Better times to come?
Intergenerational class mobility of labour market entrants
in Germany and the UK since the 1950s

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Abstract

This study examines over-time trends in intergenerational social class mobility for labour market entrants in Germany and the UK since the early 1950s. Based on a cohort approach, we calculate absolute and relative mobility rates, separately for men and women, using the German Socio-Economic Panel (1984-2016), the UK Household Longitudinal Study (2009-2016), and the UK Labour Force Survey (2014-2017). Regarding absolute mobility, we find marked differences between the two countries. Although total mobility rates remained fairly stable in both countries and for both genders in the past 70 years, upward and downward rates followed opposite trends. In Germany, downward mobility decreased, while upward mobility rose. In the UK, downward mobility increased, while upward mobility declined. These differences are primarily driven by differing changes in the two countries’ class structures. Regarding relative mobility, we provide detailed evidence for the absence of any sustained change in both countries over the past seven decades. Although we find some slight increase in social fluidity for the entire period that we consider, there appears to be no further increase for more recent labour market entry cohorts – pointing towards the possibility of a ‘limit’ to the equalisation of relative mobility chances in advanced capitalist societies.

Keywords: Social mobility, social class, labour market entry, over-time change, cohort replacement
Introduction

Over-time trends in intergenerational social class mobility figure prominently in inequality and stratification research. For almost a century, scholars have examined changes over time in the association between individuals’ class origins and class destinations to further our understanding of the level, pattern and determinants of the intergenerational transmission of inequality. Yet, despite extensive research, results for advanced capitalist societies remain inconclusive. On the one hand, some studies find increasing mobility over time (e.g. Breen and Luijkx 2004; Breen and Jonsson 2007; Esping-Andersen and Wagner 2012), while, on the other hand, there are studies finding stability or ‘trendless fluctuation’ in intergenerational class mobility rates (e.g. Featherman and Hauser 1978; Erikson and Goldthorpe 1992; Bukodi and Goldthorpe 2018b).

Against this background, the current study aims to contribute to the debate by asking: to what extent has intergenerational class mobility changed for labour market entrants in Germany and the UK since the 1950s?

Due to its theoretical foundation based on employment relations, we believe that social class captures more comprehensively than pure economic measures, such as current income, the intergenerational transmission of socio-economic inequalities (see Bukodi and Goldthorpe 2018b). We therefore conceptualise intergenerational mobility in terms of social class. Following the established practice in sociology, we explicitly distinguish between absolute and relative mobility rates.

To examine the association between class origin and class destination, the literature commonly focuses on individuals who are in their mid-30s or older, i.e. who likely have reached the stage of ‘occupational maturity’ in their working lives. The rationale behind this is that from this point onwards, job changes in individuals’ careers less likely involve changes in their class positions, thus allowing to more robustly estimate the degree to which inequalities are transmitted from one generation to the next. Nonetheless, our focus is on the mobility rates of labour market entrants. That
is, we consciously look at those at the beginning of their careers when examining over-time trends in intergenerational class mobility. The reason is twofold.

First, there are suggestions in past research that significant over-time variations in intergenerational class mobility are driven by cohort replacement rather than period effects (Breen and Jonsson 2007; Mayer and Aisenbrey 2007; Erola 2009). Changes in the opportunity structure, either due to institutional reform or changing economic conditions, are then likely to have their strongest effects on young workers, resulting in over-time trends that are primarily dependent on the entry and exit of cohorts with different levels and experience of intergenerational mobility. Further, for a number of European countries, there is evidence that disadvantages at labour market entry have strong and enduring ‘scarring’ effects on individuals’ employment careers and class attainment (Barone and Schizzerotto 2011). For example, it has been shown that British and German men whose early work-life histories coincided with a period of severe economic difficulties, continuing high levels of unemployment and labour market re-structuring experienced significantly slower improvements in their earnings and occupational status across the life-course than their counterparts who started their careers in more favourable economic conditions (Blossfeld 1986, 1987; Bukodi and Goldthorpe 2011). Moreover, for British men who started out in adverse labour market circumstances class origin appeared to have a significant and long-lasting effect: those from salariat families benefitted distinctively from their more advantaged backgrounds in that this helped to offset the relatively low earnings and occupational returns that they obtained from higher-level qualifications; and at a later career stage such an advantage was still apparent (Bukodi and Goldthorpe 2011). These findings may then call into question any assumption regarding secular change in intergenerational class mobility and suggest that mobility chances are to a large extent already determined at an early career stage, if not actually by the very first job. As a consequence, we expect that comparing cohorts of labour market entrants should most clearly reveal changes over time in intergenerational class mobility rates.
Second, focussing on labour market entry cohorts may also help to better determine the timing and causes of any change in the intergenerational transmission of inequality. It has a clear advantage over a birth cohort approach in that changes in mobility rates can be more precisely related to changes in institutional arrangements or economic conditions, if labour market entrants are indeed affected the most. Given significant variation in their educational attainment and educational trajectories, members of the same birth cohort are unlikely to begin their working lives at the same time and hence are exposed to different conditions at the point of labour market entry, especially with regard to shorter-term volatilities of the labour market. Consequently, the impact of different periods of the business cycle and economic shocks, alongside institutional reforms, may be picked up less accurately if birth cohorts were used.

We thus believe that examining the association between individuals’ class of origins and their class positions at labour market entry offers a useful perspective to study over-time trends in social mobility and complements existing approaches that measure class destination at later stages in people’s lives.

Germany and the United Kingdom provide the geographical context of this study. Despite similar levels of economic development and cultural proximity, the two countries offer revealing contrasts. They followed a distinctive ‘route to modernity’ that is reflected in differences in their educational systems, in their labour market structures and in their social stratification and social mobility ‘regimes’ (Esping-Andersen 1990; Hall and Soskice 2001; Ebbinghaus and Eichhorst 2006; DiPrete 2002; Breen 2004; Bukodi et al. 2019). An important difference between the two countries that is particularly relevant for the current study regards the strength of the link between educational qualifications and class positions at labour market entry. While in Germany this link is still relatively strong, leading to a rather direct translation of educational inequalities into inequalities in class mobility chances (e.g. Klein 2011), it is weak in the UK. This stark contrast is mainly due to differences in the degree of occupational specificity of the two countries’ education and training systems (Scherer 2005, Leuze 2007). Thus, studying Germany and the UK does not only give us
the opportunity to examine how intergenerational class mobility has changed in two major European countries, but also to better understand to what extent these changes differ cross-nationally. Given our long-term perspective, we confine ourselves to West Germany to ensure consistency and comparability of mobility rates over time.

The next section gives an overview of the potential drivers of over-time change in absolute and relative class mobility rates and reviews past research on Germany and the UK. We then elaborate on our data and key variables before presenting our empirical results in the following sections. The article ends with a summary of the findings and discussion of their implications for future research.

**Over-time changes in intergenerational class mobility: potential drivers and past research**

The distinction between absolute and relative mobility is key to any thorough investigation into social mobility. Absolute mobility refers to the proportion of individuals who attain different class positions (class destination) from their parents’ (class origin), which might be at a higher, lower or broadly the same level. Thus, absolute mobility can be divided into upward, downward and horizontal components. By contrast, relative mobility refers to the strength of the association between individuals’ origins and destinations, net of differences in the class distributions between the parents’ and the children’s generations. The literature refers to relative mobility therefore also as ‘social fluidity’ and takes it as a measure of equality of opportunity. Given that absolute and relative mobility describe distinct social phenomena, their changes over time (or the lack thereof) are likely to be driven by different factors.

As regards absolute rates of class mobility, there is now general agreement that these display significant variation over time, as also across countries, and that this variation is primarily driven by changes in the form of class structures (e.g. Erikson and Goldthorpe 1992; Breen and Luijkx 2004; Bukodi et al. 2019). With respect to variations in relative rates, however, much less agreement exists. The main question is how far over-time changes in relative rates are systematic, in the sense
of being related to exogenous macro-social factors, or have to be seen as reflecting distinctive
historical circumstances.

For example, according to the advocates of modernisation theories (e.g. Treiman 1970; Bell 1972),
trends in social mobility should follow structural developments and mobility rates should increase
with rising levels of industrialisation and technological development, mainly due to occupational
upgrading, educational expansion, and greater skill-based selection into labour market positions.
Indeed, some studies claim to show evidence of a ‘world-wide secular trend’ towards greater social
fluidity linked to such developments, arguing that ‘achievement’ rather than ‘ascription’ has become
the dominant principle of social selection (e.g. Ganzeboom et al. 1989).

Alternatively, it has been suggested that relative rates might be inversely related to prevailing levels
of inequality of conditions (e.g. Treiman and Yip 1989). The so-called ‘Great Gatsby Curve’
hypothesis put forward by economists (Krueger 2012; Corak 2013), for example, identifies income
inequality as a major determinant. However, recent sociological work shows that it is in fact difficult
to see any clear relationship between relative mobility when measured in terms of social class and
inequality in income (Bukodi and Goldthorpe 2018a). Moreover, if an inverse relationship between
income inequality and relative mobility exists, we should see a decrease in relative rates in countries
with rising levels of income inequality – most notably in the US – which is not unequivocally the
case (e.g. Chetty et al. 2014; Bloome 2014; Hertel and Pfeffer 2016; Hertel 2017).

Whether there are other exogenous factors, such as class-based inequalities in education or
economic development, that operate systematically on over-time changes in relative class mobility
rates has also been regarded rather doubtful (e.g. Erikson and Goldthorpe 1992; Breen and Luijkx
2004) – even though we should note that this might differ from country to country. Given the
stronger link between education and class position at labour market entry in Germany than in the
UK, one might expect that trends in intergenerational class mobility follow more closely trends in
educational inequalities in the former than in the latter.
This inconclusive state of affairs let others advance the idea that while there may be periods of increasing social fluidity, some limit could exist to the extent to which relative class mobility rates can be equalized in societies with a capitalist market economy, nuclear family system and liberal-democratic polity (Bukodi and Goldthorpe 2018b; Bukodi et al. 2019). This limit is thought to arise primarily because more advantaged families will always seek to use their superior resources – economic, cultural or social – to maintain their children’s greater chances of success in educational systems and labour markets relative to those of children from less advantaged families. Policy interventions aimed at creating greater equality of opportunity – either by restricting parents’ abilities and rights to use their resources to ‘do their best’ for their children or by reducing the overall level of inequality that exists in such resources – may, beyond a certain point, face increasing political opposition. Thus, once this ‘limit’ has been reached, no further sustained increase in social fluidity is expected to emerge, and persistency, or trendless fluctuation, would become the prevailing feature.

The question that now arises is what empirical research tells us about the trends in intergenerational class mobility in Germany and the UK in the light of these theoretical propositions. To our best knowledge, no study has investigated mobility rates of labour market entrants in any systematic way in these two countries. Yet, a large body of literature exists on changes in intergenerational class mobility more generally, mainly looking at the association between class of origin and class at occupational maturity.

With respect to absolute class mobility, research on Germany finds for the second half of the 20th century either overall stability (Kleining 1971a, 1971b, 1975; Müller and Pollak 2004), or increasing total rates (Mayer and Müller 1971; Kaelble 1978) with gender-specific changes in the relative importance of the upward and downward components. For women, a pattern of increasing upward and decreasing downward mobility is reported, whereas for men a decline in upward rates and an increase in downward rates is found, especially for cohorts born after the mid-1940s (Müller and Pollak 2004; Hertel 2017). For the UK, the results appear to be less conflicting. While earlier studies
tend to find increasing upward and decreasing downward mobility (Goldthorpe 1980/87, Goldthorpe and Payne 1986, Heath and Payne 2000), studies covering more recent periods suggest a reversal of trends, mainly from the 1970s onwards for both genders (Goldthorpe and Jackson 2007; Paterson and Iannelli 2008; Li and Devine 2011; Bukodi et al. 2015).

As regards relative class mobility, for Germany, past research has produced evidence in favour of either constant (Allerbeck and Stork 1980) or of increasing rates over time (Kaelble 1978; Müller and Pollak 2004, 2015; Breen and Luijkx 2004; Mayer 2006; Hertel 2017). However, Mayer and Aisenbrey (2007) find that insofar as there has been an equalisation of mobility chances in the past, this has slowed down for cohorts born after the mid-1960s. For the UK, no sociological study exists that claims decreasing relative mobility. Instead, studies either find an overall increase (Jonsson and Mills 1993; Heath and Payne 2000; Li and Devine 2011; Buscha and Sturgis 2017), stability or trendless fluctuation in relative rates (Goldthorpe and Mills 2004, 2008; Paterson and Iannelli 2008; Goldthorpe and Jackson 2007; Bukodi et al. 2015), depending on the historical period covered.

Overall, the existing literature on both Germany and the UK is still inconclusive. As a result, past research on the two countries cannot lend unanimous support to either of the theoretical propositions aimed at explaining over-time variation in relative mobility rates outlined above. Studies that find increasing social fluidity might be taken as evidence for the modernisation thesis. Studies finding overall stability or a slowdown in increasing fluidity may imply that both countries have been approaching a limit to the equalisation of relative mobility chances. By contrast, no research finds a systematic and sustained decrease in social fluidity in either country, despite continuously rising inequality from the 1980s onwards (Atkinson et al. 2017). Empirical evidence in support of a ‘Great-Gatsby-Curve’ type of argument is hence so far missing. We therefore hope to shed some more light on this matter with our new approach looking at the mobility rates of labour market entrants.
Data and variables

For Germany, our analyses are based on waves 1984-2016 of the German Socio-Economic Panel (SOEP). The SOEP is the largest representative, longitudinal survey in Germany interviewing each year around 30,000 respondents in ca. 11,000 households on matters relevant to social inequality research such as family background and composition, education, employment, earnings and wellbeing. As said, to ensure comparability over time, we only work with the West German sample of the survey.

For the UK, we use two datasets: our primary dataset is the UK Household Longitudinal Study (UKHLS, End User License version), also known as Understanding Society. Like the SOEP, the UKHLS is the largest representative, longitudinal multi-topic study that is annually conducted in the UK. Covering roughly 145,000 respondents in ca. 40,000 household, it started in 2009 as successor of the British Household Panel Study. We use waves 2009-2016. Our secondary dataset consists of the 2014-2017 UK Labour Force Survey (UKLFS, Secure Access version). The UKLFS collects representative information on current employment conditions on a quarterly basis and is currently the UK’s largest household survey. Since 2014, the UKLFS also collects, in each July-September Quarter, data on the characteristics of parents’ employment during respondents’ childhood, which makes it suitable for research into intergenerational social mobility. It is based on a rolling sample of around 100,000 respondents in ca. 40,000 households, who are interviewed in five consecutive quarters.

The rationale for using the UKLFS alongside the UKHLS is twofold. First, with the UKLFS we can extent our observation window almost up to date and include respondents who entered the UK labour market until 2017. Second, the UKLFS helps us to resolve certain methodological issues that we face when constructing our measure of social class (see below).

Conceptually, we understand social class as deriving from employment relations. In this sense, an individual’s class position depends on her employment status, i.e. whether she is employed,
employing others or self-employed, and the type of contract governing her employment if she works as an employee. Different employment contracts exist because of different skill requirements and monitoring problems arising from the specific work tasks to be performed. In the case of employees, type of occupation serves as a reliable indicator for employment contracts, such that it can be used, together with employment status, as a basis for identifying class positions. Given their strong association with socio-economic outcomes such as risk of unemployment, income security, short-term income stability, long-term income prospects and wealth, social classes can be hierarchically ordered (Bukodi and Goldthorpe 2018b).

For the UK, the National Statistics Socio-Economic Classification (NS-SEC) has been conceived to construct social class in exactly this way. We therefore use the NS-SEC to operationalise social class in the UKHLS and UKLFS. For Germany, we use its closest equivalent – the European Socio-economic Classification (ESeC). The ESeC has the same theoretical underpinning as the NS-SEC and has been developed to facilitate comparative research across European countries (Rose and Harrison 2010). Table 1 presents the 7-class version of the two schemes.

[Table 1]

Given our focus on the intergenerational class mobility of labour market entrants, respondents’ class of origin and their class of destination at labour market entry are our two key variables. In the SOEP and UKHLS, we use the dominance approach to construct class of origin, which takes the higher class if the father’s and mother’s class differ (Erikson 1984). Since the UKLFS only asks about the occupation of the main wage earner during childhood, we take this information to approximate class of origin. In all three surveys, class of origin is established at respondents’ age 14.

Due to their longitudinal design, the SOEP and UKHLS have information – even if in part retrospectively – on respondents’ full employment trajectories, including first job, based on which class at labour market entry is constructed. The UKLFS, however, does not ask respondents about
their first jobs, but provides information on the date when they completed their full-time education. Based on this, we select respondents who completed full-time education within one year of the interview and are in employment when surveyed. Given that in the UK, average job tenure amongst individuals below age 35 is around three years (OECD 2019), we believe it is reasonable to assume that these respondents are still working in their first jobs. To minimise the risk of capturing casual jobs during the school-to-work transition and re-entries into the labour market after periods of continuing education, we exclude in all surveys individuals who started their first jobs or left full-time time education before age 14 or after age 35.

For Germany, the SOEP provides ISCO88 3-digit occupational codes as well as information on employment status, number of employees and supervisory functions for respondents and their parents. We are hence able to construct the ‘full’ version of ESeC based on the official crosswalk, for both class origin and class destination at labour market entry, according to the procedure in Rose and Harrison (2010).

For the UK, we use the official NS-SEC crosswalk that relies on the national occupational classification, i.e. SOC10 4-digits codes, alongside information on employment status, number of employees and supervisory functions.

The UKLFS has all this information for the respondents. We can therefore construct the ‘full’ version of the NS-SEC to measure class at labour market entry. For class of origin, however, we need to revert to the ‘simplified’ version of NS-SEC since only the occupation of the main wage earner in the parental household is known. Yet, as Table A4 (Appendix) shows, the allocation of NS-SEC according to the ‘full’ and ‘simplified’ method for class at labour market entry overlaps to a large extent. We are therefore not too concerned about the use of different versions of NS-SEC for parents and respondents, even though this has to be kept in mind. In the UKHLS, SOC10 codes are only provided in 3-digits, for both respondents and their parents. We therefore create our own crosswalk between SOC10 3-digits codes and NS-SEC classes based on the relevant
distributions in the UKLFS, which is then used in the UKHLS to measure class origin and class at labour market entry according to the simplified version.\footnote{More precisely, we take the full sample of the pooled 2014-2017 UKLFS July-September Quarters and construct the 7-class version of the NS-SEC for respondents’ current employment and their main wage earner as outlined above. Respondents’ last employment is taken if information on current employment is missing. We then turn the SOC10 4-digits into 3-digits and determine for each of the latter the most common NS-SEC class position, separately for men, women and the main wage earner. Our crosswalk thus relies on the mode NS-SEC constructed from SOC10 4-digits by SOC10 3-digits in the UKLFS.}

To map over-time changes in mobility rates, we adopt a cohort approach as suggested by Ryder (1965). This approach has already found wide application in the social mobility literature highlighting cohort replacement as one of the major forces to account for over-time trends, as discussed earlier. We create (quasi-)cohorts of labour market entrants and construct these as narrowly as possible, in order to provide a more detailed account of over-time trends than previously done. In the SOEP, labour market entry is defined as the year in which respondents start their first job after having completed full-time education. In the UKHLS and UKLFS, we take the year in which respondents first left full-time education as a proxy, since no information on the precise date when respondents entered the labour market is available.\footnote{For 37 observations (0.1\%) in the SOEP and 688 observations (1.8\%) in the UKHLS, year of leaving full-time education is missing. For these cases, we approximate year of labour market entry using mean age of starting first job (SOEP) and mean age of leaving full-time education (UKHLS) of those respondents, who have similar educational qualifications and/or were born within the same five years.} In our two primary datasets, the SOEP and UKHLS, we then create 16 four-year cohorts, comprising respondents who entered the labour market between 1950 and 2013. Given its large sample size, we can work with four annual labour market entry cohorts in the UKLFS, i.e. our secondary dataset for the UK.

As explained, the operationalisation of class of origin and class of destination is somewhat different in the two UK surveys. Class mobility rates are hence likely to differ to some extent in the two datasets. In particular, rates of relative mobility might be over-estimated in the UKLFS as class of
origin is measured less precisely based on the main wage earner and using an ‘occupation only’ approach. Nonetheless, despite these measurement problems, we regard using the UKLFS important in order to provide an up-to-date account of trends in intergenerational class mobility in the UK. Although the levels of mobility rates might be slightly different in the two UK surveys, a close inspection of the UKLFS data suggests that the size of the measurement error described above does not differ between survey years (or labour market entry cohorts). Thus, the estimates for over-time variation in mobility rates from the two surveys can be regarded as comparable.

Finally, we perform multiple imputation by chained equations, separately for men and women, on all three datasets to adjust for systematic missingness in class of origin. In line with previous research (Betthäuser 2017), individuals in lower class positions are more likely to have missing information on their class of origin than individuals in higher class positions. After imputation, our analytical samples contain 36,661 (SOEP), 37,847 (UKHLS) and 6,770 (UKLFS) observations. Tables A1, A2, and A3 (Appendix) show the distributions of class of origin and class destination at labour market entry by cohort and gender for each survey. All results presented draw on the multiply imputed datasets.

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3 If class of origin is measured with greater error, its ‘predictiveness’ regarding class destination decreases and the association between class of origin and class destination weakens. Thus, rates of relative mobility will be upwardly biased showing greater social fluidity than is actually the case (see also Erikson and Goldthorpe 2010). This is exactly what we observe as presented in Figure A1 (Appendix).

4 Besides year and class at labour market entry, we use available information on individuals’ highest educational attainment, age at labour market entry, class at age 36 or older, (log) income as well as parental education and labour market participation to predict missing information on class of origin. Class of origin is imputed for 17.16%, 10.31% and 5.30% of the analytical sample in the SOEP, UKHLS, and UKLFS, respectively.
Results

Absolute mobility rates

We calculate rates of total, upward and downward absolute mobility for each of our labour market entry cohorts in Germany and the UK, separately for men and women. Total rates are calculated as the percentage of individuals, who are found in different class positions at labour market entry to that of their parents’, based on the 7-class version of ESeC and NS-SEC. For upward and downward mobility, we use a 5-class collapse of both schemes, since Classes 3, 4 and 5 cannot be hierarchically ordered (see Table 1). Upward (downward) rates are calculated as the percentage of individuals, who started their careers in a higher (lower) class position as compared to their class of origin.

Figures 1 and 2 show the absolute mobility rates with 95% confidence intervals. By and large, we observe no significant change in total mobility rates in either country: the rates are between 70-80% for each cohort, for both men and women. However, country differences do emerge regarding trends in the relative importance of upward and downward mobility. In Germany, the rate of upward mobility has steadily increased, while the rate of downward mobility has steadily decreased. This trend is particularly marked for women. Consequently, the proportion of the upwardly mobile increasingly outstrips the proportion of the downwardly mobile for cohorts entering the labour market from the 1960s onwards. In the UK, we see an opposite pattern. There, upward mobility has been in constant decline, while downward mobility has been on the constant rise for both men and women since the late 1970s. This trend is also apparent in the UKLFS and thus continues for the most recent labour market entry cohorts.

[Figures 1 & 2]

As discussed above, trends in absolute mobility rates are known to be driven by changes in the class structure between parents’ and children’s generations. If so, these changes must have been
rather different in Germany and the UK, given the opposing trends in upward and downward rates. As we see in Figure 3, which plots over-time trends in the proportion of individuals from salariat (Classes 1 and 2) origins and the proportion of labour market entrants in salariat destinations, this is indeed the case.

In the UK, a steady increase in the proportion of respondents coming from the salariat emerges, implying that the number of labour market entrants ‘at risk of downward mobility’ has been on the permanent rise. However, since the 1970s, the proportions of men and women who started their careers in salariat positions have not risen to the same extent. A more rapid growth has hence occurred in the proportion of labour market entrants originating in the salariat than is currently taking place in these positions.

In Germany, the proportion of labour market entrants at risk of downward mobility has only slightly increased. Also, the creation of salariat jobs leading to more ‘room at the top’ seem to keep track. Especially from the mid-1960s onwards, the proportion of women starting their careers in salariat positions increasingly surpassed the proportion of those originating from the salariat, resulting in rising upward mobility. The observed country differences in absolute class mobility rates are thus reflected in the divergent changes in the German and UK class structure.

In summary, for both countries, we find that total rates remain generally constant for the entire observation period, but opposite trends appear in upward and downward mobility rates. While in Germany, upward mobility continuously increased and downward mobility continuously decreased, we find a steady rise in downward mobility and a steady fall in upward mobility in the UK. For both countries, we can relate these trends in absolute mobility to class structural changes. More precisely, the trends that we observe appear to be driven by developments on the demand side of the labour market determining the kinds of jobs available to labour market entrants.
Relative mobility rates

Since relative class mobility considers the chances of individuals coming from different class origins being found in different class destinations, net of class structural change, we use (log-)odds ratios (OR) to measure relative rates. For a mobility table that is based on a seven-class scheme like the ESeC or NS-SEC, $21^2 = 441$ odds ratios can be calculated, as there are $(7 \times 6)/2 = 21$ pairs of origin and destination classes each. We have 16 mobility tables for Germany and 16 (UKHLS) + 4 (UKLFS) tables for the UK, for each gender, and so must deal with 31,752 odds ratios in total. Consequently, we choose two different approaches to dealing with such complexity.

Our first approach is adopted from Cox, Jackson, and Lu (2009), and is based on so-called ‘average global log-odds ratios’ that we calculate for each labour market entry cohort by gender in the two countries (see also Dale 1984; Bukodi et al. 2019). Average global log-odds ratios provide a single summary measure of relative mobility and are therefore useful to compare relative rates between cohorts. However, they require fully ordered class categories. We thus work with 5x5 mobility tables using the 5-class version of ESeC and NS-SEC (see Table 1). The first step is to partition each mobility table into 16 2x2 sub-tables to calculate global log-odds ratios. The first global log-odds ratio is calculated based on the 5x5 mobility table being divided between the first row and first column. The second is calculated based on the table being divided between the first row and first and second column. The third is calculated based on the table being divided between the first row and first, second, and third column and so on. We then average across all 16 global log-odds ratios. Formally,

$$AGLOR_k = \frac{1}{16} \sum_{i=1}^{4} \sum_{j=1}^{4} \ln \left[ \frac{\text{odds}(\text{destination } \leq \text{Class}_i | \text{origin } \leq \text{Class}_j)}{\text{odds}(\text{destination } \leq \text{Class}_i | \text{origin } > \text{Class}_j)} \right],$$

where $AGLOR_k$ is the average global log-odds ratio for labour market entry cohort $k$ based on a 5x5 mobility table. The higher the average global log-odds ratio, the stronger the net origin-destination association, i.e. the lower the level of relative mobility.
Figure 4 plots the average global log-odds ratios for each labour market entry cohort, for both countries, based on our primary datasets. As is apparent, the origin-destination associations are generally stronger in Germany than in the UK, especially for men. This is in line with previous research that identifies Germany as a low and the UK as a high fluidity country (Bukodi et al. 2019).

Yet, and more importantly for our purposes, with respect to over-time trends, we observe no sustained increase or decline in the strength of the origin-destination associations for either country. Although there is some indication of a slight increase in social fluidity, especially for women, the average global log-odds ratios scatter in a rather haphazard way around a smoothed trend line, suggesting unsystematic variation.

Our second approach follows more established sociological practice by fitting two log-linear models on the 7-class version of ESeC and NS-SEC (for further elaboration see Breen 2004). The model of ‘Constant Social Fluidity’ (CnSF) assumes that the net association between class origin and destination does not differ across labour market entry cohorts and so remains constant over time:

\[ \log F_{ijk} = \mu + \lambda_i^O + \lambda_j^D + \lambda_k^C + \lambda_{ik}^{OC} + \lambda_{jk}^{DC} + \lambda_{ij}^{OD}, \]

where \( F_{ijk} \) is the expected frequency in cell \( ijk \) of a three-way table including origin \( i \) (O), destination \( j \) (D) and labour market entry cohort \( k \) (C), \( \mu \) is a scale factor, \( \lambda_i^O, \lambda_j^D, \lambda_k^C \) are the main effects of the distributions of individuals over origins, destinations and cohorts, and \( \lambda_{ik}^{OC} \) and \( \lambda_{jk}^{DC} \) refer to the association between origin and cohort and destination and cohort, respectively. Finally, \( \lambda_{ij}^{OD} \) represents the net association between origin and destination, for which the defining log-odds ratios are assumed to be the same across cohorts.
By contrast, the model of ‘Uniform Differences’ (UNIDIFF), also known as the log-multiplicative layer effects model (Erikson and Goldthorpe 1992; Xie 1992), allows the log-odds ratios to differ by a common cohort-specific factor $\beta_k$ – the UNIDIFF parameter:

$$ logF_{ijk} = \mu + \lambda^O_i + \lambda^D_i + \lambda^C_i + \lambda^{OC}_{ik} + \lambda^{DC}_{ik} + \beta_k X_{ij}^{OD}, $$

where $X_{ij}^{OD}$ refers to the general pattern of the association between origins and destinations across cohorts. If $\beta_k < 1$, the origin-destination association is weaker, and relative rates are higher, in cohort $k$ compared to a given reference cohort ($\beta_{\text{reference}} = 1$). If $\beta_k > 1$, the origin-destination association is stronger, and relative mobility rates are lower. The UNIDIFF model hence accounts for cohort-specific differences in the origin-destination association that apply uniformly to all underlying log-odds ratios. Put differently, it allows cohorts to have consistently higher or lower levels of social fluidity.

In order to give an overview of over-time change, we apply what we call a ‘moving windows’ approach. More specifically, we fit the CnSF and UNIDIFF models to our mobility tables, first taking the earliest labour market entry cohort (1950-53) as reference and comparing its relative rates to those of all later cohorts, then taking the second-earliest (1953-57) as reference for comparisons with the then following cohorts, then the third-earliest cohort (1957-61) becomes the reference cohort, and so on until the relative rates of the second youngest cohort (2006-2009) are compared to those of the youngest cohort (2009-2013). In total, we have 15 comparisons.

The results are shown in Figure 5 for Germany and Figure 6 for the UK. It is clear that there are some cross-cohort differences in relative rates, but again, they do not point towards a sustained increase or decrease in social fluidity. More specifically, when we compare individuals who entered the labour market in the 1950s and 1960s to those who did so in the 1970s or later, we find evidence for a weakening association between class of origin and class at labour market entry, i.e. increasing social fluidity in both countries for both genders. However, when we only focus on those who
started their careers in the mid-1970s or later, the overall picture is somewhat different. For men, we observe stability, as the UNIDIFF model no longer improves on the CnSF model. For women, although we still see evidence of significant changes in relative rates, these do not point towards a particular direction in any systematic way. For cohorts who entered the labour market since the late 1990s, they cease to be significant at all.

[Figures 5 & 6]

Our results from the two methodological approaches are then broadly similar. For individuals entering the labour market during the second half of the 20th century and through the beginning of the 21st century, a sustained and consistent trend in relative mobility is absent in both Germany and the UK. In fact, we find marked similarity between the two countries in their trends in relative mobility despite differences in absolute mobility. For both countries, we only find a slight increase in social fluidity, which yet fades away for more recent labour market entry cohorts, making it likely that a limit to the equalisation of relative mobility chances in advanced capitalist societies could indeed exist. Furthermore, no evidence emerges for relative class mobility rates to follow more closely trends in educational inequalities in Germany than in the UK, given that these have been shown to decline over the course of the 20th century in both countries (Breen et al. 2009; Becker and Mayer 2019).

So far, our analyses have only been concerned with the long run. Yet, the absence of any lasting increase or decrease over the past 70 years does not rule out the possibility that relative mobility rates may be subject to shorter-term changes as caused by volatilities in the economy and the labour market. As discussed before, previous research does point towards a negative effect of unfavourable economic and labour market conditions on relative mobility chances. In the next step, we therefore provide a more fine-tuned description of cross-cohort variation to see whether relative rates follow developments of the business cycle coinciding with times of boom and bust. As argued in the Introduction, our focus on labour market entrants may particularly be insightful
and apt for this purpose. We hence perform significance tests for differences in average global log-odds ratios (Figure 7)\(^5\) and fit the CnSF and UNIDIFF models to pairs of adjacent cohorts (Figure 8).

Regardless of which approach we take, we find evidence for only little changes between adjacent cohorts in relative mobility rates in our two countries.\(^6\) Insofar as there are cross-cohort differences, these show up in a rather un-systematic way and can neither be related to trends of the business cycle nor known periods of serious economic crisis and recovery. If anything, what emerges as the prevailing pattern is a picture of trendless – yet mostly statistically insignificant – fluctuation.

**Auxiliary analyses on relative rates**

Evidently, given that our study covers a period of over 60 years, it might be the case that the analyses of over-time trends in relative mobility rates are affected by compositional changes. We therefore conduct an additional set of auxiliary analyses that should erase the following concerns. Due to space limitation, we can only give a brief summary but detailed elaboration on what we do and all results from this exercise are presented in full in Appendix B.

First, we observe, in both countries, that respondents’ age at labour market entry has increased quite significantly over the last decades. This is likely to be due to educational expansion after World War II and can affect our estimates of relative mobility since the origin-destination association tends to be weaker for the highly educated (Hout 1988; Breen and Luijkx 2004; Torche

\(^5\) More precisely, we divide the difference in the average central four of global log-odds ratios by the standard error of this difference as described by Cox et al. (2009). According to the authors using the central set of global log-odds ratios is preferable as they give a more precise result.

\(^6\) We obtain similar results if we compare cohorts over a period of 16 years by replacing the 4-year labour market entry cohorts by 8-year cohorts. The results are presented in Figures A2 and A3 (Appendix).
2011). Given that the proportion of the highly educated has been rising, this may lead to a downward bias in our estimates for changes in relative rates. In other words, we may in fact to some extent over-estimate the increase in social fluidity for later cohorts.

Second, existing research indicates that more recent cohorts are more likely than earlier cohorts to enter the labour market in some kind of ‘non-standard’ jobs, such as part-time or temporary employment (Bachmann et al. 2018; Allmendinger et al. 2013; Passaretta and Wolbers 2019). Further, it is conceivable that the level of social fluidity is different for individuals in standard and non-standard jobs. Insofar as there is an increase in the proportion of labour market entrants in non-standard employment, this might then affect rates of relative mobility, and the over-time change therein – whether in an upward or downward direction depends on the nature of the relationship between the level of relative mobility and being employed in non-standard versus standard jobs.

Regarding the first issue, our analysis shows that the strength of the origin-destination association does not differ between younger and older labour market entrants in either country (Table B1). Hence, we do not have sufficient evidence for a downward bias in our estimates of changes in relative rates for later cohorts that would stem from the changing age distribution of labour market entrants. Differences in relative rates between individuals in standard and non-standard employment are however significant in the UK (Tables B2 and B3): those in non-standard employment tend to have higher rates of relative mobility. Yet, given that this difference is only apparent for younger respondents and given that labour market entrants are generally becoming older, we believe that the consequence of this effect for our main findings is minor.

Conclusion

In this study, we conducted detailed analyses to offer a new account of the over-time trends in intergenerational class mobility in Germany and the UK by focusing on cohorts of labour market
entrants, that is, men and women who entered the labour market between the 1950s and 2010s. We believe that our approach accounts for the decisive role of labour market entry for individuals’ employment careers and class attainment, and reflects the process of cohort replacement as a potential underlying driving force of over-time change.

With respect to absolute mobility, we find marked differences between Germany and the UK. Although total mobility rates remained fairly stable in the two countries for both genders, upward and downward rates followed opposite trends. In Germany, downward mobility decreased, while upward mobility rose. In the UK, downward mobility increased, while upward mobility declined.

In line with previous studies, we relate these differences to divergent developments over time in the two countries’ class structures, emphasising the importance of the demand side of the labour market in driving trends in absolute mobility rates. As our findings suggest, in Germany, the increase in upward mobility is primarily maintained through the continuous expansion of upper class jobs. In the UK, however, the rate at which top-end jobs have been created does not map onto the increasing proportion of individuals originating in the salariat – i.e. those ‘at risk of downward mobility’ – leading to rising rates of downward mobility for more recent cohorts of labour market entrants.

Yet, with respect to relative mobility, we find striking similarity between Germany and the UK. For both countries, no sustained and systematic trend can be identified for social fluidity to follow. Neither have relative rates consistently increased, nor have they continuously declined over the past seven decades. Although we find some indication of a weakening of the association between class of origin and class at labour market entry when focusing on the entire period, relative rates have ceased to increase since the mid-1970s in both countries. Likewise, our comparison of adjacent labour market entry cohorts yields a picture of stability punctuated with trendless fluctuations, which may be taken as reflections of short-term volatility in the labour market. However, these do not appear to be closely related to economic cycles of boom and bust. Overall
then, we do not find any evidence of convergence in the level of social fluidity between the two countries. Germany and the UK still appear to represent distinct class mobility regimes with differing strengths of the origin-destination association.

This leads us to take a sceptical position vis-à-vis the modernisation thesis as well as arguments about other exogenous factors – e.g. income inequality, educational inequality or economic development – operating systematically on over-time changes in relative class mobility. Even though we are not able to confirm whether a limit to the equalisation of relative mobility rates exists, the lack of any sustained increase in social fluidity in two different European countries speaks to its possibility.

The findings presented here differ to some extent from those in previous studies. On the one hand, the use of multiple imputation, different periods of time, class schemes and data sources may be responsible for such differences. On the other hand, it is possible that the extent to which class at labour market entry is predictive of subsequent class positions has changed over time, and differently so for individuals from different class origins. Further, it is conceivable that the extent to which intragenerational mobility may serve as a channel for counter mobility, i.e. for individuals from more advantaged class backgrounds who initially experienced downward mobility to revert to their parents’ class positions, also varies across cohorts. All this could lead to differing results regarding both the levels and trends in intergenerational class mobility, depending on which point in individuals’ careers class destinations are measured.

Nonetheless, there are still good reasons to assume that over-time trends are most sensitively captured when looking at labour market entrants, as they are the ‘most-likely cases’ to be affected by changes in the opportunity structure. And insofar as our results point towards a lack of change in the inequality of relative mobility chances in two major European countries, it appears to us that explaining the persistency in social fluidity might be one of the main puzzles to be resolved by mobility scholars of the 21st century.
References


Hertel, F. 2017. Social Mobility in the 20th Century: Class Mobility and Occupational Change in the United States and Germany. Wiesbaden: Springer VS.


<table>
<thead>
<tr>
<th>Class</th>
<th>ESrC</th>
<th>NS-SEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1</td>
<td>Large employers, higher managers and professionals</td>
<td>Higher managerial, administrative and professional occupations</td>
</tr>
<tr>
<td>Class 2</td>
<td>Lower managers and professionals, high-level supervisors</td>
<td>Lower managerial, administrative and professional occupations</td>
</tr>
<tr>
<td>Class 3</td>
<td>Intermediate occupations</td>
<td>Intermediate occupations</td>
</tr>
<tr>
<td>Class 4</td>
<td>Small employers and own account workers</td>
<td>Small employers and own account workers</td>
</tr>
<tr>
<td>Class 5</td>
<td>Lower supervisors and technicians</td>
<td>Lower supervisory and technical occupations</td>
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<tr>
<td>Class 6</td>
<td>Lower service, sales and technical occupations</td>
<td>Semi-routine occupations</td>
</tr>
<tr>
<td>Class 7</td>
<td>Routine occupations</td>
<td>Routine occupations</td>
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*Note:* The dashed lines indicate the hierarchical ordering of classes in the respective scheme.
Figure 1. Absolute mobility rates (%), with 95% confidence intervals, by labour market entry cohort, Germany

Note: $N_{men} = 17,904$; $N_{women} = 18,757$.

Figure 2. Absolute mobility rates (%), with 95% confidence intervals, by labour market entry cohort, UK

Note: \( N_{\text{men}} = 17,019 \) (UKHLS) / \( 3,025 \) (UKLFS); \( N_{\text{women}} = 19,687 \) / \( 3,745 \) (UKLFS).

Figure 3. Proportion of respondents from salariat origins and proportion of respondents in salariat destinations at labour market entry by labour market entry cohort

Figure 4. Average global log odds ratios by labour market entry cohort

Note: Local polynomial smoothing applied for men (solid line) and women (dashed line).
Source: SOEP 1984-2016, UKHLS 2009-2016 EUL.
Figure 2. UNIDIFF parameters for labour market entry cohorts - "Moving windows approach", Germany

Note: Fit statistics are presented in Table A5 in the Appendix.
Figure 6. UNIDIFF parameters for labour market entry cohorts - "Moving windows approach", UK

Note: Fit statistics are presented in Table A6 in the Appendix.
Source: UKHLS 2009-2016 EUL
Figure 7. Significance test for differences in average global log odds ratios between adjacent labour market entry cohorts

Figure 8. Results of fitting the CnSF and the UNIDIFF models to adjacent labour market entry cohorts

Note: Fit statistics are presented in Tables A7 and A8 in the Appendix.