Becker, Rolf; Blossfeld, Hans-Peter; Mayer, Karl Ulrich

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Socio-economic change and intergenerational class mobility: A dynamic analysis of the experiences of West Germans born between 1929 and 1971

Rolf Becker [a,*,1], Hans-Peter Blossfeld [b,2], Karl Ulrich Mayer [c,3]

[a] University of Bern, Department of Sociology of Education, Fabrikstrasse 8, CH–3012 Bern, Switzerland
[b] University of Bamberg, Feldkirchenstrasse 21, D–96052 Bamberg, Germany
[c] Yale University and Max Planck Institute for Human Development, Lentzeallee 94, D–14195 Berlin, Germany

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ABSTRACT

Augmenting the conceptual and methodological approaches that are common in current mobility research, we are proposing a dynamic approach to the analysis of intergenerational mobility. A multilevel model is developed that embeds differences and changes in individual resources, such as respondents' class origin, educational attainment, and labor force experience, in the time-varying macro context of a changing cohort size, socio-economic modernization, and business cycles. The empirical analysis combines longitudinal career data from two German life history studies with time series data from official statistics and identifies the mechanisms behind the dynamics of intergenerational mobility processes by means of event history analysis. For the 1945–2008 period, the hypotheses of our theoretical model are supported empirically for daughters and sons born between 1929 and 1971. Their educational distribution is a particularly important factor for their vertical social mobility. Career duration also affects intergenerational mobility. Processes of intergenerational mobility are significantly shaped by time-dependent processes of socio-economic modernization and labor market conditions, which are affected by business cycle fluctuations that act as both push and pull factors on social class positions at labor market entry (cohort effect) and at all later career stages (period effect). Cohort size, which is assumed to increase competition in the career process, reduces upward mobility. Finally, when controlling for all these time-dependent mechanisms of social mobility, significant effects of social origin on offspring's class positions in their life course remain. In particular, upward mobility and class reproduction dominate descents across cohorts and periods.

1. Introduction

The question of how socio-economic positions (associated with different life chances and standards of living) are typically passed from one generation to the next as markers of social class (Weber, 1922: 177) remains one of the central concerns of sociology (Breen & Müller, 2020). In a critical article published nearly four decades ago, Sørensen (1986) criticized the conceptual framework and the statistical methodology of mobility tables. He pointed out that the way the standard mobility table has been applied to measure openness or equality of opportunity in a society shows "little concern for specifying the mechanisms by which outcomes have been produced" (Sørensen, 1986: 70).

In the typical mobility table, the father's social class is referred to as the social origin and is captured by retrospective questions about his socio-economic position at the time the respondent grew up (e.g., at the age of 15), while the socio-economic position of the respondent at the

* Corresponding author.
E-mail addresses: rolf.becker@edu.unibe.ch (R. Becker), hans-peter.blossfeld@uni-bamberg.de (H.-P. Blossfeld), mayer@mpib-berlin.mpg.de (K.U. Mayer).
[1] ORCID ID: https://orcid.org/0000-0001-9574-1669
[2] ORCID ID: https://orcid.org/0000-0002-9298-139X
[3] ORCID ID: https://orcid.org/0000-0002-3265-0089

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time of the interview is considered to be their class destination. In a mobility table using cross-sectional data, however, these 'destinations' are only observations of a respondent's career state at the time of the interview. In other words, the typical mobility table aggregates "destinations where some (the younger respondents) have had very little time to move anywhere while others (the older respondents) have been exposed to the process for a considerable period of time" (Sørensen, 1986: 77). Thus, when using cross-sectional surveys, the information on movement in the mobility table does not reveal when, where, and why job movements have taken place. Disaggregating these mobility tables by birth cohorts does not solve the problem because individuals with different levels of education enter the employment system at very different ages and thus have experienced quite different lengths of exposure to the mobility process. What is missing in the standard mobility table is fundamental information about the exact length of exposure to the career process. This is also true for current longitudinal analyses of intergenerational transmission of earnings and income trajectories realized according to the logic of mobility table analysis (e.g. Hällsten & Yaish, 2022; Cheng & Song, 2019; Mazumder, 2018).

However, this is not the only problem with typical mobility tables. Members of the same birth cohort will not only be at different career stages at the time of the survey, but they will also have started and experienced their careers in very different historical socio-economic contexts. This means that, in the standard mobility table, individuals' job trajectories and the historical context in which their job careers occur are inextricably intertwined. Sobel (1983) showed in a technical paper that the statistical model of independence in the analysis of mobility tables therefore does not control for structural (or forced) mobility in any meaningful way, so that the remaining "association in a mobility table should not be (operationally) equated with the residual concept of circular mobility" (Sobel, 1983: 725). He concluded that the measures of circulation mobility (or social fluidity) in a mobility table cannot be used to indicate the degree of openness of a society. All these arguments also apply to intergenerational mobility analyses that use more complex log-linear models to make inferences about mobility processes (Sobel, 1983). The core problem is that the associations between class origin and class destination in mobility tables are the result of very different temporal processes that make them uninterpretable. Moreover, the specific way in which social structure and changes in that structure are measured in inequality tables, by relying only on marginal distributions and their comparisons, simply neglects other important sources of change in an occupational structure, such as exit from the labor force (e.g., out-migration, unemployment, retirement, or death) and entry into the labor force (entry into the labor force or immigration into the country) (Duncan, 1966:12). Thus, a better, more holistic measure of socio-economic structural change is urgently needed for intergenerational class analysis.

While we readily acknowledge that traditional work on relative intergenerational mobility based on standard mobility tables has advanced the field especially in regard to descriptive cross-national comparisons, we should move some steps further. The purpose of our paper is therefore not only to utilize a *more appropriate measure of structural economic change (which includes all sources of structural change)*, but also to present an alternative, more detailed *dynamic analysis of the time-dependent mechanisms* that produce intergenerational mobility outcomes over the life course. Using two longitudinal datasets, the German Life History Study (GLHS) (Mayer, 2015a) and the Working and Learning in a Changing World (ALWA) study (Kleinert et al., 2011), we utilize detailed work history information on where and when class positions began and where and when they ended. Our analysis is limited to the 1945–2008 period, during which the social mobility of daughters and sons born between 1929 and 1971 in the western part of the Federal Republic of Germany took place. We propose a micro-macro model that links individual-level characteristics, such as respondents' class origin, educational attainment, and labor force experience, to the highly time-varying macro indicators of changing cohort sizes, economic modernization, and labor market conditions affected by business cycle fluctuations (Hillmert, 2011: 408–409: Becker & Blossfeld, 2017: 120–121; Becker & Mayer, 2019: 153).[4] Socio-economic changes are modeled in the event history analysis by matching time series data from official statistics to the individual career processes. These statistical models allow us to examine how labor force experience (exposure effect), labor market entry conditions (cohort effect), and career processes over the life course of all individuals in the labor market (period effect) affect intergenerational mobility rates.

Our paper is organized as follows: The next section introduces the theoretical background and hypotheses. The third section describes the data, variables, design, and statistical procedures used in our analysis. The empirical results are presented in the fourth section. A summary and the conclusions are found in the fifth and final section.

2. Theoretical background

On the one hand, our theoretical micro-macro model assumes that intergenerational class mobility is influenced by families' and individuals' decisions about educational investments and job positions, both of which are guided by the motive of (at least) intergenerational class maintenance (i.e., the desire to reproduce or improve the original class position, as well as an aversion to class descent) (Hillmert, 2011: 403; Goldthorpe, 2007: 167; Stocké, 2007: 507). On the other hand, and at the same time, our micro-macro model assumes that demographic and economic structural forces produce a constant expansion and contraction of educational opportunities and vacant class positions (DiPrete et al., 1997; Hout & DiPrete, 2006; Mayer et al., 2010; Hillmert, 2011; Stawarz, 2013, 2015; Becker & Blossfeld, 2017; Becker & Mayer, 2019; Trinh & Bukodi, 2022; Witteveen & Westerman, 2023). Our model therefore systematically links several theoretical approaches that play an important role in the present and past research on social stratification and mobility. These include the relationships between socio-economic change and intergenerational mobility described by Lipset & Bendix (1959) or Treiman (1970), the role of educational expansion for social mobility opportunities discussed by Breen & Müller (2020), the importance of organizations providing the links between individual careers and large-scale socio-economic change highlighted by Hannan (1988), and the logic of vacancy competition in social mobility processes described by Sørensen (1983).

2.1. The dynamics of intergenerational mobility over the life course

Following Weber (1922), we define class position as a market situation; these situations change over the life course. Thus, each of the class positions that descendants occupy, from their parental family's social class of origin to their own successive class 'destinations' in a job career up to the time of the (retrospective) interview, must be included in an appropriate analysis of intergenerational mobility (Sørensen, 1986; Hillmert, 2011). Our event history analysis therefore includes individuals' detailed job histories and applies transition rate models that describe and analyze the highly time-dependent nature of stochastic processes that generate intergenerational class mobility over the life

[4] This study uses a narrow definition of *socio-economic modernization*. The progress of modernization is reflected in systematic changes in industries, occupations, employment relationships, economic performance, and the degree of economic prosperity (Treiman, 1970). Modernization is associated with processes of industrialization, tertiarization, technological progress, urbanization, bureaucratization, scientific rationalization of production, jobs' increasing skill requirements, mass consumption, expanded educational opportunities, increased literacy, and political democratization (Zapf, 1991, 1979). In addition to socio-economic modernization, we focus also on business cycles that lead to fluctuations in employment opportunities, cyclical job creation and destruction, and the ebb and flow of job openings (Becker & Blossfeld, 2017).

course.

According to Lipset & Bendix : 60) (1959), individuals prefer to improve or maintain their original class position to avoid the social disapproval associated with social descent. Thus, class maintenance—i.e., reproducing or improving the class position of offspring across generations—is an important motive for families as regards investing in their children's education and job opportunities, with the parental class position being the reference point for this motive (Becker & Mayer, 2019: 149; Stocké, 2007: 507; Breen & Goldthorpe, 1997). Persistent shifting of economic sectors and occupational structures, and—as a consequence—the upgrading of the class structure have changed the reference points of class maintenance across generations. As noted by Weber (1922), education is a central factor in access to employment in the labor market, and for class formation. Since the work of Sorokin (1927), it has been taken for granted in research on social stratification and mobility (Hout & DiPrete, 2006) that education is an important "mobility channel" (Sørensen, 1986: 81). For our empirical analysis, not least because of the close connection between the education system and the labor market in Germany (Allmendinger, 1989; Müller, 1998), we therefore suppose that *education* has a systematic beneficial impact on vertical mobility (*Hypothesis 1*). Education not only strengthens *class maintenance across generations*, but also *increases the rate of intergenerational upward mobility*. Another important motive of educational investments is to avoid intergenerational downward mobility (Lipset & Bendix, 1959: 61–62). This is particularly true for Germany (Hillmert, 2011: 403), with its strongly certificate-based occupational structure that establishes a close link between school and work (DiPrete et al., 1997; Müller, 1998). Therefore, *education significantly reduces the rate of intergenerational downward mobility*.

Although there is a 'good' theoretical reason to expect that education is an important mechanism for intergenerational mobility processes (Pollak & Müller, 2020: 146), people's *level of education is by no means sufficient to explain patterns of job mobility*: "One may work hard for a promotion and not get it, because there are no promotions to be gotten. One may also work not so hard and still get a promotion because one was at the right place at the right time" (Sørensen, 1983: 208). Regardless of their level of education, workers are therefore dependent on vacancies in the labor market (and the class structure). Yet education matters when employers sort people into queues to fill a vacancy. Thus, education becomes a *channel for mobility* (Goldthorpe, 2014). These interdependencies between individual resources and labor market structure, and their consequences for worker mobility, are described in detail in the theories of vacancy competition (Sørensen, 1986, 1983). These models suggest that—due to the ceiling effect—the rate of *intergenerational upward mobility decreases the higher parents' class position (Hypothesis 2)*. The opposite is supposed for the rate of intergenerational downward mobility: *The higher their origin class position, the higher the risk of moving to a lower class position* (*Hypothesis 3*). Due to decreasing individual productivity over the life course and declining opportunities for further advancement in the hierarchy of the class structure (Sørensen, 1986, 1983), it is expected that *the rate of class immobility increases with the duration of labor force experience (Hypothesis 4*).

2.2. Structural change and the dynamics of intergenerational mobility

Intergenerational mobility in modern societies is shaped by the structural dynamics of educational expansion, long-term socio-economic trends, and short-term business cycle fluctuations (Hillmert, 2011: 407–409; Hannan, 1988: 170; Lipset & Bendix, 1959: 38). Several sociologists—e.g., Lipset & Bendix (1959), Blau & Duncan (1967), Treiman (1970), Featherman & Hauser (1978), and Erikson & Goldthorpe (1992)—pointed out already in the early periods of the analysis of social stratification and mobility that socio-economic transformations have significant effects on absolute rates of intergenerational class mobility by shifting the occupational distribution toward higher-status positions and more skilled jobs. Thus, there is an upgrading of the occupational structure through an increase in the share of technical and scientific professionals, semi-professionals, and academics in service occupations, an increase in the share of managers and white-collar workers in the administrative sector, and a decrease in the share of blue-collar and unskilled workers in the production sector. Lipset & Bendix : 38) (1959) pointed out that "the cause of mobility lies primarily in the economic expansion made possible by a given degree of industrialization". Today, mobility researchers emphasize that the trend toward a service economy influences mobility processes not only through changes in career opportunities for offspring, but also through shifts in the class structure of the parents' generation itself (Trinh & Bukodi, 2022; Becker & Blossfeld, 2017; Stawarz, 2013, 2015; Hillmert, 2011; Bell, 1973). In fact, empirical studies show a clear upgrading of the class structure across parental generations (Oesch, 2006; Blossfeld, 2020). Thus, with higher levels of socio-economic modernization, as well as the associated expansion of education and service occupations, families' *reference points for their investments in the education of offspring*, which are necessary for maintaining families' class position across generations, are shifting substantially upward (Blossfeld, 2020: 3; Becker & Mayer, 2019: 149; Goldthorpe, 2007: 167; Stocké, 2007: 507). This structural upward shift in parental class composition across cohorts implies for offspring an increasing pressure to complete higher educational degrees (Becker & Mayer, 2019: 149): "Particularly in the German qualification-based labor market, high educational degrees of the offspring are often a necessary requirement to secure advantaged occupational positions for the next generation" (Blossfeld, 2020: 3). Therefore, we expect a *cohort effect*, whereby each younger birth cohort, whose secondary and tertiary educational careers have been increasingly shaped by the rising requirements of *socio-economic modernization, has a higher rate of intergenerational upward mobility and a lower rate of intergenerational downward mobility* (*Hypothesis 5*). On the other hand, we expect a *positive period effect of economic modernization* on the *rate of upward job mobility* and the *likelihood of class reproduction*, as well as a *negative period effect of economic modernization* on the *rate of downward mobility* (*Hypothesis 6*).

In parallel with the trend of socio-economic modernization, *changes in labor market conditions* influenced by economic business cycles (i.e., the cyclical ecology of industries, firms, and organizations) act on intergenerational mobility (Becker & Mayer, 2019; Becker & Blossfeld, 2017). Overall, there is a *period effect of changing labor market conditions*, whereby the higher rate of job openings in an *economic upturn* increases *rates of upward intergenerational mobility*, and vice versa (*Hypothesis 7*).

Finally, according to Lipset & Bendix : 57) (1959) and to Easterlin et al. (1993), different fertility rates across successive birth cohorts should affect the rate of intergenerational mobility. The higher the ratio of vacancies to applicants in each birth cohort, the greater the rate of upward intergenerational mobility. In line with Easterlin : 497) et al. (1993), even after controlling the number of vacancies, a large cohort size entering the labor force might reduce the socio-economic opportunities of its members and therefore the chances for upward intergenerational mobility, while the expected mobility prospects depend on the size of cohorts of the parental generation (Pampel & Peters, 1995: 165). Therefore, due to the limited capacities of the labor market to absorb a larger number of potential workers and the limited prospects of maximizing human capital investment in the educational system, we propose

that *a large birth cohort size (controlling for the number of open class positions) reduces the rate of intergenerational upward mobility due to increased intra-cohort competition among applicants* (*Hypothesis 8*). That means that the German baby boomer generations born at the end of World War II, as well as between 1956 and 1965, might have had a lower chance of reproducing their parents' class position relative to the parental cohort (Easterlin et al., 1993: 497).

3. Data, variables, design, and statistical procedure

3.1. Data sources

Two longitudinal datasets were used for the empirical analyses. The first dataset comprises event history data from the GLHS (Mayer, 2015a, 2015b). This dataset provides detailed time-related information on the class mobility of daughters and sons from the 1929–31, 1939–41, 1949–51, 1954–56, 1959–61, 1964, and 1971 birth cohorts (Mayer, 2008; Hillmert, 2004).[5] The cohorts born around 1930, 1940, and 1950 include 2171 West German sons and daughters interviewed between October 1981 and March 1983 (Brückner & Mayer, 1998). More than 2000 West Germans born around 1955 were interviewed between October 1988 and November 1989. Finally, data on 2909 sons and daughters born between 1964 and 1971 were collected between June 1998 and February 1999 (Hillmert, 2004). For these birth cohorts, it is possible to analyze the process of intergenerational mobility over the historical period 1945–1999. To extend the intergenerational mobility analysis to the 1999–2008 period, the event history dataset from the ALWA study (Kleinert et al., 2011) was also used, which is now part of the National Educational Panel Study (NEPS).[6] The interview schedules of the ALWA study are based on those of the most recent GHLS projects and are therefore highly comparable. Moreover, the fieldwork was conducted by the same survey research institute. This dataset includes information on 10,404 individuals born between 1956 and 1988 who were interviewed between August 2007 and April 2008 about their social origin, education, and work histories. To construct a cohort design analogous to the GLHS study, 2601 Germans (1387 females and 1214 males) of the 1959–61, 1964–66, and 1969–71 birth cohorts were included in the final dataset. The definition of these birth cohorts is theory-driven, based on their experience of historical events (see Hillmert, 2015: 187–188). These life courses encompass fundamental trends in regard to modernization in the social, political, economic, and cultural spheres, as well as cyclical fluctuations.

Overall, our dynamic analysis of intergenerational class mobility is based on 8167 West German citizens (4011 daughters and 4156 sons). Target persons without German citizenship were excluded because these groups were not part of the earlier GLHS design. Of these respondents, only those who began their careers after the end of World War II were analyzed. It should be emphasized that only those sons and daughters who were employed at least once were included in our class analysis. Therefore, our intergenerational class analysis is affected by the lower labor force participation rate of women in the older birth cohorts. In 1950, about 44 % of West German women aged 15 to 65 were ever employed. This labor force participation rate increased to 47 % in 1960, 59 % in 1990, and 63 % in 2000. In 2008, more than two-thirds of women had ever been employed.

The advantages of using longitudinal GLHS data and an event history design for macro-sociological analyses of social mobility have been demonstrated in several studies. For example, Carroll & Mayer (1986), Blossfeld (1986), Mayer & Carroll (1987), Becker & Blossfeld (2017), and Becker & Mayer (2019) used these data and models. Hillmert (2015) has shown the benefits of life course data for uncovering trends in social openness across birth cohorts (see also: Hillmert, 2011).

Information on the life courses was collected retrospectively (Mayer, 2008; Brückner & Mayer, 1998). This means the respondents were asked to reconstruct their lives with regard to various fields of activity, such as education, training, and career. With such a method, recall errors might be expected, and these would be expected to increase based on the time interval between the interview and the occurrence of a specific event. Although such reservations about the reliability of retrospective data seem to be plausible, they are not confirmed empirically (e.g., Becker, 2001: 33; Schömann, 1994: 160). To the contrary, institutionally defined states and events—such as education and training, labor market entry, and class positions in the work history—are usually memorized in a quite reliable manner (Reimer, 2005; Brückner, 1995). The form and precision of the survey instrument proved to be of key importance with respect to the quality of the responses (Reimer & Matthes, 2007). Finally, an intensive editing process and a close inspection of the information on the life courses in respect of chronological consistency speak to the quality of the data (Brückner & Mayer, 1998). Previous comparisons of microdata with aggregated time series data from official statistics demonstrate the high data quality of the retrospective event history data on educational and occupational trajectories (Becker & Mayer, 2019: 151; Blossfeld, 1987; Jacob, 2004: 259).

3.2. Dependent and independent variables

The *dependent variable* of our analysis is the *intergenerational transmission of the class position* of the (step)father (social origin) to the successive social class positions of son(s) and/or daughter(s) (class destinations) over the life course. We distinguish between *upward mobility* (social origin $<$ social destination), *class reproduction* (social origin $=$ social destination), *class maintenance* as a combination of upward mobility and immobility (social origin $\leq$ social destination), and *downward mobility* (social origin $>$ social destination). These mobility events are observed from entry into the labor force (the first class position) and across all successive class positions over the life course until the time of the (retrospective) interview.

Both the *class position of the father* (family origin of the respondent at age 15) and the *class positions of his children* (class destinations at each point in the respondent's career) are measured using the German Employment Class Schema (GEC) developed by Mayer & Aisenbrey : 130, 131) (2007).[7] In contrast to other class schemes, this schema takes into account the special features of employment relationships in West Germany (i.e., employment status in the firm, as well as the social security status of blue-collar workers, white-collar workers, employees and civil servants in the public sector, and the self-employed). Moreover, in contrast to the widely used EGP class schema, it relies on direct

[5] These datasets are available at GESIS (https://dbk.gesis.org/dbksearch/gdesc2.asp?no=0033&db=e). Please take note of their digital object identifiers (doi:10.4232/1.2645; doi:10.4232/1.2646; doi:10.4232/1.2647; doi:10.4232/1.2648; doi:10.4232/1.3927).

[6] This dataset is available at the IAB research data center (http://fdz.iab.de/en/FDZ_Individual_Data/ ALWA.aspx).

[7] The measure of social origin by the class position of the parental home at the age of 15 for the interviewed children is appropriate as regards families' motives in respect of intergenerational class maintenance. At this age, near the end of compulsory schooling, important educational decisions, in terms of class maintenance, must be made. Driven by the class-specific motivation to avoid social demotion, the educational path that is chosen (vocational track vs. academic track) is that which at least provides access to a preferred class position and the associated reproduction. Overall, social origin is regarded as a constraint that has a strong impact on the offspring's material well-being, life chances, life choices, and appraisal of their life (positive or negative).

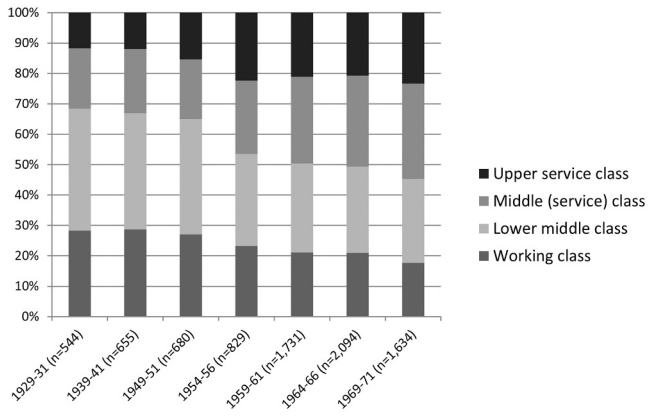

Fig. 1. Composition of parental (father's) class positions in West Germany across birth cohorts. Data: GLHS and ALWA.

measures of employment status ("*Stellung im Beruf*") and not only on information on occupations (Erikson et al., 1979).[8] We are measuring distinctions in regard to employment status (self-employed vs. employee), position in the firm hierarchy (blue-collar worker, white-collar worker, civil servant, etc.), and private vs. government sector employment. Missing values on social origin were replaced by the last class position of the (step)father. In this respect, we follow the approach suggested by Erikson (1984). Due to the low employment rate of the mothers of the respondents in our analysis in Germany in the post-war period, the class position of the parental home is dominated by fathers' market position. Moreover, there is evidence that educational homogamy or hypergamy, instead of hypogamy, is the dominant characteristic of assortative mating (Blossfeld & Timm, 2003). Therefore, the father's market position is a valid indicator for the offspring's social origin.

The distributions of parental class positions (social origins) for successive birth cohorts reflect the social embeddedness of families in different historical eras, i.e., the historical socio-economic conditions under which their children grew up. Fig. 1 shows the historical change in the class structure of the parents' generation in West Germany across birth cohorts that will be analyzed in our intergenerational class mobility study. The declining share of the working and lower middle classes and the increasing share of middle and upper service classes across generations show that the composition of social origins has changed significantly as a result of socio-economic structural change (see also: Blossfeld, 2020).

An important independent variable for our class analysis is the respondents' *general, vocational, and tertiary education*. Based on the characteristics of the German educational system, such as the tracked secondary school system, the strong role of the dual and qualification-based vocational training system, or tertiary education integrating traditional universities and universities of applied sciences (Allmendinger, 1989), the level of general schooling is combined with work-oriented training or tertiary education, following the logic of the CASMIN educational schema (Braun & Müller, 1997). With regard to secondary school qualification, the level of schooling is categorized into four levels: (1) no school graduation; (2) lower secondary school graduation (*Volks- resp. Hauptschulabschluss*); (3) intermediate secondary school graduation (*Realschulabschluss* resp. *Mittlere Reife*); and (4) higher education entrance qualification (i.e. eligibility for university training (*Abitur*) or training at a university of applied sciences (*Fachhochschulreife*). With regard to vocational training and tertiary education, the following four levels are distinguished: (1) no training graduation; (2) general vocational education or training (*Lehre*, *Fachschule*); (3) advanced vocational training (e.g. master, technician); and (4) university degree (Diploma, PhD). The multiplicative combination of schooling, vocational training, and tertiary education results in the following categories: 1: no school and no training graduation; 2: lower secondary school degree without any training degree; 3: intermediate secondary school degree without any training degree; 4: lower secondary school degree and vocational education and training degree; 6: intermediate secondary school degree and vocational education and training degree or lower secondary school degree and advanced vocational training (e.g. master, technician); 8: upper secondary school degree and vocational education and training degree; 9: intermediate secondary school degree and advanced vocational training; 12: upper secondary school degree and vocational education and training degree and advanced vocational training; 16: academic university or university of applied sciences degree or PhD certificate or postdoctoral qualification. In Germany, this classification of *educational attainment* is commonly used in empirical mobility analyses; it has already proven itself in its current form in other empirical studies (e.g., Becker & Blossfeld, 2022: 71).

Labor force experience is another important independent variable in our intergenerational class analysis. It is measured via the cumulative time of employment since respondents' labor market entry in months and is used to model the duration of *exposure to the intergenerational mobility process* (Sørensen, 1986).

In the context of neighboring larger or smaller cohorts, the *relative size of birth cohorts* can be used as a proxy variable that, by itself, reflects diminished or enlarged mobility chances since the cohort size can be considered as affecting the degree of job competition for class positions between and within cohorts (Easterlin et al., 1993; Ryder, 1965). *Cohort size* is measured by cohort-specific numbers of births (in millions) from official statistics (1929–31: 1.13; 1939–41: 1.4; 1949–51: 0.81; 1954–56: 0.82; 1959–61: 0.97; 1964–66: 1.07; 1969–71: 0.81).

Another type of *cohort effect* is the *level of socio-economic modernization* at the time when respondents are 15 years old (see *Figure A.1* in the Supplement). This indicator reflects the impact of current levels of socio-economic modernization on young people's perceptions of changing occupational structures and their related educational choices immediately after compulsory education (Becker & Mayer, 2019; Becker & Blossfeld, 2017).

Finally, the *period effects* of socio-economic change on intergenerational mobility are measured by two time-dependent indicators—*modernization trend* and *labor market conditions* affected by business cycle fluctuations—and then matched to the individual class durations of respondents, as described below. Please note that—in contrast to the mobility tables, which only use the marginal distributions of the mobility table as structural indicators—these data from official statistics reflect observations on the overall structure of the German economy (also including the effects of migration, retirement, unemployment, etc.) on each of the annual structures. The long-term macro trend of modernization is expected to be an important driver of intergenerational mobility processes, and short-term economic cycles are thought to determine intergenerational mobility by producing periodic

[8] The GEC class schema does not differ from the EGP class schema in its theoretical framework, and thus we are likewise using the term "service class". The *upper middle class* consists of highly qualified employees and professionals—e.g., those in management (e.g. general manager), higher civil servants (e.g. judge), academics (e.g. doctor with own medical office, lawyer), as well as self-employed persons with at least 10 employees. This social class is equivalent to the *upper service class* in the class schema by Erikson and Goldthorpe (1992). Master craftsmen and industry masters, employees in qualified positions (e.g., clerks), those in the mid-ranking civil service, the self-employed with up to nine employees, as well as farmers with more than 50 ha of land belong to the *middle (service) class*. The *lower middle class* includes skilled workers, foremen, and self-employed persons with no more than one employee, as well as farmers with less than 50 ha of land. The *working class* includes family workers, farmers with less than 10 ha of land, unskilled and semi-skilled workers, employees with routine jobs (e.g. sales), and lower civil service workers.

expansions or contractions in the number of job vacancies (Blossfeld, 1986; Becker & Blossfeld, 1991; Hillmert, 2011; Stawarz, 2013, 2015; Becker & Blossfeld, 2017; Trinh & Bukodi, 2022).[9] The descriptive statistics of the variables are documented in *Table A.4* in the Supplement.

3.3. Design and statistical procedure

To link the dynamics of macro-level structural change to micro-level class mobility trajectories (multilevel model), we use the *method of episode splitting* (Blossfeld et al., 2019: 155–59). This method has proven its usefulness for the longitudinal analysis of mobility processes on several occasions (Blossfeld, 1986; Becker & Blossfeld, 2017). In this procedure, each of the observed class durations t in an individual's career is divided into annual sub-episodes and then, at the beginning of these sub-episodes, the respective time-varying values (factor scores) of the modernization level and the state of the cyclical labor market situation (see *Figure A.1*) are matched to these sub-episodes. Thus, class mobility intensity at each point of the duration t is modeled as a stochastic process that depends on time-constant and time-varying individual resources (class origin, education level, work experience) and the time-varying macro factors (cohort size, level of modernization, and state of the business cycle): $X(t)$. To estimate the time-dependent rate of intergenerational class mobility over the life course $r(t/X(t))$, we use an exponential model that is constant within each of these annual sub-episodes and that can vary across sub-episodes (Blossfeld et al., 2019: 155). Thus, the intergenerational class mobility rate $r(t/X(t))$ is defined as the instantaneous intensity at time t of making a transition from the father's class origin to the son's or daughter's class destination, provided that this transition did not occur before time t. This procedure is equivalent to an age-period-cohort analysis, but because it uses substantive measures for age (exposure length), period, and cohort (Blossfeld, 1986), it avoids the typical difficulties in identifying these effects when only different linear measures of time (age in years, period year, and cohort year) are used (Mayer & Huinink, 1990).

It is an advantage of event history analysis that we can use time-dependent covariates to test hypotheses in a time-specific manner: controlling for other important influences on the mobility process, time-dependent covariates (measured in the past), such as changing labor market conditions and changes in the modernization trend, are modeled as affecting individual rates of intergenerational mobility (in the present and in the future of the life course) (Blossfeld et al., 2019: 24). Thus, if we combine the dynamic representation of the effects in event history analysis with substantive arguments, as outlined in the theoretical section, it is possible to evaluate substantive hypotheses (Blossfeld et al., 2019: 27).

For the comparative-static analysis of social mobility at the beginning of the job career, we use a binary logistic regression model (Long & Freese, 2006) that estimates average marginal effects (AME). AME is the average of the predicted changes in the fitted values for one unit change in an explanatory variable for each value of the other covariates. It is therefore a measure of the 'average' strength of the effect of the explanatory variables on the probability of vertical intergenerational mobility. This model is appropriate for comparisons of nested models or for comparisons between groups (Mood, 2010). These methods minimize estimation bias that occurs due to unobserved heterogeneity.

[9] *Socio-economic modernization*—in terms of structural changes in labor market structures, industrial structures, occupational structures and economic outcomes (i.e., volume of labor force; labor force participation rate; share of employees in the primary, secondary, and tertiary sectors; gross domestic product (GDP); GDP per capita)—and *labor market situation* (i.e. number of firms, negative unemployment rate, and ratio of notified vacancies and manpower) were measured by 10 long time series obtained from official German statistics. These uncorrelated factors have been extracted by confirmatory factor analysis. Both of the factors explain 92 % of the variance in these time series (*Table A.1* in the Supplement). Applying principal component analysis (PCA) produced much the same finding, whereby PCA underestimated the impact of business cycles on the modernization trend. The historical change in the factor scores between 1945 and 2010 (*Figure A.1* in the Supplement) reflects the almost linear trend of increased modernity and the cyclical patterns of labor market conditions along the economic history of the Federal Republic of Germany in the post-war period (see Becker & Blossfeld, 2017: 120).

4. Empirical results

The analysis consists of two steps. In a first step, because of the extraordinarily strong institutional link between the education system and the employment system in West Germany, and the special institutional regulations of employment (e.g., job protection) in Germany, we analyze intergenerational mobility at labor market entry (i.e., respondents' first class position in the labor market) using individual characteristics and measures of the historical socio-economic context (see also: Trinh & Bukodi, 2022; Stawarz, 2013). Second, we estimate the direct effects of socio-economic change on intergenerational mobility in the careers of offspring by incorporating into the vertical mobility model the time dependencies of individual careers and the time-varying effects of the economic modernization trend and cyclical fluctuations.

4.1. Vertical intergenerational mobility at labor market entry

Consistent with previous mobility studies for Germany (and other countries), education is an important mobility channel at labor market entry (see Table 1). As education expands across birth cohorts, it contributes to increasing upward mobility at labor market entry and reduces the risk of social demotion in the very early stages of the job career. This result supports *Hypothesis 1* on education being a mobility channel.

This finding is true for both genders. For the class position at labor market entry of daughters and sons, education entails a life course effect suggesting that individuals who have been enrolled in the education system for longer periods start their first job at an older age and are more

Table 1
Intergenerational mobility across birth cohorts (only daughters' and sons' first job).

	Daughters		Sons	
	Upward[a]	*Downward*[b]	*Upward*[a]	*Downward*[b]
Education				
General, vocational, and academic degrees	0.041 ***	–0.030 ***	0.031 ***	–0.030 ***
	(0.003)	(0.002)	(0.002)	(0.002)
Social origin				
Working class	*Reference*		*Reference*	
Lower middle class	–0.029	–0.519 ***	–0.484 ***	–0.654 ***
	(0.020)	(0.017)	(0.017)	(0.016)
Middle (service) class	–0.498 ***	–0.496 ***	–0.672 ***	–0.246 ***
	(0.017)	(0.018)	(0.015)	(0.018)
Upper service class		*Reference*		*Reference*
Cohort effect				
Level of modernization (at age 15)	0.092 ***	–0.120 ***	0.018 *	–0.021 *
	(0.013)	(0.013)	(0.009)	(0.010)
Size of birth cohort	–0.105 *	0.070	–0.009	0.028
	(0.050)	(0.056)	(0.045)	(0.053)
N of cases	2911	2872	3236	3086
Mobility rate in %	37.1	48.3	33.5	48.6
Pseudo-R^2	0.3013	0.2299	0.2995	0.2265

Data: GLHS and ALWA—authors' own computation.
*$p \leq 0.05$;
**$p \leq 0.01$;
***$p \leq 0.001$; AME, estimated by binary logit regression (in parenthesis: robust standard error).
[a] Not at risk: upper service class;
[b] not at risk: working class.

successful in terms of achieving class maintenance. This might be due to the fact that education signals better skills and higher productivity among entrants. An alternative explanation of the effect of education is that better educated entrants may be in the right place at the right time to profit from job vacancies (Sørensen, 1986). This might be due to the interplay of educational expansion and upgrading of the occupational structure in the process of modernization (see also: Stawarz, 2013, 2015; Becker & Mayer, 2019; Breen & Müller, 2020; Pollak & Müller, 2020; Becker & Blossfeld, 2022; Trinh & Bukodi, 2022).

Moreover, the probability of upward and downward mobility depends on social origin. In this respect, and in line with *Hypotheses 2* and *3*, socially privileged children have lower upward (ceiling effect) and higher downward mobility rates (floor effect), while the probability of status maintenance is highest among (lower) middle class children.

There is also a significant cohort effect of socio-economic change on intergenerational mobility at labor market entry. Consistent with *Hypothesis 5*, the table shows that the higher the level of modernization at labor market entry, the less likely are demotions for daughters and sons (especially for sons). Moreover, upward mobility is greater for individuals who enter the labor market during periods exhibiting a favorable trend in respect of modernization.[10] This finding is replicated if the labor market situation is considered, instead of the level of modernity. Due to the comparative-static design for the analysis of mobility at career entry, multicollinearity occurs when both macro variables are considered at the same time. Therefore, we decided to report the strongest macro effect on social mobility into the first class position only.

In addition, confirming *Hypothesis 8*, there is a statistically significant cohort size effect: the larger the birth cohort, the less likely is upward mobility upon entering the labor market, while the probability of demotion is higher for birth cohorts characterized by higher birth rates, such as the baby boomer generations. However, it should be noticed that the (negative) effect of cohort size is only statistically significant for daughters' likelihood of achieving intergenerational upward mobility.[11]

In summary, in addition to individual characteristics such as education and social origin, structural changes are important for vertical intergenerational mobility in the early stage of the job career. Although daughters exhibit higher upward mobility rates than sons, their rates of advancement depend much more on favorable structural conditions than is the case for sons. This means that daughters benefit more from the modernization process in their intergenerational career opportunities than sons. In terms of the risk of descent, in particular, daughters have profited significantly from the process of modernization since they are disproportionately absorbed in the tertiary sector, which strongly expanded after the post-war periods.

4.2. Dynamics of intergenerational mobility in later career stages

We now turn to the career processes of sons and daughters (after labor market entry). The effects of individual characteristics on the vertical class mobility rate in the life course for both genders are about the same as in the initial career stage (Table 2). Education facilitates the rate of social class advancement or class maintenance throughout the career and reduces the rate of intergenerational downward mobility (*Hypothesis 1*). The effects of social origin on the rate of intergenerational class mobility remain important, as has already been noted for the class position at entry into the labor market. There are similar ceiling effects for the rate of upward mobility and floor effects for the rate of downward mobility as are observed for labor market entry (*Hypotheses 2* and *3*).

The theoretically expected effect of exposure to the mobility process, as measured by daughters' or sons' labor force experience, leads to an increasing immobility rate, and decreases the vertical upward and downward mobility rates over the life course. These results are in line with *Hypothesis 4*.

There are strong period effects of socio-economic change on intergenerational mobility rates.[12] In line with *Hypothesis 6*, a positive period effect of economic modernization on the rates of upward mobility and class reproduction is revealed. In contrast to sons, these effects are statistically significant for daughters. Both for daughters and sons, we also find a statistically significant and negative period effect of economic modernization on the rate of downward mobility. Thus, the modernization process decreases social demotion.

However, the *period effect of labor market conditions* on their mobility patterns is different for daughters and sons. For sons in particular, it is true that the higher the number of job vacancies in an *economic upturn*, the higher the *rates of upward intergenerational mobility*. This finding is in line with *Hypothesis 7*. For daughters, however, we find an unexpected positive effect of a favorable labor market situation on the risk of downward mobility. This result contradicts *Hypothesis 7*. It teaches us again that it is necessary for mobility analysis to differentiate between genders.

Finally, there are also significant cohort size effects on vertical intergenerational mobility. In line with *Hypothesis 6*, we observe that a *large birth cohort size* (controlling for the number of vacant class positions) reduces the rate of intergenerational upward mobility due to increased intra-cohort competition among applicants.[13] This also holds

[10] Our initial finding is replicated if the allocation to the first class position is analyzed (see *Table A.2* in Supplement). For both genders it is obvious, by controlling for education and social origin, that entrance to the working class or upper service class becomes less likely the higher the level of modernization at the time a child is aged 15 years. Overall, the higher the level of modernization at age 15, the more likely is allocation to the upper middle class position at labor market entry. This means that socio-economic change on the societal level has a significant impact on the offspring's opportunity for allocation to favored class positions.

[11] If the allocation to the first class position is analyzed (see *Table A.2* in Supplement), it is found that a large size of the birth cohort restricts entrance to the highest class position. For sons, it becomes likely that they will enter the lower middle class position, while daughters in large birth cohorts are better able to access the middle (service) class. In sum, it is demonstrated again that external pressures caused by demographic processes have a substantial impact on intergenerational mobility.

[12] For daughters, we observe that if the modernization trend increases by one unit, the likelihood of social ascent increases by 22 %, while the risk of social descent decreases by 14 %. For sons, it is true that if the labor market conditions improve by one unit, the likelihood of social ascent increases by 11 %. If the allocation to the class positions in the occupational career is considered, the period effects of socio-economic change on social mobility also become obvious (see *Table A.3* in Supplement). They are equal to the mobility pattern observed for the process of labor market entrance. The higher the level of modernization, the higher the likelihood of allocation to the middle class and the less likely is access to the working class or upper service class positions. Vice versa: the more favorable the labor market conditions in terms of vacant class positions, the more likely is access to the working or upper class, and the less likely is access to the middle class.

[13] Across the work histories, the cohort size effect is similar to the effects observed for labor market entry (see *Table A.3* in Supplement). For daughters in the baby boomer generations, it is obvious that access to the middle classes is more likely than access to positions in the upper service class, while sons in these cohorts are more likely to be allocated to the lower middle class rather than to the working class. In order to quantify the effect of cohort size on upward mobility across the occupational trajectory, we calculate sons' relative probability of upward mobility. While the cohorts born around 1950, 1955, and 1970 show a 36 % lower probability for an ascent compared to the other cohorts, the probability of upward mobility is 54, 42, and 45 % lower for the baby boomer cohorts born around 1940, 1960, and 1965, in contrast to the other cohorts. Sons born around 1930 had a 39 % lower probability of being upwardly mobile compared to the younger cohorts. The same pattern is observed for daughters. In sum, the baby boomers show the most unfavorable probability of experiencing an upward move.

Table 2
Dynamics of intergenerational mobility in the life course after labor force entrance.

	Daughters			Sons		
Models	*Upward*[a]	*Class maintenance*[c]	*Downward*[b]	*Upward*[a]	*Class maintenance*[c]	*Downward*[b]
Education						
General, vocational and academic degrees	0.078 ***	0.042 ***	–0.070 ***	0.091 ***	0.042 ***	–0.118 ***
	(0.005)	(0.004)	(0.006)	(0.004)	(0.003)	(0.006)
Social origin						
Working class	*Reference*	*Reference*		*Reference*	*Reference*	
Lower middle class	–0.216 ***	–0.567 ***	–1.023 ***	–0.638 ***	–0.345 ***	–1.598 ***
	(0.040)	(0.034)	(0.046)	(0.038)	(0.029)	(0.050)
Middle (service) class	–1.347 ***	–0.543 ***	–0.943 ***	–1.262 ***	–0.584 ***	–0.885 ***
	(0.056)	(0.035)	(0.047)	(0.049)	(0.034)	(0.045)
Upper service class		–1.296 ***	*Reference*		–0.989 ***	*Reference*
		(0.050)			(0.046)	
Labor force experience						
In months since labor force entrance	–0.005 ***	–0.005 ***	–0.004 ***	–0.007 ***	–0.007 ***	–0.010 ***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Period effect						
Modernization	0.200 ***	0.065 **	–0.150 ***	0.047	0.037	–0.095 **
	(0.035)	(0.024)	(0.030)	(0.029)	(0.020)	(0.029)
Labor market conditions	0.028	0.025	0.078 ***	0.106 ***	0.052 ***	0.025
	(0.023)	(0.016)	(0.021)	(0.020)	(0.014)	(0.021)
Cohort effect						
Size of birth cohort	–0.440 **	–0.215 *	0.054	–0.559 ***	–0.372 ***	–0.369 **
	(0.136)	(0.095)	(0.121)	(0.116)	(0.081)	(0.125)
Intercept	–4.191 ***	–3.643 ***	–3.461 ***	–4.042 ***	–3.487 ***	–2.336 ***
	(0.133)	(0.094)	(0.125)	(0.116)	(0.082)	(0.126)
LR chi[b] (d.f.)	1452.2 (7)	1719.9 (8)	1153.6 (7)	2017.9 (7)	2647.7 (8)	2768.4 (7)
Number of sub-episodes	39,279	48,265	37,617	56,485	66,245	49,804
Number of events	2956	5678	2901	3425	6927	2778

Data: GLHS and ALWA — authors' own computation.
*p ≤ 0.05;
**p ≤ 0.01;
*** p ≤ 0.001. Regression coefficient, estimated by exponential model considering episode splitting (in parenthesis: robust standard error).
[a] Not at risk: upper service class;
[b] not at risk: working class;
[c] upward mobility or class reproduction

for intergenerational class maintenance. In a finding that is theoretically unexpected, we find, for sons, a negative effect of a *large birth cohort size* on the risk of social descent. For sons only, it has to be stressed that an increased cohort size results in increased immobility.

In a final step, the development of intergenerational mobility is shown in a period design (Fig. 2). From the perspective of a micro-macro model (Raub, de Graaf & Gërxhani, 2022: 6–7), this represents the aggregated outcome of the cohort-specific dynamics of mobility patterns across the life cycle at the individual level (see Table 2). In the post-war period, the share of class maintenance has increased over the subsequent historical periods: from 45 % in 1945 to 75 % in 2008. This impressive development was fueled by the fact that downward intergenerational mobility strongly declined during the German "economic miracle" and was surpassed by the increase in upward intergenerational mobility by the end of the 1970s (Trinh & Bukodi, 2022; Hertel, 2017). The extent of immobility remained relatively constant over the 1945–2008 period. In summary, the presentation of absolute intergenerational mobility in Fig. 2 reveals a rather stationary mobility regime in West Germany (Müller & Pollak, 2004), since important temporal dimensions of the mobility process are neglected that we considered in our dynamic analysis above.

In particular, the period-specific dynamics of the mobility pattern depicted above focus on the prospects of upward mobility conditioned by social origin (Fig. 3). Across the historical periods, the differences between the social classes becomes obvious. In line with our dynamic analysis (see Table 2; Fig. 2), working class children show the highest rate of upward mobility compared to children from the middle classes. At the end of the 1980s the rate of upward mobility is declining for women and men stemming from the working class and lower middle class while for offspring from the middle class the decline has taken place already at the end of the 1970s and the beginning of the 1980s.

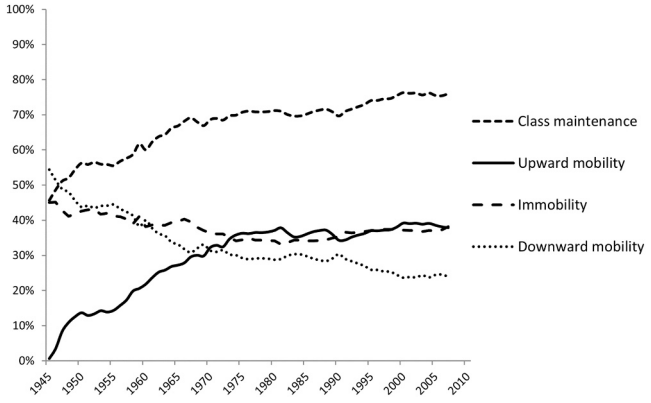

Fig. 2. Intergenerational mobility in West Germany across historical periods, 1945–2008. Data: GLHS and ALWA.

5. Summary and conclusions

Against the background of previous and current research in social stratification and mobility, the goal of our study was to utilize a better measure of structural change and to present a more appropriate dynamic analysis of the time-dependent mechanisms that produce intergenerational mobility outcomes. We included in our models not only measures at the individual level, such as respondents' social origin, education, and length of exposure to the mobility process, but also highly time-varying structural measures of the long-term modernization trend and short-term cyclical labor market conditions. By integrating two longitudinal datasets, i.e., the GLHS and the ALWA, we were able to use information

Fig. 3. Probability of upward mobility in West Germany by social origin across historical periods, 1945–2008. Data: GLHS and ALWA.

on the occupational trajectories of West German daughters and sons born between 1929 and 1971 in regard to where and when intragenerational class positions began, as well as why, where, and when they ended (see also: Hillmert, 2011). Using event history analysis and the method of episode splitting, time series from official statistics (measuring the modernization trend and cyclical labor market conditions) were matched to individual episodes of social class in the life course of several birth cohorts (see also: Blossfeld, 1986; Becker & Blossfeld, 2017; Becker & Mayer, 2019).

In the theoretical outline, our multilevel model suggests that education and the process of educational expansion are necessary, but not sufficient, for understanding changes in the process of intergenerational mobility. The increasing share of more demanding jobs created by socio-economic change, and the competition for these vacant jobs among individuals, are important additional factors for the relationship between class origin, respondents' education, and respondents' destination class, as well as the time-varying patterns of intergenerational mobility. The impact of socio-economic change on intergenerational mobility was analyzed in terms of individual class position over the life course, embedded in different historical contexts that provide different opportunities for vertical mobility and class maintenance.

The empirical findings for West Germany show that, controlling for individuals' social origin and education, the long-term increasing level of modernization generally improves the chance of intergenerational upward mobility or, at least, class maintenance. The trend of modernization also results in a decreasing rate of social descent across the life course. However, this opportunity is constrained by processes of job competition. On the one hand, short-term favorable cyclical labor market conditions result in favorable prospects for upward mobility. In West Germany, this has been especially true for sons as compared to daughters. In periods of favorable labor market conditions, daughters also face an increased risk of downward mobility, in contrast to their male counterparts. On the other hand, a large size of birth cohort impacts the likelihood of upward mobility. It turns out that the larger the birth cohort and the stronger the competition for vacant class positions, the lower the chances of upward mobility.

Moreover, contrary to what some sociologists in Germany (e.g., Reckwitz, 2019; Nachtwey, 2016) have claimed, there is no evidence of an increasing rate of social descent at the aggregate level. In fact, the opposite is true (see also: Stawarz, 2013, 2015; Pollak & Müller, 2020; Trinh & Bukodi, 2022). Class maintenance across generations—that is, the extent of upward mobility and immobility relative to parental class position—dominates the intergenerational mobility process, while downward mobility has declined in West Germany in the post-war period. Thus, the narrative of an emerging regime of social descent in Germany ('*Abstiegsgesellschaft*') is not justified by empirical data (see also: Nennstiel, 2021). By disaggregating mobility processes, it becomes obvious that the labeling of societies as holistic entities does not contribute to obtaining realistic insights into developing social inequalities.

In our view, the conventional analysis of mobility processes using cross-sectional data and mobility tables (aggregating the class positions of individuals who are at very different career stages and have experienced different structural historical contexts) might be a convenient—and to some extent useful—descriptive exercise, but it does not reveal the important underlying mechanisms. To understand the dynamics of class structures and intergenerational mobility regimes, longitudinal data on individual occupational trajectories need to be matched with measures that represent the macrostructural processes of change.

Therefore, and in the spirit of analytical-empirical life course research, this study is a renewed appeal in favor of process-oriented explanatory and longitudinal research on social stratification and mobility (e.g., Becker & Blossfeld, 2017; Mayer, 2000; Sørensen, 1986). Such research needs to develop dynamic models of intergenerational social mobility over the life course, and it needs to use time-dependent multilevel designs and sophisticated statistical procedures to uncover causes and mechanisms (e.g., Blossfeld, 1996). Although the interplay between structural and individual characteristics in determining access to unequal class positions has long been a concern of mobility researchers, this approach has only rarely been applied in traditional mobility research (Sørensen, 1986: 80). Although previous research has shown that cross-sectional standard transition tables of intergenerational class mobility (Mayer, 2000: 274; Hillmert, 2015) or intragenerational status mobility (Hillmert, 2011; Becker & Blossfeld, 2017) grossly underestimate the extent of change that actually occurs, the number of sociological mobility studies that seriously consider the temporality of mobility processes by utilizing an event-oriented design and employing statistical methods such as event history analysis is still rather small, with a few exceptions (e.g., Becker & Mayer, 2019; Becker & Blossfeld, 2017; Hillmert, 2015).[14]

Based on the critique of Sørensen (1986), the ideas of Blossfeld (1986, 1996) and Hillmert (2015), and the empirical analyses of Becker & Mayer (2019) as well as Becker & Blossfeld (2017, 2022), we have outlined a theoretical and methodological framework that could form the basis for a new generation of stratification and mobility research. Longitudinal data analysis in a multidimensional age-period-cohort design could significantly add to comparative research on social stratification and mobility (Fosse & Winship, 2019).

Can we claim that we have found a satisfactory solution to the problems discussed by Sørensen (1986) and Sobel (1983)? *Certainly not.* Beyond the collection of longitudinal data and the development of appropriate statistical methods, there is still a need to further improve the theoretical foundation of mobility processes, in the form of time-related and mechanism-based models of the causes of mobility outcomes. To avoid ad hoc interpretations of, or speculations on, the "big structures, big processes, big comparisons" type (Tilly, 1984), surveys of revealed preferences and better measures of individual preferences and choices, as well as their realization over the life course, are essential for future prospective longitudinal designs. This may be one of the most important challenges for research on social stratification and mobility in the coming years. Another challenge is related to the interpretation of

[14] In economics, however, there is a growing number of empirical studies that analyze the intergenerational transmission of income prospects using a panel design (Corak, 2013; Lee & Solon, 2009; Aaronson & Mazumder, 2008; Mazumder, 2005; Aughinbauh, 2000; Solon, 1992; for an overview: Mazumder, 2018). However, against the background of our theoretical and methodological arguments, they show the same problems that we have criticized in our study, and—due to their focus on earnings and income—most of them lag behind the state of research that has already been reached in sociological research on class-related stratification and mobility.

effect sizes and their comparability across historical periods and different countries. And a final challenge will be the direct specification of the structural processes, such as educational expansion or social policy, in relation to social mobility.

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Karl Ulrich Mayer: Writing – original draft, Writing – review & editing. **Hans-Peter Blossfeld:** Writing – original draft, Writing – review & editing. **Rolf Becker:** Data curation, Formal analysis, Methodology, Writing – original draft, Writing – review & editing, Project administration, Software, Supervision, Validation, Visualization.

Declaration of Competing Interest

The authors report no conflict of interests.

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Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.rssm.2024.100956.

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