a detailed code for occupational titles but we were able to roughly establish a simple correspondence between the code retained in the investigation and the CASMIN classes.

The availability of data on occupational titles changed drastically in the 1990s, starting with a detailed investigation of social and economic inequality by René Levy and his colleagues in 1991 (Levy [et al.], 1997) and, in 1999, the participation of Switzerland in the International Social Survey Programme dedicated to the study of inequality (Lamprecht and Stamm, 2000), the Eurobarometer, and the inception of the annual Swiss household panel survey (Tillmann [et al.], 2001). Sample size, occupational coding, and sociometric issues relating to sampling and weighting makes the latter the best choice for 1999.

### 4.3 Design

After briefly exploring the evidence for social change in the occupational structure in order to illustrate the degree of flux among men in Switzerland in the past 60 years, we focus on the temporal consistency of social origins and destinations by examining the degree of association over time between fathers and sons in terms of their educational attainment, as well as occupational categories as proposed by CASMIN and ISCO-88. Alternative analytical techniques exist (e. g. Carmichael, 2000; Prandy, 1998b) but this empirical investigation is based explicitly on mobility tables because of the categorical nature of the coding schemes of education and occupations. Needless to say, an ever-increasing statistical sophistication in their analysis based on loglinear modeling (e. g. Agresti 1991; Breen, 1998; Clogg, 1987; Goodman 1979, 1987 and 1991; Hauser, 1978; Rytina, 2000b; Xie, 1992; Yamaguchi, 1987) far outstrips the state-of-the-art of data collection, coding, and validation of occupations, educational achievement, and social class (Elias, 1997a and 1997b). Thus, variations between fathers' and sons' educational or class categories over time cannot merely be attributed to changes in social mobility but

may also be due in part to variations in measurement and coding quality of the data sets.

Our analyses aim to reveal whether the overall societal mobility in terms of occupational and, thus, social changes, has resulted in an increase in intergenerational mobility in Switzerland. More precisely, we will study the extent to which large-scale occupational and social changes since 1975 have resulted in a greater intergenerational mobility and, specifically, whether such flux or fluidity was constant or whether it displays important temporal dynamics. For this purpose, we follow the recent methods for analyzing mobility tables (Breen and Goldthorpe, 1999 and 2001; Vallet, 1999 and 2001; Yamaguchi, 1987; Xie, 1992). The software employed for this purpose is *LEM* (Vermunt, 1997), a freely distributed program for the analysis of categorical data.<sup>1</sup>

We will present three sets of analyses which allow us to study the temporal changes in intergenerational mobility in Switzerland between fathers and sons according to their educational attainment, occupational structure as measured by CASMIN, and occupational structure as measured by ISCO-88. Within these three sets, we use selected loglinear models which are designed to test whether the flux across generations and data sets is constant.

The basis of all models in this section is the “conditional association” model (Clogg, 1982; Goodman, 1979), i. e. a three dimensional table (origin, destination, and year of survey/cohort), where the parameters for the first order main effects and two of the second order effects – origins with years/cohorts as well as destinations with years/cohorts – are fixed. The remaining second order association between origins and destinations, i. e. the fathers’ and sons’ educational or occupational categories – is modeled according to three different hypotheses:

In the *Conditional Independence Model (CIM)*, the expected cell frequencies are calculated based on the hypothesis that there exists no association between fathers’ and sons’ educational or occupational categories. In other words, CIM proposes that fathers’ occupational class or educational level (origin) has no effect on their sons’ occupational class or educational attainment (destination) and, thus, that no advantage is passed from the fathers to their sons. This model is used as the baseline model for comparison with more complex models.

In the *Constant Social Fluidity Model (CnSF)*; also referred to as the Common Social Fluidity Model where the third dimension is defined as nations rather than cohorts) the CIM is extended by adding a degree of association between the fathers’ and sons’ educational or occupational categories. This association is fixed, i. e. constant, across years/cohorts (e. g. Erikson and Goldthorpe, 1992). Thus, this model suggests that the inherited advantage from fathers to sons remains constant over time and across generations. An important contention from Erikson and Goldthorpe’s influential study was that, while the CnSF model was seldom a

1 <http://www.kub.nl/faculteiten/fsw/organisatie/departementen/mto/software2.html>

completely adequate description for any given country, it was, first, able to account for a very large part of the origins-destinations associations found in their datasets, and, second, with a few nation-specific adjustments to describe particular influences in each example, it could be adapted to successfully describe most mobility structures. On these grounds, Erikson and Goldthorpe accepted an adapted version of the CnSF model to conclude that mobility rates tend to remain constant over time.

Finally, the *Log-Multiplicative Layer Effect Model (LMLEM)* also extends the CIM by adding a term describing the origins-destinations associations. Here, this association is not expressed by a constant but is allowed to vary log-multiplicatively from year/cohort to year/cohort (Xie, 1992).<sup>2</sup> Thus, instead of producing a fixed year/cohort effect, we obtain a non-linear, i. e. multiplicative, deviation that is expressed by a parameter  $\phi_y$  for each year/cohort  $y$ . In our analyses,  $\phi_y$  are given a substantive interpretation as the temporal deviation in the association between origin and destination for the given year/cohort. In a sense, this model parameterizes the *variance* of flux; in this case, the change in social mobility from fathers to sons over time and across generations. Any temporal structure observed from these parameters may be used to argue against the constant flux hypothesis because it suggests the development of trends in mobility patterns.

We assess the quality of these models in three ways: first, we analyze their goodness-of-fit from log-likelihood ratios and their probability in connection with the tables' degrees of freedom.<sup>3</sup> Second, we conduct model comparisons by

- 2 The origin-destination association and the first-order interaction in the LMLEM are a function of the log-multiplicative product of the overall origin-destination association and a deviation parameter for each layer (cf. Xie, 1992). In the LMLEM, the expected frequencies are

$$F_e = \tau \tau^O \tau^D \tau^L \tau^{OL} \tau^{DL} \exp(\psi^{OD} \phi_k)$$

where  $\tau$  is the grand mean,

$$\tau^O \tau^D \tau^L$$

represent the marginal effects of the origin, destination, and layers, and

$$\tau^{OL} \tau^{DL}$$

are the two-way associations between the origin and layer, and the destination and layer, respectively. The association between the origin and destination, i. e. the link between fathers' and sons' education and class categories, is the product of the overall origin-destination parameter,

$$\psi^{OD}$$

and a deviation parameter  $\phi$  for the  $k$ th table, i. e. a  $\phi$  parameter is produced for each origin-destination table and reflects the variation between fathers' and sons' educational and class categories over time.

- 3 The formula for the likelihood ratio statistic is,

$$L^2 = \sum [f_o \ln(F_e) + (1 - f_o) \ln(1 - F_e)]$$

where  $f_o$  is the observed frequency in the educational or occupational categories, and  $F_e$  is the expected cell frequency according to the specificities of a model. In essence, the  $L^2$  statistic is a goodness-of-fit indicator, which means that it reflects how well our model fits the observed

calculating whether the log-likelihood ratio of a particular model represents a significant improvement over the other two models.<sup>4</sup> Finally, we use the Bayesian coefficient *BIC*,<sup>5</sup> which is an alternative to assessing model fit in contingency tables. Although it also assesses the overall model fit, the *BIC* coefficient is controversial in that it is considered somewhat biased against more complex models. Neither the log-likelihood ratio nor the *BIC* should be considered the final word in assessing model fit. Instead, both goodness-of-fit measures give us different information about the quality of our models.

## 5 Social and Occupational Changes

As in most modern societies, tremendous changes have taken place in Switzerland due to transformations in occupational structures and industrial sectors since the 1970s. Table 3 illustrates some of these changes in the form of proportional distributions of occupational categories:

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data. More precisely, the smaller the difference between the observed frequencies  $f_0$  in our educational or occupational categories and the frequencies that we would expect based on calculations for the different hypothesised models  $F_i$ , the more closely our model reflects the empirical observations. The degrees of freedom depend on both the total number of cells in our mobility table and the complexity of our models. The distribution of the log-likelihood statistic,  $L^2$ , follows closely the distribution of the  $\chi^2$  statistic and its fit will be assessed accordingly. The p-values shown in our tables are evaluations of the magnitude of the lack of model fit. The p-value can be read as the probability that the lack of fit observed would have arisen by (sampling) chance, given the size of the lack of fit and the degrees of freedom. If that probability is at all substantial (a conventional criteria is anything greater than 0.05) then it is likely that the model adequately describes the large bulk of mobility patterns in the table. A very low probability indicates that there are still patterns in the table that the model does not account for.

- 4 The difference between the log-likelihood statistics from two models can be used to estimate whether one model is a significant improvement over the other. This difference in the  $L^2$  statistics of the two models also follows the  $\chi^2$  distribution and can, thus, be used to determine whether one model represents a significant improvement over another in terms of fit. Thus,

$$\chi^2_{\text{difference}} \cong 2 \left( L_{m1}^2 - L_{m2}^2 \right)$$

where  $L_{m1}^2$  represents the larger, and  $L_{m2}^2$  represents the smaller model's log-likelihood statistic, i. e.  $L_{m1}^2 > L_{m2}^2$ . The significance-level of the difference  $L^2$  will be assessed based on the difference in the degrees of freedom of both models and according to a  $\chi^2$  distribution.

- 5  $BIC = L^2 - (df) \log n$ , where  $L^2$  represents the log-likelihood ratio statistic,  $df$  are the degrees of freedom associated with a specific model, and  $n$  is the sample size (Raftery, 1986; Xie, 1992). Smaller *BIC* values are interpreted as indicators of a more parsimonious and, hence, more desirable model. The value of the *BIC* statistic reflects the trade-off between model fit and model complexity.

Table 3: Distribution of Occupational Classes between Fathers and Sons (CASMIN) in %

Year of survey	1975	1975	1981	1991	1991	1999	1999
Sons' Age Range	50-65	35-49	35-64	50-65	35-49	50-65	35-49
<b>Fathers</b>							
1 professionals	5.4	3.0	7.3	19.1	19.0	15.5	19.3
2 associate professions	6.0	5.9	3.4	9.9	10.0	11.9	13.2
3 routine non-manual	7.2	4.1	9.9	6.9	11.3	4.4	6.2
4 small proprietors	3.6	3.0	19.5	16.8	12.7	13.7	11.1
5 skilled manual	24.6	32.5	26.8	19.1	16.7	19.8	18.9
6 semiskilled manual	26.3	21.3	10.4	9.2	14.7	14.9	16.8
7 self-employed farmers	24.0	25.4	20.8	15.3	13.0	16.5	12.3
8 farm workers	3.0	4.7	2.1	3.8	2.7	3.4	2.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Sons</b>							
1 professionals	12.0	14.8	12.2	34.3	27.7	30.4	29.3
2 associate professions	13.8	18.3	21.3	18.3	22.7	29.4	28.6
3 routine non-manual	13.2	10.7	14	8.3	5.3	4.4	5.6
4 small proprietors	2.4	3.6	15.3	7.6	6.6	9.3	7.8
5 skilled manual	29.3	30.8	23.6	24.4	19.7	11.7	14.3
6 semiskilled manual	18.6	15.4	8.3	6.1	15.7	9.3	11.1
7 self-employed farmers	9.6	5.9	4.7	0.7	1.3	4.2	2.9
8 farm workers	1.2	0.6	0.5	0.0	1.0	1.4	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

A few observations will illustrate the extent to which structural changes have taken place in Swiss society. In terms of structural mobility, we can clearly observe a decrease over time in skilled and semi-skilled manual professions, as well as in self-employed farmers among both fathers and sons. Concurrently, we can detect an overall increase among professionals and the associate professions. Comparing fathers with sons, we can furthermore observe that sons are more likely to be among the professionals and associate professions, and less likely among the self-employed farmers.

Such structural changes indicate a tremendous upheaval in the occupational structure and, by extension, in the system of social stratification and mobility, as has also been observed in other European countries (Erikson and Goldthorpe, 1992). This cursory view suggests that the Swiss society experienced significant vertical as well as horizontal change in that the movements of structural changes were in the general direction of increasing the proportions in more "privileged" occupations. A simple re-coding of this table, separating ascending and descending mobility as defined by the three-fold hierarchical structure used in the CASMIN project, illustrates this point further:

Table 4: Ascending and Descending Mobility according to CASMIN

Survey Sons' Age	1975 50–65	1975 35–49	1981 35–65	1991 50–65	1991 35–49	1999 50–65	1999 35–49
Ascending	28.3	44.3	39.1	41.9	42.8	49.6	48.0
Unchanged	32.8	25.7	28.9	26.7	24.7	25.5	24.3
Absent	6.3	4.2	8.4	3.1	2.2	3.2	2.9
Descending	25.0	25.7	23.6	28.4	30.4	21.7	24.8

Table 4 describes the proportional changes for all occupational categories over time, as expressed in column percentages. This table, confirms our previous expectations, i. e. that Swiss society experienced a tremendous vertical change in the occupational structure across generations as well as over time. Under these definitions, a Marxist proposition of a gradual collective descent cannot be confirmed. The only clear exception relates to the oldest generation, i. e. those born between 1910 and 1925, whose mobility was influenced by the Second World War. It is not possible to assess whether such structural changes had an effect on intergenerational mobility from aggregate tables alone. Similar to Lipset's earlier work, we are unable to differentiate in this way whether the overall increase in opportunities and change on a societal level has loosened the link between intergenerational advantage. To find out if more flux has been introduced through such changes, we will have to turn our attention to the analysis of intergenerational mobility tables.

## 6 The Dynamics of the Flux

In a previous article, we found few significant changes in the occupational structure in Switzerland for the 1990s (Bergman, Joye, and Fux, 2002). We now expand our focus by examining intergenerational social mobility and by including all data sets that pertain to this domain. Based on our analyses of mobility tables as described in the design section of this paper, we will present three sets of analyses, representing intergenerational social mobility based on educational attainment, social classes as proposed by CASMIN, and occupational categories as proposed by the ISCO-88 major groups. All tables present the goodness-of-fit statistics for three models (i. e. the CIM, CnSF, and LMLEM)<sup>6</sup>, as well as  $\phi_y$ , the parameter estimate reflecting the change in father-son inheritance across year/cohort for the LMLEM.

<sup>6</sup> Parameter estimates for the LMLEM model reflect evidence for a more complex model, which includes not only a table-specific variation, but also a diagonal treatment that is not part of the CIM and CnSF.



## 6.1 Education and Intergenerational Mobility

In the first set of analyses, we will examine the extent to which intergenerational educational mobility between fathers and sons has changed between 1975, 1991, and 1999. CIM reflects the idea that sons do not inherit their fathers' educational attainment, while CnSF proposes that, whatever the level of inheritance, educational attainment is the same across the three data sets. LMLEM explicitly estimates variations between the three survey years by calculating the relative size of the mobility transition for each year. Table 5 summarizes the most significant results for intergenerational educational mobility:

Table 5: Educational Attainment and Intergenerational Mobility in 1975, 1991 and 1999

Model	$L^2$	df	p	BIC	$\phi_{1975}$	$\phi_{1991}$	$\phi_{1999}$
CIM	1'138.2	108	0.0000	247			
CnSF	122.9	72	0.0001	-471			
LMLEM	107.4	74	0.0067	-503	1.17	0.78	1.15

Table 5 suggests that both the CnSF and LMLEM models, by incorporating a term for origin-destination associations, brought a dramatic improvement in fit, although the  $p$ -values suggest there is still further structure to the data which is not modeled by either. Furthermore, the LMLEM model replicates the data structure better than the CnSF, and it is also favored by the  $BIC$  statistic, thus suggesting structure by time periods, and not constancy, to the educational origin-destination association. Substantively, we conclude that an element of fathers' educational attainment is indeed inherited by their sons, and that the degree of inheritance varies over the years. Indeed, we find that the  $\phi_y$  coefficient associated with the data set of 1991 reflects a greater fluidity because data collected in 1975 and 1999. However, as we stated earlier, this data set does not contain sufficient details with regard to the educational distinctions on the secondary level. A lack of detail may indeed reflect a greater fluidity in that upward or downward movements are not sufficiently recorded. In order to investigate this issue in more detail, we split the three data sets into a younger (i. e. 35–49) and older (i. e. 50–65) generation.

Table 6 lists the relevant parameter estimates for educational mobility over time and cohorts:

Table 6: Educational Attainment and Intergenerational Mobility in 1975, 1991 and 1999 across Generations

Model	$L^2$	df	p	BIC	$\phi_{1975o}$	$\phi_{1975y}$	$\phi_{1991o}$	$\phi_{1991y}$	$\phi_{1999o}$	$\phi_{1999y}$
CIM	906.3	216	0.0000	-795						
CnSF	233.3	180	0.0045	-1'185						
LMLEM	176.2	158	0.1528	-1'069	1.48	0.65	1.04	0.66	1.08	1.19

According to the log-likelihood statistics  $L^2$  and their associated  $p$ -values, the LMLEM again fits our data better than the CIM and CnSF, and appears to adequately fit the data structure in this case. However, according to the  $BIC$  coefficient, which can be considered somewhat biased against more complex models, preference should be given to the CnSF, considering how the more succinct CnSF model still explains a great deal of the data patterns. Should we be interested in the more complex model (and the considerable fluctuation in the  $\phi_y$  coefficients warrants this), then the  $\phi_y$  parameter estimates propose that the older generation is less mobile than the younger generation in 1975 and 1991. In 1999, their degree of mobility has largely equalized. Rather than the older generation being now more socially mobile, it is the younger generation which has reached the same level of (im)mobility as the older generation. In other words, the older generation has become more educationally mobile somewhere between 1975 and 1991 and has then stayed on this level of educational mobility. Lack of fluidity in the older generation of respondents in 1975 is most likely due to the effects of the Second World War, when their educational trajectory was hampered by the war and by mobilization. In contrast, the younger generation has been relatively mobile until after 1991 and has subsequently become somewhat less mobile, possibly due either to the economic crisis in the 1990s or to the social mobility from industrial changes experienced by their parents. In sum, the relative advantage of the younger generation in 1975 and 1991 was no longer apparent in 1999, while relative immobility in terms of education for the Second World War generation had improved since 1975, but remained roughly the same in the 1990s (e. g. Bergman [et al.], 2002).

## 6.2 CASMIN Classes and Intergenerational Mobility

In this second set of analyses, we will explore how intergenerational social mobility according to the social class schema CASMIN changed over time. This will also give us an opportunity to compare the links between educational mobility and class mobility.

Table 7: CASMIN Classes and Intergenerational Mobility in 1975, 1981, 1991 and 1999

Model	L <sup>2</sup>	df	p	BIC	$\phi_{1975}$	$\phi_{1981}$	$\phi_{1991}$	$\phi_{1999}$
CIM	1'068.9	196	0.0000	-0.536				
CnSF	189.6	147	0.0102	-1'014				
LMLEM	186.3	148	0.0180	-1'025	1.18	1.82	0.91	0.66

In table 7 we see very little difference between the CnSF and LMLEM models – both achieve similar fit and explain a great deal more than the CIM model, although the LMLEM displays a marginally better fit and is slightly favored by the BIC statistic. These results lead to an ambiguous interpretation: on the one hand, the CnSF suggests that a hypothesis of no change in mobility rates is an adequate model; on the other, we can equally make a case for interpretable structure in the strength of origin-destination links over time. Examining the LMLEM's individual parameter estimates for the different surveys, we can thus argue that social mobility trends in Switzerland are similar to those found in other countries, i. e. a general increase in social fluidity over time (Vallet, 1999 and 2001). The trend is broken by the data from 1981 but, as we had stated earlier, this particular data set did not contain sufficient information to allow for detailed classification of occupational titles into CASMIN, compared to the others. At this point, we might conclude that we are either dealing with an intergenerational mobility trend that is comparable to other European countries (thus explaining the 1981 'findings by data and coding imprecision), or that we have indeed experienced a sudden burst of social coagulation sometime around 1981. A reanalysis of the data, this time omitting the data set that contains the less detailed occupational titles, reveals the following parameter estimates:

Table 8: CASMIN Classes and Intergenerational Mobility in 1975, 1991, and 1999

Model	L <sup>2</sup>	df	p	BIC	$\phi_{1975}$	$\phi_{1991}$	$\phi_{1999}$
CIM	855.3	147	0.0000	-325			
CnSF	117.3	98	0.0894	-670			
LMLEM	145.6	108	0.0092	-722	1.55	1.27	0.88

The evidence from this table is also mixed. First, the CnSF model emerges as a better, indeed possibly adequate, fit to the data. One corollary is a suggestion that a fair amount of the structure picked up by the LMLEM in table 7 was simply associated with the 1981 data (since with that structure the two models achieved similar fits). However, the *BIC* statistic again favors the LMLEM as an improvement over the CIM and the CnSF. Here, the structure to the LMLEM estimates suggests that intergenerational mobility as measured by CASMIN increased between 1975, 1991 and 1999, in line with findings from other countries. However, since both the CnSF and LMLEM models have alternative attributes, it is not clear whether the flux that is modeled here is constant or whether it varies over time.

How is the flux associated across generations? To answer this question we will, once again, divide our data sets into generations, wherever possible. Tables 9 and 10 display the following results:

Table 9: CASMIN Classes and Intergenerational Mobility in 1975, 1981, 1991 and 1999 across Generations

Model	L <sup>2</sup>	df	p	BIC	$\phi_{1975o}$	$\phi_{1975y}$	$\phi_{1981}$	$\phi_{1991o}$	$\phi_{1991y}$	$\phi_{1999o}$	$\phi_{1999y}$
CIM	887.7	343	0.0000	-1'815							
CnSF <sup>7</sup>	280.5	294	0.7044	-2'036							
LMLEM	260.3	268	0.6208	-1'852	0.69	1.13	1.94	0.91	0.53	0.51	0.58

Again the conclusions from table 9 are mixed, since both the CnSF and LMLEM models can be regarded as adequate reproductions of the observed data. On the one hand, the *BIC* statistic favors the CnSF as a more parsimonious model. On the other hand, the LMLEM explains somewhat more of the data patterns and is also evaluated by the *p*-value as an acceptable model. An examination of the  $\phi_y$  coefficients of the LMLEM reveals an increase in overall mobility over time, as well as a convergence in social mobility between the older and the younger generation. In addition, we can observe that 1981 is once again an exception to the trend, which in our opinion is due to the different and less detailed classification of occupational titles. Accordingly, we reran these models without the 1981 data set:

7 This model did not converge with the *LEM* software, which may be due to the combination of small counts in some cells of the mobility table and relatively weak effects in the two-way associations. We reran the analysis with the General Loglinear module of SPSS and calculated *BIC* according to the previously elaborated formula.

Table 10: CASMIN Classes and Intergenerational Mobility in 1975, 1991 and 1999 across Generations

Model	$L^2$	df	p	BIC	$\phi_{1975o}$	$\phi_{1975y}$	$\phi_{1991o}$	$\phi_{1991y}$	$\phi_{1999o}$	$\phi_{1999y}$
CIM	714.4	294	0.0000	-1'533						
CnSF	212.8	245	0.9323	-1'679						
LMLEM	228.4	228	0.4800	-1'532	0.96	1.72	1.39	0.61	0.66	0.74

According to both the log-likelihood statistics  $L^2$  and the  $BIC$  statistic, we ought to reject the LMLEM in favor of the CnSF. However, the LMLEM retains a satisfactory fit to the data, as indicated by the high  $p$ -value. From the significant variations of the  $\phi_y$  coefficients of the LMLEM model, we can nevertheless interpret the trend discernable in the variations of flux across time and cohort. Here, the older generation fared much better than the younger generation in terms of class mobility in 1975. This stands in stark contrast to our previous findings, in which we found that this Second World War generation was much worse off in terms of educational mobility, compared to their younger peers. Our *post hoc* explanation rests on the fact that while the Second World War generation was indeed hampered with regard to educational attainment, their professional appointments in Swiss organizations and administration frequently took into account military rank and time served during mobilization. This gives rise to an interesting temporary dissociation between educational achievement and social position due to the Second World War. The war generation made up in military standing what they lacked in formal educational attainment. Finally, we can detect from the  $\phi_y$  parameter estimates that intergenerational class mobility reversed in 1991 in that the younger generation was more mobile compared to the older generation, and that, in 1999, intergenerational mobility converged so that the younger and the older generations were equally mobile in that year and approximately as mobile as the younger generation in 1991.

### 6.3 ISCO-88 Classification and Intergenerational Mobility

So far, our analyses seem contradictory: we found fairly clear empirical evidence for a change in social mobility patterns across generations and time with regard to educational attainment, while the evidence for the CAMSIS classes is far more ambiguous. Can we state from these results that social mobility rates have changed in terms of education, but are stable in terms of occupational structures? In this third set of analyses, we repeat the modeling – now using the ISCO-88 major occupational group scheme. This allows us to explore the contradiction of the

results that we have observed in the previous sets, i. e. we will now examine how much occupational mobility as detected by CASMIN may have been an artifact of that classification schema. As described above, the ISCO-88 schema refers to major occupational groupings but it explicitly incorporates education as one of the elements of classification. Convergence in results between CASMIN and ISCO-88 would imply a form of cross-validation of the ambiguous trend in social mobility as expressed through occupational categories. A convergence in results between educational achievement and ISCO-88, and a divergence in results between CASMIN and ISCO-88 may lead us to suspect that schema-specific coding, rather than occupational categories in general, may eliminate occupational mobility patterns over time and generations.

Table 11 displays intergenerational mobility in 1975, 1991 and 1999 according to the ISCO-88 occupational classification schema:

Table 11: ISCO-88 Classification and Intergenerational Mobility in 1975, 1991 and 1999

Model	L <sup>2</sup>	df	p	BIC	$\phi_{1975}$	$\phi_{1991}$	$\phi_{1999}$
CIM	810.1	192	0.0000	-713			
CnSF	160.0	128	0.0290	-855			
LMLEM	165.6	148	0.1530	-1'008	1.69	1.17	1.07

Both the CnSF and LMLEM log-likelihood statistics again indicate that there are significant associations between fathers' and sons' occupational categories as measured by ISCO-88. However, the  $p$ -value of the LMLEM suggests an adequate model for the data set, while the  $p$ -value associated with CnSF suggests that it is not an adequate model. The  $BIC$  also strongly favors the LMLEM. These two findings suggest that social mobility based on ISCO-88 is not constant; rather, mobility is best modeled as structured over time. Substantively, we can note from the  $\phi_y$  parameter estimates an improvement in intergenerational social mobility in 1999, compared to either 1975 or 1999.

A reanalysis of these data sets based on generational separation reveals the following coefficients:

Table 12: ISCO-88 Classification and Intergenerational Mobility in 1975, 1991 and 1999 across Generations

Model	L <sup>2</sup>	df	p	BIC	$\phi_{1975o}$	$\phi_{1975y}$	$\phi_{1991o}$	$\phi_{1991y}$	$\phi_{1999o}$	$\phi_{1999y}$
CIM	860.4	384	0.0000	-2'113						
CnSF <sup>8</sup>	349.7	320	0.1221							
LMLEM	323.8	310	0.2833	-2'077	1.73	1.67	1.30	0.89	1.25	0.92

As in all other examples, the LMLEM is a dramatic improvement in fit over the CIM model with a much reduced likelihood ratio, and, according to the  $p$ -value, it also constitutes an acceptable model for the data, suggesting variations in the origin-destination association which are structured by time. The CnSF also adequately reproduces the data structure but is not as efficient as the LMLEM. The parameters of the LMLEM model suggests that social mobility initially increased until 1991 and then stabilized for both sets of cohorts although the younger cohort still tends to fare better in 1999. However, these tables included many sparse cells, a fact reflected by the *BIC* statistics' favoring of the CIM model after balancing higher degrees of freedom against the sample size.

These results are consistent with those of educational mobility and are contrary to the results from our analyses on occupational categories as conceptualized by CASMIN. On the one hand, educational and occupational mobility as measured by ISCO-88 changed over time and generations. On the other, mobility patterns based on CASMIN are more ambiguous, supporting contradictory conclusions, i. e. that both flux and constancy over time and generations can be justified from our analyses. This means that the degree of flux in intergenerational mobility may be in part an artifact arising from the sorting and coding of occupations.

#### 6.4 Swiss Mobility Patterns in International Comparison

The results presented here outline features of the social mobility structure evident from recent Swiss data sets. We can also evaluate social class mobility against similar studies conducted in other countries, primarily in terms of findings from the CASMIN occupational schema as presented by Erikson and Goldthorpe (1992). In that regard, our findings are twofold. First the crude but nevertheless important point is that social background matters in Switzerland as it does elsewhere. Across all models, parameters for the origin-destination association lead to dramatic model improvement. Similar findings are highlighted by Erikson and Goldthorpe's table 3.1 (1992, 89), reproduced partially below, with the addition of comparable data from Switzerland.

8 As in table 9, this model did not converge with the *IEM* software, so we used the General Loglinear module of SPSS.

Table 13: Proportional Improvement in Fit between CIM and CnSF for 10 Countries (Erikson and Goldthorpe, 1992, 50 und 89) and the Swiss Sample from 1975

	$rG^2$		$rG^2$
England 1972	96.9	Northern Ireland 1973–1974	94.3
France 1970	98.5	Poland 1972	99.1
West Germany 1976–1978	92.5	Scotland 1974–1975	94.2
Hungary 1973	97.1	Sweden 1974	88.8
Ireland 1973–1974	93.3	Switzerland 1975	88.1

The values of  $rG^2$  represent the proportional improvement in fit between the conditional independence model, which allows no role for origin-destination associations, and the constant social fluidity model, which allows an origin-destination association which is fixed across cohorts.<sup>9</sup>

One tentative interpretation of the values of the  $rG^2$  statistics in table 13 is that Switzerland, along with Sweden, was in 1975 a country with relatively less social immobility, where no cross-cohort variation in immobility is allowed. However this view is offset by the relative simplicity of the CnSF model and the failure to explore the more intricate structures of (im)mobility specific to each country. The more robust finding, therefore, is simply that Swiss immobility is, as in other countries, substantial.

Second, our explorations with the various LMLEM, in contrast to the CnSF, led us to suggest that there may well be a case to argue that Swiss data shows time structured trends in the extent of social immobility. Generally, mobility tables for younger and more recent cohorts could often be modeled as if they showed greater openness, although there were some exceptions to this rule. This contrasts with the findings of Erikson and Goldthorpe (1992), although their analysis allowed for several additional complexities in the CASMIN categories' origin-destination associations which, due to data limitations, were not considered here.

9 The values for the nine countries from Erikson and Goldthorpe (1992) refer to single year samples split into four age cohorts. For approximate comparability, the value presented for Switzerland is derived from two models, not presented above, which compare fathers and sons in the 1975 sample only (split into the older and younger cohorts). The different number of cohorts should be immaterial to the CnSF model. However, the size of the Swiss sample, 336 cases for 1975, is considerably smaller than those used in the CASMIN project.



## 7 Discussion and Conclusions

In this paper, we limited our focus to the analysis of the constancy or dynamics of flux in intergenerational mobility in Switzerland between 1975 and 1999. We did this by examining mobility tables of four large-scale, representative data sets available in Switzerland that can be used for these purposes.

Our research revealed five major results. At the most basic level, we were unable to confirm unequivocally the findings by Erikson and Goldthorpe that social fluidity is constant in modern societies. The adequacy of many of the LMLEM indicated that mobility patterns are not constant, but are structured over generations and time. Xie has confirmed this in his reanalysis of various datasets from other countries with more powerful statistical tools (1992). Second, we were able to detect a fairly consistent, though non-linear, increase of social fluidity between 1975 and 1999, as far as our CASMIN and ISCO-88 analyses were concerned. Intergenerational educational mobility was found to be more complex. Third, intergenerational mobility between the older and the younger generations tends to converge, whether we analyze generational differences in terms of educational attainment, social class as proposed by CASMIN, or occupational categories as identified by ISCO-88. Fourth, Switzerland does not seem to display wildly different mobility patterns over time, compared to other European and North American nations, and in most examples, the constant social fluidity model accounts for the large bulk of origin-destination associations. Finally, some of our results are rather ambiguous due to data and coding vagaries, as well as to model specifications and the idiosyncrasies of the occupational coding schemes. A more coherent data collection effort in the future will help clarify and stabilize what has been measured, calculated, and tentatively suggested here.

At this point, we would like to reiterate briefly the major criticisms that can and should be raised against our study and others of its kind. The exclusion of female workers from our comparisons is clearly undesirable, perhaps increasingly so with recent changes in women's participation in the labor force. Related to this, we did not consider ethnicity, nationality, or geographic region, which, we strongly suspect, will have a significant impact on the phenomena described by social stratification and mobility (cf. Urry, 2000; Bergman, 2002). Sample size restrictions as well as incomplete data relating to migration status are the culprits here. Next, the social class or category attributed to survey respondents according to their current occupation is problematic because people change their occupation over their lifetime. Researchers from a previous generation of social mobility studies proposed career chain models to reflect the occupational history of individuals (Blau and Duncan, 1967; Featherman, 1971). This approach could at least partially address the work trajectories of women and migrants. Unfortunately, no CASMIN equivalent or a rigorous discussion of this topic exists today. Finally,

we hope that more effort will be invested in the theory and empirical measurement of data collection and coding in order to match the impressive sophistication of analytical and statistical tools, with which these data are analyzed.

Nevertheless, we revealed some of the dynamic changes in intergenerational mobility as they relate to educational attainment, occupational categories and social class. We were unable to find empirical evidence for the collective downgrading of social positions, i. e. proletarianization, as proposed by Marxist theory. Rather, the Swiss population *as a collective* experienced significant vertical mobility. With regard to the liberal theory of industrialism, our conclusions are far more tentative and mixed. Based on the generational convergence of our results, as well as a slow increase in intergenerational fluidity between 1975 and 1999, we tentatively confirm that, for Swiss men, the redistribution of resources may have become more egalitarian, meritocratic, and socially just. Overall, however, we can clearly state that intergenerational inheritance of advantage, be it through educational attainment, occupational categories, or social class, remains powerfully intact in Switzerland today.

## 8 References

- Abbott, Pamela and Geoff Payne (1990), Women's Social Mobility: the Conventional Wisdom Reconsidered, in: Geoff Payne and Pamela Abbott, Eds., *The Social Mobility of Women: Beyond Male Mobility Models*, London: Falmer.
- Agresti, Alan (1991), *Categorical data analysis*, New York: Wiley.
- Bergman, Manfred Max (2002), Pauvreté, exclusion et territoire dans les sociétés modernes, *Les Annales de la Recherche Urbaine*, 93.
- Bergman, Manfred Max and Dominique Joye (2001), Comparing Social Stratification schemas: CAMSIS, CSP-CH, Goldthorpe, ISCO-88, Treiman, and Wright, *Cambridge Studies in Social Research*, 9, 1–31.
- Bergman, Manfred Max, Dominique Joye and Beat Fux (2002), Social Change, Mobility, and Inequality in Switzerland in the 1990s, *Swiss Journal of Sociology*, 28/2, 267–295.
- Blau, Peter M. and Otis D. Duncan (1967), *The American Occupational Structure*, New York: Wiley.
- Bourdieu, Pierre (1983), Ökonomisches Kapital, kulturelles Kapital, soziales Kapital, in: Reinhard Kreckel, Ed., *Soziale Ungleichheiten. Soziale Welt, Sonderband 2*, Göttingen: Schwartz.
- Bourdieu, Pierre and Jean-Claude Passeron (1990), *Reproduction in Education, Society, and Culture* (2<sup>nd</sup> ed.), London: Sage.
- Brauns, Hildegard and Susanne Steinmann (1997), Educational Reform in France, West-Germany, the United Kingdom and Hungary. Updating the CASMIN Educational Classification, *MZES Working Paper*, AB I, 21.
- Breen, Richard (1998), Individual Level Models for Mobility Tables and other Cross-classifications, *Sociological Methods and Research*, 23, 147–173.
- Breen, Richard and John H. Goldthorpe (1999), Class Inequality and Meritocracy: A Critique of Saunders and an Alternative Analysis, *British Journal of Sociology*, 50, 1–27.

- Breen, Richard and John H. Goldthorpe (2001), Class, Mobility and Merit: The Experience of two British Birth Cohorts, *European Sociological Review*, 17/2, 81–101.
- Breen, Richard and Jan O. Jonsson (2001), Decomposing Change in Social Fluidity: Sweden, 1976–1999. *Presented at the ISA Research Committee on Social Stratification (RC28)*, Mannheim.
- Britten, Nicky and Anthony Heath (1983), Women, Men and Social Class, in: Eva Garmanikow, David H.J. Morgan, June Purvis and Daphne E. Taylorson, Eds., *Gender, Class and Work*, Aldershot: Gower.
- Carmichael, Fiona (2000), Intergenerational Mobility and Occupational Status in Britain, *Applied Economics Letters*, 391–396.
- Chan, Tak W. and John H. Goldthorpe (2002), Is there a Status Order in Contemporary British Society? Evidence from the occupational Structure of Friendship, Oxford: Department of Sociology, University of Oxford, *Working Paper Number 2002–2003*.
- Clogg, Clifford C. (1982), Some Models for the Analysis of Association in Multiway Contingency Tables having ordered Categories, *Journal of the American Statistical Association*, 77, 803–815.
- Coxon, Anthony P. M. and Charles L. Jones (1979), *Class and Hierarchy: The Social Meaning of Occupations*, London: Macmillan.
- Elias, Peter (1997a), Social Class and the Standard Occupational Classification, in: David Rose and Karen O'Reilly, Eds., *Constructing Classes: Towards a New Social Classification for the UK*, Swindon: ESRC/ONS.
- Elias, Peter (1997b), Occupational Classification: Concepts, Methods, Reliability, Validity, and Cross-national Comparability, *Occasional Papers*, 20, OECD. Warwick: Institute for Employment Research.
- Erikson Robert and John H. Goldthorpe (1992), *The Constant Flux: A Study of Class Mobility in Industrial Societies*, Oxford: Clarendon.
- Evans, Geoffrey (1992), Testing the Validity of the Goldthorpe Class Schema, *European Sociological Review*, 8/3, 211–232.
- Evans, Geoffrey and Colin Mills (1998), Identifying Class Structure: A Latent Class Analysis of the Criterion-related and Construct Validity of the Goldthorpe Class Schema, *European Sociological Review*, 14/1, 87–106.
- Featherman, David L. (1971), A Social Structural Model for the Socioeconomic Career, *American Journal of Sociology*, 77, 293–304.
- Featherman, David L. and Robert M. Hauser (1978), *Opportunity and Change*, New York: Academic Press.
- Featherman, David L., F. Lancaster Jones and Robert M. Hauser (1975), Assumptions of Social Mobility Research in the U. S., *Social Mobility Research*, 4, 329–360.
- Ganzeboom, Harry B. G. and Ruud Luijkx (2001), Recent Trends in Intergenerational Occupational Class Mobility: Men in the Netherlands 1970–1999, *Presented at the ISA Research Committee on Social Stratification (RC28)*, Mannheim.
- Ganzeboom, Harry B. G., Ruud Luijkx and Donald J. Treiman (1989), Intergenerational Class Mobility in Comparative Perspective, *Research in Social Stratification and Mobility*, 8, 3–84.
- Ganzeboom, Harry B. G. and Donald J. Treiman (1996), International Comparable Measures of Occupational Status for the 1988 International Standard Classification, *Social Science Research*, 25, 201–239.
- Ganzeboom, Harry B. G., Donald J. Treiman and Wout C. Ultee (1991), Comparative Intergenerational Stratification Research: Three Generations and Beyond, *Annual Review of Sociology*, 17, 277–302.

- Gershuny, Jonathan (2002), A new Measure of Social Position: Social Mobility and Human Capital in Britain, Colchester: University of Essex, *Working Paper 2002-02* of the Institute for Social and Economic Research.
- Goldthorpe, John H. (1983), Women and Class Analysis: In Defense of the Conventional View, *Sociology*, 17/4, 465–488.
- Goldthorpe, John H. (1992), Employment, Class, and Mobility: A Critique of Liberal and Marxist Theories of Long-term change, in: Hans Haferkamp and Neil J. Smelser, Eds., *Social Change and Modernity*, Berkeley: University of California.
- Goldthorpe, John H. (1997), The “Goldthorpe” Class Schema: Some Observations on Conceptual and Operational Issues in Relation to the ESRC Review of Government Social Classification, in: David Rose and Karen O’Reilly, Eds., *Constructing Classes: Towards a new Social Classification for the UK*, Swindon: ESRC/ONS.
- Goldthorpe, John H. and Keith Hope (1974), *The Social Grading of Occupations: A new Approach and Scale*, Oxford: Clarendon Press.
- Goldthorpe, John H., and Lucienne Portocarero (1981), La mobilité sociale en France, 1953–1970. Nouvel examen, *Revue Française de Sociologie*, 22, 151 and 166.
- Goodman Leo A. (1979), Simple Models for the Analysis of Association in Cross-classifications Having Ordered Categories, *Journal of the American Statistical Association*, 74, 537–552.
- Goodman, Leo A. (1987), New Methods for Analyzing the Intrinsic Character of Qualitative Variables Using Cross-classified Data, *American Journal of Sociology*, 93, 529–583.
- Goodman, Leo A. (1991), Measures, Models, and Graphical Displays in the Analysis of Cross-classified Data, *Journal of the American Statistical Association*, 86, 1085–1111.
- Grusky, David B. and Robert M. Hauser (1984), Comparative Social Mobility Revisited: Models of Convergence and Divergence in 16 Countries, *American Sociological Review*, 49, 19–38.
- Hauser, Robert M. (1978), A Structural Model for the Mobility Table, *Social Forces*, 56, 919–953.
- Hoffmann, Eivind (2000), *International Statistical Comparisons of Occupations and Social Structures: Problems, Possibilities and the Role of ISCO-88*, Geneva: International Labour Office.
- Hout, Michael and Robert M. Hauser (1992), Symmetry and Hierarchy in Social Mobility: A Methodological Analysis of the CASMIN Model of Class Mobility, *European Sociological Review*, 8/3, 239–266.
- International Labour Office (1990), *International Standard Classification of Occupations, ISCO-88*, Geneva: ILO.
- Jones, F. Lancaster (1985), New and (very) Old Mobility Ratios: Is there Life after Benini?, *Social Forces*, 63/3, 838–850.
- Jonsson, Jan O. (1992), Towards the Merit-selective Society? Cited in Richard Breen and John H. Goldthorpe (2001).
- Karabel, Jerome and A. H. Halsey, Eds., (1977), *Power and Ideology in Education*, New York: Oxford University.
- Lamprecht, Markus and Hanspeter Stamm (2000), Soziale Lagen in der Schweiz, *Swiss Journal of Sociology*, 26/2, 261–295.
- Levy, René, Dominique Joye, Olivier Guye and Vincent Kaufmann (1997), *Tous Égaux? De la Stratification aux Représentations*, Zürich: Seismo.
- Lipset, Seymour M. and Reinhard M. Bendix (1963), *Social Mobility in Industrial Society*, Berkeley: University of California.
- Lipset, Seymour M. and Hans L. Zetterberg (1959), Social Mobility in Industrial Societies, in: Seymour M. Lipset and Reinhard M. Bendix, Eds., *Social Mobility in Industrial Society*, Berkeley: University of California.

- Marsh, Catherine (1986), Social Class and Occupation, in: Robert G. Burgess, Ed., *Key Variables in Social Investigation*, London: Routledge and Kegan Paul.
- Marshall, Gordon, David Rose, Howard Newby and Carolyn Vogler (1988), *Social Class in Modern Britain*, London: Unwin Hyman.
- Marshall, Gordon, Adam Swift and Steven Roberts (1997), *Against the Odds? Social Class and Social Justice in Industrial Societies*, Oxford: Clarendon.
- Marshall, Thomas H. (1950), Citizenship and Social Class, in: Thomas H. Marshall, *Citizenship and Social Class and other Essays*, Cambridge: Cambridge University.
- Müller, Walter and Shavit Yossi (1998), Bildung und Beruf im institutionellen Kontext. Eine vergleichende Studie in 13 Ländern, *Zeitschrift für Erziehungswissenschaft*, 1, 4.
- Parkin, Frank, Ed., (1974), *The Social Analysis of Class Structure*, London: Tavistock.
- Penn, Roger D. (1981), The Nuffield Class Categorisation, *Sociology*, 15, 265–271.
- Prandy, Kenneth (1998a), Deconstructing Classes: Critical Comments on the Revised Social Classification, *Work, Employment and Society*, 12/4, 743–753.
- Prandy, Kenneth (1998b), Class and Continuity in Social Reproduction: an Empirical Investigation, *Sociological Review*, 46, 154–178.
- Prandy, Kenneth (2002), Ideal Types, Stereotypes and Classes, *British Journal of Sociology*, 53/4, 583–601.
- Prandy, Kenneth and Wendy Bottero (2000), Social Reproduction and Mobility in Britain and Ireland in the Nineteenth and Early Twentieth Centuries, *Sociology*, 34, 265–281.
- Prandy, Kenneth, Paul S. Lambert and Wendy Bottero (2002), By Slow Degrees: Two Centuries of Social Reproduction in Britain, presented at the Meeting of the ISA Research Committee on Social Stratification (RC28), Oxford.
- Raftery, Adrian E. (1986), Choosing Models for Cross-classifications: Comment on Grusky and Hauser, *American Sociological Review*, 51, 145–146.
- Rytina, Steven (2000a), Is Occupational Mobility Declining in the United States?, *Social Forces*, 78, 1227–1276.
- Rytina, Steven (2000b), A Keynote of Hierarchy, an Echo of Class: The full Texture of Mobility in England and Wales, presented at RC33 – Fifth International Conference on Logic and Methodology, Cologne.
- Saunders, Peter (1997), *Unequal but Fair? A Study of Class Barriers in Britain*, London: Institute of Economic Affairs.
- Sorokin, Pitirim A. (1959[1927]), *Social Mobility* (2<sup>nd</sup> ed.), Glencoe, IL: Free Press.
- Stewart, Alexander, Kenneth Prandy and Robert M. Blackburn (1980), *Social Stratification and Occupations*, New York: Holmes and Meyer.
- Tillmann, Robin, Erwin Zimmermann, Monica Budowski, Boris Wernli, Annette Scherpenzeel and Alexis Gabadinho (2001), *Vivre en Suisse: Panel suisse de ménages 1999–2003*, Neuchâtel: Office Fédéral de la statistique.
- Treiman, Donald J. (1977), *Occupational Prestige in Comparative Perspective*, New York: Academic Press.
- Treiman, Donald J. and Harry B.G. Ganzeboom (2000), The fourth Generation of Comparative Stratification Research, in: Stella R. Quah and Arnaud Sales, Eds., *The International Handbook of Sociology*, London: Sage.
- Urry John (2000), *Sociology beyond Societies: Mobilities for the Twenty-first Century*, London: Routledge.
- Vallet, Louis-André (1999), Quarante années de mobilité sociale en France: l'évolution de la fluidité sociale à la lumière de modèles récents, *Revue Française de Sociologie*, XL, 1, 5–64.

- Vallet, Louis-André (2001), *Change in Intergenerational Class Mobility in France from the 1970s to the 1990s and its Explanations: An Analysis Following the CASMIN Approach*, Paris: Laboratoire d'Analyse Secondaire et de Méthodes Appliquées à la Sociologie - Institut du Longitudinal.
- Vermunt, Jeroen K. (1997), *LEM: A General Program for the Analysis of Categorical Data*, Tilburg: Tilburg University.
- Western, Mark and Erik O. Wright (1994), The Permeability of Class Boundaries to Intergenerational Mobility among Men in the United States, Canada, Norway and Sweden, *American Sociological Review*, 59, 606–629.
- Wright, Erik O. (1997), *Class Counts: Comparative Studies in Class Analysis*. Cambridge: Cambridge University.
- Xie, Yu (1992), The Log-multiplicative Layer Effect Model for Comparing Mobility Tables, *American Sociological Journal*, 57/3, 380–395.
- Yamaguchi, Kazuo (1987), Models for Comparing Mobility Tables: Toward Parsimony and Substance, *American Sociological Review*, 52, 482–494.

**Eric Widmer, Jean Kellerhals et René Levy**  
avec la collaboration de **Michèle Ernst Stähli et Raphaël Hammer**

# Couples contemporains – Cohésion, régulation et conflits

## Une enquête sociologique

Comment peut-on caractériser les relations de couple aujourd'hui ? Sont-elles marquées par l'autonomie des conjoints ou au contraire par la valorisation du « nous-couple » ou du « nous-famille » ? Les couples se replient-ils sur eux-mêmes ou s'ouvrent-ils sur le monde qui les entoure ? Du point de vue des rôles et du pouvoir, l'égalité entre hommes et femmes est-elle désormais pratiquée ou au contraire les arrangements traditionnels perdurent-ils ? Ce livre montre que la situation est caractérisée par une grande diversité de styles d'interactions conjugales plutôt que par un modèle unique. Ces styles répondent à des logiques associées au statut social, à la position dans le parcours de vie et à la participation sociale des couples. De plus, ils génèrent des niveaux de problèmes et de satisfaction très différents. L'intérêt d'une analyse sociologique du fonctionnement des couples contemporains ne tient pas qu'à l'importance d'un groupe que l'on dit essentiel pour la construction de l'individu et pour l'intégration sociale, mais aussi à l'interrogation sociale et politique générée par les mutations familiales des trente dernières années.

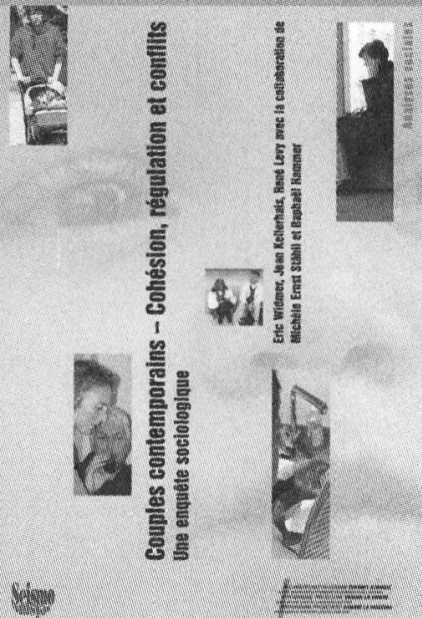
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