



# Later and less? New evidence on occupational maturity for Swedish women and men

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## ABSTRACT

A common assumption in the social stratification literature is that the lion's share of people reaches occupational maturity quite early in working life, i.e., they end up in an occupation/class position and stay there. The conventional view is that career maturity is reached around the age of 35. By using Swedish longitudinal occupational biographies across six birth cohorts from 1925 to 1984, this study challenges this view. Our findings reveal substantial career transitions throughout working life, an increase across cohorts, and a wide variation in the age of the last class transition. This suggests that careers are not in general static positions from a certain age, but fluctuate over time. There are signs of a general slowing down of career transitions across working lives, but this comes later in life and to a smaller extent than expected. These findings suggest that research often based on cross sectional data, e.g. studies on intergenerational mobility and class differences in health, need to incorporate career mobility data. More research is needed to illuminate if the results of Sweden, in terms of a low and decreasing level of occupational maturity can be replicated in other countries.

## 1. Introduction

A common view among social stratification researchers is that individuals tend to establish themselves in an occupation relatively early in working life and stay there (C.f. Barone & Schizzerotto, 2011). Put differently; individuals tend to reach occupational maturity early and consequently also their final class of destination as class concepts generally are based on occupations. The exact age when occupational maturation is reached has been hard to establish, and research suggests the age to shift across both individuals and, to some extent, across birth cohorts (Bukodi & Goldthorpe, 2011; Härkönen & Bihagen, 2011; C.f. Barone & Schizzerotto, 2011). Still, the conventional view in the research field is that occupational maturation has been reached at the age of 35 (see below). With the use of Swedish data covering cohorts born already from the mid-1920s up to the 1980s, we are able to shed light on occupational maturation across a historical period covering profound changes in the labor market in terms of e.g., class and gender composition. Hence, we are able to nuance the conventional view and also study variation across cohorts, genders and, individuals in the timing of both occupational and class maturation.

The stabilization of careers is of interest from a stratification point of

view as it could be argued that the smaller the variation in class across the life course and the quicker a class of destination is reached the better class will predict life chances in one way or another. It could be argued that "any idea of social structure includes the notion of relative stability" (Blossfeld, 1986: 208). Also, considering the importance of class of destination in intergenerational mobility there are surprisingly few studies on occupational maturation and hardly any that focus on class maturation and how this differs across cohorts (Breen & Jonsson, 1997; Bukodi & Goldthorpe, 2011; Härkönen & Bihagen, 2011; Manzoni et al., 2014).

More specifically, we aim to contribute to the literature in the following ways. First, we aim to shed light on the stabilization of careers in terms of both occupational and class maturation across ages, where previous research focuses on occupational maturity although from a class structural point of view, class could be perceived as being more important. Generally, we expect class to stabilize earlier than occupation as classes are aggregates of occupations and some occupational shifts may take place in classes. By using longitudinal occupational biographies in the Swedish *Level-of-Living Surveys* (LNU), in which respondents report their occupational careers from the first job they held that lasted for more than five months, we can analyze at what age

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occupational and class stabilization occur. Second, we compare six cohorts born between 1925 to 1984, followed up to 2010, and analyze if there is a difference in stabilization across these six decades: a period characterized by profound labor market changes including a substantial educational expansion in tandem with occupational upgrading, a gender convergence in labor force participation, and in the last decades: an increase in temporary jobs or at least higher unemployment levels following the 1990s recession in Sweden. Such labor market trends may be expected to both speed up and slow down the occupational maturation process and we could expect substantial differences between cohorts in maturation processes. Third, we will conduct separate analyses for women and men where research for a long time focused on the careers of men. In all, the study will provide a more coherent description of career maturation than what is found in previous research and to shed light on if there is support for the conventional view of career maturity. A limitation of the study is the use of only Swedish data and maturation processes may diverge between countries and this will be further addressed at the end of the paper.

## 2. The conventional view on occupational/class maturity

That careers stabilize across age was indicated already in research from the late 1940s. [Form and Miller's \(1949\)](#) findings suggested that there is a "trial work period", where the worker shops around for a job that matches preferences and abilities, that lasted for around 6 years, followed by a "stable work period", where the worker has "settled down" in the labor market. The stable work period would last for around 20 years starting at the end of the age of 20s. In the influential study of [Goldthorpe \(1987: 70, first published in 1980\)](#) the assumption of "occupational maturity" was stated explicitly: at around the age of 35 "one may expect, if not a cessation, at all events a marked falling off in the probability of job changes involving major shifts of occupational level". Findings of occupational maturation, i.e. that individuals have a strong tendency to slow down the frequency of occupational transitions with age, have been seen as reassuring in intergenerational mobility studies. This since such studies often are based on cross-sectional data and use synthetic birth cohorts to analyze trends with the apparent risk that the class of destination has not yet been reached for later born cohorts who were younger at the time of data collection (C.f. [Trinh & Bukodi, 2022](#)). The maturation assumption was largely accepted in this field of intergenerational class mobility studies ([Erikson & Goldthorpe, 1992, 2002](#)), and also backed up by empirical studies that indicated that differences in cross-cohort intra-generational mobility did not distort empirical patterns of intergenerational class mobility ([Breen & Jonsson, 2007](#)).

Also, occupational maturation is in line with theoretical expectations from different perspectives. First, matching problems between individuals' skills and jobs are likely to be the largest at the start of careers ([Neal, 1999](#)). Second, there is a diminishing rate of return on work experience and on-the-job training in relation to human capital as time in the labor market increases ([Mincer, 1974](#)). Therefore, it is likely for individuals to settle down in their occupational careers. Third, internal labor markets in organizations provide promotional ladders - particularly during early career stages (e.g., [Sørensen, 2000](#)). Likewise, it has been suggested that for some professional occupations promotional ladders exist both within and across firms as occupational internal labor markets ([Cheng & Kalleberg, 1996](#)). Lastly, early careers overlap with years of family formation when increased financial needs provide additional incentives for occupational progression at the beginning of careers; historically especially so for men ([Mayer & Carrol, 1987](#)). However, in relation to family formation, it may be more complex to track women's careers as they are, more often than men's careers, influenced by stronger ties to the domestic sphere ([Alon et al., 2001](#)). In addition to the above-mentioned theoretical reasons, there is also a statistical reason for the stabilization of careers. Since status scales of occupations and class schemas have a limited number of positions, the

chance of an increase probably decreases with every step up the career ladder, i.e. a ceiling effect (e.g., [Hauser & Warren, 1997](#); [Sørensen, 1975](#)). However, a similar pattern of stabilization is seen for annual earnings ([Böhlmark & Lindquist, 2006](#); [Haider & Solon, 2006](#)), which lack a definite ceiling and, hence, there are reasons to believe that the stabilization of careers in terms of occupational shifts are not solely due to ceiling effects.

In all, there is some empirical support for the idea of career stabilization across the life course in line with theoretical expectations. As mentioned above, such an empirical pattern could be seen as crucial for class research in two interrelated ways. First, it could be argued that the idea of classes in society hinges upon the idea that intragenerational transitions between classes are limited. If class is believed to be theoretically linked with, for instance, life chances in a broad sense ([Weber, 1968](#)), or more specifically with economic conditions in the long run ([Goldthorpe, 2000](#); [Goldthorpe & McKnight, 2006](#)), this is more plausible the more individuals stay in the same class for a long time. Second, intergenerational class mobility research that is empirically based on measuring associations between class origin (at one time point) with class destination (at one time point) requires a certain level of class stability in order to give valid estimates. It is within this field of research that the conventional view on occupational maturity has been settled, but the conventional view has also been challenged.

## 3. Challenges to the conventional view

The conventional view of class maturity was questioned already in the 1970s, and onwards, as it was suggested that there is quite a substantial level of occupational shifts across the life course (C.f. [Mayer & Carrol, 1987](#); [Sørensen, 1975](#)). Generally, there has been a growing interest in studying intragenerational careers with the use of new data, new methods, and subsequently more possibilities to make comparisons across historical time (e.g. [Blossfeld, 1986](#); [Kalleberg & Mouw, 2018](#); [Rosenfeld, 1992](#)). There are at least three types of findings that can be seen as challenging for the conventional view: (1) that maturation is not reached before the age of 35, (2) that there are cohort differences in maturation, and (3) that it is not enough to set the age limit at 35 to achieve robust inter-generational mobility rates. Our interest is mainly in the two first categories of findings as we are interested in maturation per se and not primarily in the role of maturation for achieving robust inter-generational mobility rates.

In a recent Swedish study based on cohorts born 1943 to 1947 it is indicated that that class maturity tends to occur much later than usually expected: first around the age of 45 ([Shahbazian & Bihagen, 2022](#)). Also, it is indicated that there are substantial levels of shifts during individuals' late-careers. This finding seems to go against the conventional view on maturation. This study is only based on indirect evidence of maturation, i.e. the distribution of class by age, and not on individuals' transitions. There are probably more transitions than what is indicated here since transitions between two time points to some extent even out each other: e.g., one transition from working class to service class even out one transition in the other direction.

One obvious challenge to the idea of occupational maturation at a specific age would be evidence of less or delayed stabilization of careers across cohorts, and there are some indications of this. [Bernhardt et al. \(1999\)](#) found that job instability for young adults, using a selected sample of US-data, increased between the 1980s and the 1990s compared to those of the same age in the 1960s and 1970s. In a more recent study, [Jarvis and Song \(2017\)](#) use the *Panel Study of Income Dynamic* from US and find that intragenerational occupational mobility increased between 1969 to 2011, especially among men. Their analysis is based on micro-classes as well as big classes, and they report that the rise in mobility is quite general, although the increase is mostly found at the micro-level. However, [Lin and Hung \(2022\)](#) partly question this conclusion, and their results suggest that mobility is increasingly between similar occupations.

A thorough comparison of birth cohorts across time is found in [Lersch et al. \(2020\)](#) based on the German Life History Study and the German National Educational Panel Study. They focus on the variability in individuals' occupational prestige trajectories in Germany for cohorts born between 1919 and 1979 and draw the following conclusions. First, individuals' prestige trajectories are characterized by large variability not only during an initial phase after labor market entry (first five years) but also later on. Second, they show that birth cohorts systematically differ in their mobility variability; cohorts who entered the labor market in the late 1950s and 1960s have exceptionally homogenous trajectories while both earlier and later cohorts are more heterogeneous in their trajectories.

These results can be compared with the results of [Bukodi and Goldthorpe \(2011\)](#), based on three male birth cohorts followed in three British datasets. An interesting aspect of this study is that it aims at constructing a direct measure of occupational maturity which will be discussed further below. The study indicates that the cohort born in 1946 reached occupational maturity later than the 1958 and the 1970 cohorts, while the 1958 cohort had less career growth than the other two. [Bukodi and Goldthorpe \(2011\)](#) conclude that there is variation in occupational maturation across both individuals and cohorts. In another study based on Swedish data with retrospective occupational biographies for both men and women, [Härkönen and Bihagen \(2011\)](#) report a delayed stabilization in occupational prestige for cohorts born after the mid-1940s, and even more so for later born, compared to those born earlier (from the mid-1920s). Moreover, it is indicated that there is a drastic gender convergence in careers across cohorts, where women tend to have career growth more in line with men and for the later cohorts born in the 1970s even somewhat more growth than men (see also [Härkönen et al., 2016](#)). To sum up so far, studies indicate that occupational stabilization differs across cohorts, but the studies do not generally indicate a prolongation of maturation in a longer historical period at least not for Britain and Germany (see also [Manzoni et al., 2014](#)), while the studies for Sweden and studies based on more limited data in time for US indicate such a development.

Given that there are several similar profound labor market changes in all countries discussed above we could have expected cohort differences in maturation to be similar as well. Such trends include the historical trends of occupational upgrading (growing service class), educational expansion, and gender convergence in labor market participation. However, first, countries differ in the timing of these processes, e.g., in female labor force participation ([Besamusca et al., 2015](#)), and second; expectations on how such processes affect occupational maturation are not clear-cut. For instance, trends of educational expansion and occupational upgrading may affect matching processes in the labor market in tandem, e.g. a relatively more rapid pace in educational expansion may lead to a larger proportion of overeducated and a prolonged matching process/a delayed maturation (C.f. [Brückner & Mayer, 2005](#); [Pallas, 1993](#); [Thomsen et al., 2017](#)). In terms of gender convergence, women in older cohorts, experience less career progression than women in younger cohorts during child rearing ages ([Härkönen et al., 2016](#)). This may result in earlier maturation for these older cohorts but it could also lead to delayed career progression.

As we saw above the conventional view originated from the field of intergenerational mobility and there are also more recent studies that have studied the impact of measuring class of destination with different age limits. Measuring class of destination at different ages has been shown to matter for both the level of absolute and relative intergenerational mobility. For Britain, it has been shown that there is more absolute upward (and less downward) inter-generational class mobility if class of 'destination' is measured at age 38 instead of 27 although trends across cohorts are rather similar ([Bukodi et al., 2015](#)). However, for relative mobility using destination class at the age of 27 there is a trend of increasing fluidity for both women and men while this trend is not replicated for men when the measuring point is 38 years instead ([Bukodi et al., 2015](#)). Another recent study shows that trends of

increasing fluidity in both Germany and Britain disappear when measuring class of destination at a later stage in the career as career counter mobility reduces fluidity ([Trinh, 2023](#)). Hence, there is some evidence that estimations could be biased by setting the age of class of destination too low. Nonetheless, using the 38 years criteria is almost in line with the conventional view that maturation is reached around the age of 35 ([Breen & Jonsson, 2007](#); [Erikson & Goldthorpe, 2002: 31](#); [Goldthorpe, 1987](#)). [Bukodi et al. \(2015\)](#) do not test implications of using even higher age criteria than 38, and [Trinh \(2023\)](#) mainly use data for the first 15 years of careers. Hence, we do not know if it is enough to follow individuals up to around this stage of the career for reaching robust results (see also footnote 4 in [Trinh, 2023](#)). In all, the recent studies described here do not refute the conventional view but they indicate that the age when measuring class matters for trends in inter-generational mobility, and also, indirectly that there are cohort differences in maturation.

To sum up, there are challenges to the conventional view of maturation. Studies indicate that occupational/class maturation comes later than what would be expected and there are cohort differences in maturation. However, there is a lack of studies that use direct evidence, i.e. evidence based on transitions across the life course, with a wide coverage of cohorts and this will be our contribution. Previous research suggests that there are country differences in maturation so the conclusions of our study on Sweden will not necessarily be valid in other countries which we will return to in the concluding part. With our focus on maturation it is of relevance to also discuss definitions more in detail and how we use the concept.

#### 4. Defining occupational and class maturation

In [Goldthorpe \(1987\)](#) occupational maturity is described in terms of a "marked falling off in the probability of job changes involving major shifts of occupational level". This is further developed and also estimated by a model in [Bukodi and Goldthorpe \(2011\)](#) where predictions of reaching maturity at a specific month are made given the occupational level of the first job, age, and interaction terms between age and educational qualifications (see also [Bukodi & Goldthorpe, 2009](#) for a longer version). The measure of reaching maturity is based on having smaller probabilities of occupational change in all upcoming subsequent months up to the age of 34.

Thus, occupational maturity is clearly defined in [Bukodi and Goldthorpe \(2011\)](#) and it opens up for occupational maturity to occur at different ages for different individuals, which is an interesting idea, but there are some possible downsides with this definition. First, in the models used by [Bukodi and Goldthorpe \(2011\)](#) probabilities of class change are assigned to individuals using an extrapolation technique. Thereby, it is somewhat unclear if the analyses shed light on individuals' occupational maturity or the group-based phenomenon of class maturity. Second, with right censored longitudinal data at age 34, there is a risk that months after 34 years of age will entail job shifts with major shifts of occupational level and, hence, the level of maturity will risk being overestimated. Third, it is not completely clear why a model approach is used and how the inclusion of variables in the model affects the level of maturity.

Hence, we prefer a more descriptive approach where an advantage also is that cohorts can be followed up to the age reached in data so that more data can be used, i.e. not using a common maximum age for all cohorts. Moreover, we find it fruitful to distinguish between, on the one hand, the process of occupational and class stabilization across the life course which can be described as maturation, and on the other hand: the stage when this process has ended with individuals typically reaching their occupation respectively class of destination, which can be described as maturity. Using the terms accordingly also opens up the possibility that a "marked falling off" does not necessarily lead to maturity in terms of a reached class and occupational destination. That individuals tend to slow down their class/occupational transitions is

then taken as a sign of maturation while, on average, complete falling off in transitions is perceived as maturity and that the final destination of class and occupation is reached. Obviously, there is a proportion of uncertainty if this state is reached when there is lacking future data for more younger cohorts, but we are still able to compare if there are indications of cohort differences in maturation.

## 5. Research questions

As mentioned in the introduction our aim is to contribute to the literature by providing a thick description of the maturation of careers in terms of both occupational prestige and class across a relatively long historical time period in Sweden. Our main research questions are:

1. At what age do women's and men's career transitions slow down and how much do they slow down, focusing on age of last transition (class and prestige) and accumulation of transitions?
2. How do this slowing down of transitions differ between cohorts (individuals born from 1925 to 1984) and genders, as well as within cohorts and genders (comparing across quartile groups)?

We find it plausible that there are substantial cohort and gender differences given the profound labor market changes during the historical period covered. However, it is an open question how such differences develop across cohorts and genders, although previous research suggests, for the case of Sweden, that maturation comes later in life for later born cohorts. As additional analyses we also report the combined gender-cohort differences by current class to see if such patterns differ by class. Given occupational upgrading the service class is growing and it could be the case that delayed career transitions are a consequence of this and, hence, it is of interest to study if cohort differences are similar in classes. Finally, as a sensitivity test, we report gender-cohort differences in the accumulation of transitions by years since the first job instead of by age to see if results are driven by delayed labor market entries.

## 6. Data and variables

In this study, we use occupational biographies that are retrieved from Swedish *Level-of-Living-Surveys* (LNU) collected in the years 1991, 2000, and 2010. LNU is a random nationally representative sample of the Swedish adult population, which has a panel structure in which individuals participate repeatedly, from its starting year 1968. When individuals are no longer in the sample frame, they are replaced by individuals who were too young to take part in the previous survey. Therefore, each wave of LNU can be used as a nationally representative sample for cross-sectional purposes.

In the LNU survey, respondents are asked to report each employment activity (including starting and ending times of each such activity) starting from the first job they held that lasted for 6 months or more. From this data we retrieved occupational biographies giving detailed information on when the respondents entered and exited different occupations and classes throughout their careers.<sup>1</sup> This data-set will allow us to use different occupational based measurements in order to investigate when class/occupational maturation occurs. We divide the sample

<sup>1</sup> There is an inflow and outflow of individuals in paid work over the course of their lives, as a result occupational information is lacking during these periods. For shorter periods of break, we assume that people have no alteration in their class belonging or occupational prestige. Therefore, for shorter term absences (<2 years), due to skill enhancement, unemployment, sick leave, parental leave, etc., prior class or SIOPS information is used. For extended education (2–4 years), the previous class or SIOPS information is used. For long-term absences, exceeding 2 years (4 for education), class and SIOPS are coded as missing data.

into six birth cohorts: born between 1925–34, 1935–44, 1945–54, 1955–64, 1965–74 and 1975–84. We can follow individuals until the year 2010, which implies that we follow our first birth cohort (1925–1934) for 50 years, while we can only follow the last birth cohort (1975–84) for 10 years. One potential issue with retrospective data, particularly data collected from events that occurred long ago, is the presence of recall bias (Manzoni et al., 2010). This bias can affect the reliability of the data, as individuals may tend to simplify complex past events in their recollections (Rubin & Baddeley, 1989). The study by Manzoni et al. (2010) indeed identified such errors in the data but noted that these errors did not significantly distort the core findings. Additionally, there is supporting evidence suggesting that retrospective biographical data can provide reliable and valid documentation for past employment histories (Wahrendorf et al., 2019), but also when it comes to information for well-being outcomes (Jivraj et al., 2020).

Class is measured by the *European Socio-economic Classification* (ESeC) which is an updated version of the *Erikson-Goldthorpe-Portocarero* (EGP) class schema (Rose & Harrison, 2007). Class position is derived from individual's employment contracts (Erikson & Goldthorpe, 1992). There are basically three broad employment relationships for classes of employees: those with service contracts (the service class/es), those with labor contracts (the working class/es) and those with contracts that are somewhere between the former two contracts (the mixed class/es). The labor market also contains self-employed individuals, who do not have any employment contract type. Thus, we are able to distinguish between four different class categories and our main analysis are based on: the service class (ESeC 1 + ESeC 2), the mixed class (ESeC 3 + ESeC 6), the working class (ESeC 7 + ESeC 8 + ESeC 9) and the self-employed (ESeC4 + ESeC5). Using this more aggregated version of ESeC could be seen as a conservative approach (Houseworth & Fisher, 2020), in the sense that a more fine-grained class schema would allow for more intragenerational mobility across the life-course.<sup>2</sup>

Besides class we also use the occupational prestige scale, the *Standard International Occupational Prestige Scale* (SIOPS), which measures the relative social standing or prestige of occupations. The SIOPS scale ranges between 13 and 78 in our data. Using prestige scores in social stratification research has a long history and represents a hierarchy of individuals positions that reflect shared norms and values in society (Reiss, 1961; Treiman, 1977). Goldthorpe and Hope (1974) also argue that occupational prestige captures occupations' desirability and the degree of success of the employees in these occupations. SIOPS, also known as the Treiman scale, has been described as capturing prestige hierarchies that are generally constant over time and space (e.g. Hauser & Warren, 1997; Treiman, 1977) and Hout and DiPrete (2006: 3) write: "...the Treiman constant may be the only universal sociologists have discovered – not just in stratification but sociology as a whole". This makes SIOPS ideal for the aim of this study, as we look at changes across birth cohorts born between 1925 to 1984.<sup>3</sup>

We divide our data into three different sub-samples, where we follow individuals from age 15 up to 64. These three samples are supposed to address potential selection issues regarding inclusion criteria that might distort our results. Table 1 shows the number of valid occupational information that each cohort in each sample has. Sample A has no restrictions, besides that respondents must have valid occupational information during the age they are included in the surveys. Sample B

<sup>2</sup> Our findings are replicated with a more detailed class schema although mobility is higher. See Appendix A, Fig. A7 where ESeC with an 8-class category is used instead of 4.

<sup>3</sup> Prestige scores (SIOPS) cannot be derived for self-employed (appr. 6.8% of all person-years). To address this, episodes involving self-employment are substituted with a global mean SIOPS value. In addition, sensitivity tests were conducted, where self-employed episodes were imputed using data from the previous episode, and all self-employment episodes were excluded. All these adjustments produce similar results.

**Table 1**  
Number of valid occupational years by sample and cohort.

	Cohorts					
	1925 – 34	1935 – 44	1945 – 54	1955 – 64	1965 – 74	1975 – 84
<b>Sample A</b>	No restriction	No restriction	No restriction	No restriction	No restriction	No restriction
<b>Sample B</b>	20 years valid	20 years valid	20 years valid	20 years valid	No restriction	No restriction
<b>Sample C</b>	40 years valid	40 years valid	30 years valid	20 years valid	No restriction	No restriction

must have at least 20 years of valid occupational values. This criterion does not apply for cohorts 1965–74 and 1975–84, because we cannot follow them for 20 years in the labor market. Sample C is the most restricted sample, where respondents only can have 10 years of missing information about their occupation. As a result, respondents in the following cohort must have valid occupational information for 40 years for cohorts 1925–34 and 1935–44, 30 years for cohort 1945–54, and 20 years for cohort 1955–6. However, this criterion does not apply for cohorts 1965–74 and 1975–84, because we cannot follow them for 20 years in the labor market.

The main results of this paper are based on sample A. The main reason is that people in some occupations may have shorter longevity (e.g. [Torssander & Erikson, 2010](#)), and therefore sample A will produce the least biased results. However, even sample A could be biased in the sense that some individuals will choose not to participate or die before they are given the opportunity to report their occupational biography. Therefore, the results are replicated with more restricted samples, and what we assume to be more biased samples, to see if results are robust across samples and this is generally the case.<sup>4</sup> Our analytical sample A contains total 132,021 person-years, [supplementary Table B1](#) in the one-line [Appendix B](#) shows the number of person-years across our six cohorts divided across gender and age (between 15 to 64 years).

## 7. Results

One way to illustrate maturation is to look at the class distributions by age to see if changes in the distribution slow down and eventually come to a standstill. In [Fig. 1](#) such distributions are shown separately for cohorts and genders, and across all cohorts, we see a steep decrease in the proportion of the working class across the life course and a corresponding increase of the other classes and most consistently so for the service class. The oldest cohort (born 1925 to 34) most clearly has a relative quick stabilization of the distributions, up to the age of around 30, followed by almost complete flat lines indicating that individuals of this cohort have reached their final class of destination. This pattern is seen for both women and men. Even for the next three cohorts (born 1935 to 44, 1945 to 54, and 1955 to 64) there are patterns of stabilization from around the same age, but the decrease of the working class continues together with the increase of the service class. Hence, the figures indicate maturation for these cohorts, i.e. the slowing down of the changes in the distributions, but still not that maturity is reached in general, i.e. the proportions still continue to change. The more recent cohorts are followed only up to 35 and 25 years of age, and there are hardly any indications of maturation before these ages are reached. In all, [Fig. 1](#) indicates that maturation is a process that continues across the life course for all cohorts that can be followed for a long period of time, with the exception for the oldest cohort where the lines flatten out from around the age of 30 to 35.

Going over to means of occupational prestige by age in [Fig. 2](#), which can be seen as the equivalent analyses as the previous, we see similar patterns in several respects. First, there is clear evidence of maturation from around the age of 25. Second, however, this only leads to a horizontal line for the oldest cohort (born between 1925–34). Third, there

<sup>4</sup> The results for Sample B and C can be found in the on-line [Appendix A](#), and the results are reasonably similar across the three samples.

are clear cohort differences where the lines are more upward the younger the cohort, and for the two youngest cohorts we cannot, at least not yet, see indications of maturation. As in previous research (e.g., [Härkönen & Bihagen, 2011](#)), where the same data is used, there is even a downward trend, or at least a dip, of occupational prestige of women for the oldest cohort that is probably due to career interruptions in relation to parenting. In all, there are clear differences between the cohorts for both genders but even more so for women.

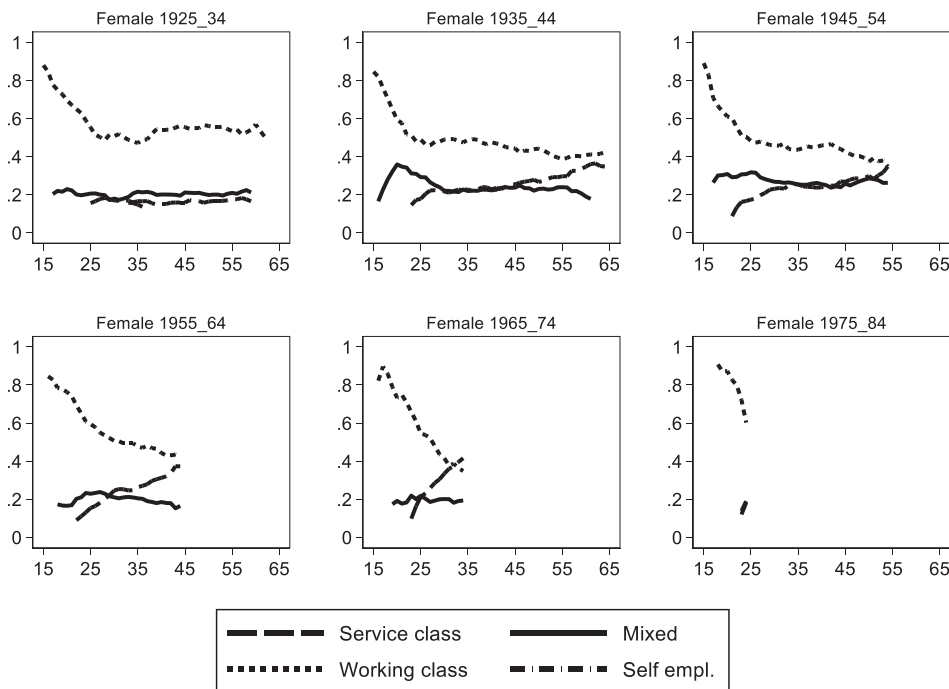
While [Figs. 1 and 2](#) only are based on indirect evidence of class maturation, i.e., they do not show the actual individual level of transitions across classes and occupations, the upcoming figures show more direct evidence. In [Fig. 3](#) the mean age of the last change in class by age is shown. In [Fig. 3](#) we see that individuals on average, from the age of 25 and onwards up to the age of 65 (for the two oldest cohorts born between 1925–34 and 1935–44), changed their class from around the age of 18 to 35. It is interesting to see that there is no clear indication of a flattening out of these lines until the age of about 55, which can only be shown for the oldest two cohorts. The roughly linear increase shows that there is an on-going mobility across classes up to relatively high ages. Moreover, the patterns of [Fig. 3](#) point towards a delayed maturation across cohorts where the lines are flatter for older cohorts and especially for women in the oldest cohort. For men, it is rather the two oldest cohorts that deviate most from the other.

A very similar pattern is seen when shifting focus from class to occupational prestige (i.e., the last occupational shift that entails a change in prestige scores. See [Fig. C1 in the online Appendix C](#)). However, the last prestige shift is on average closer in time (i.e., closer to the current age) than the average class shift. This is expected and indicates that prestige shifts are often taking place within a class.

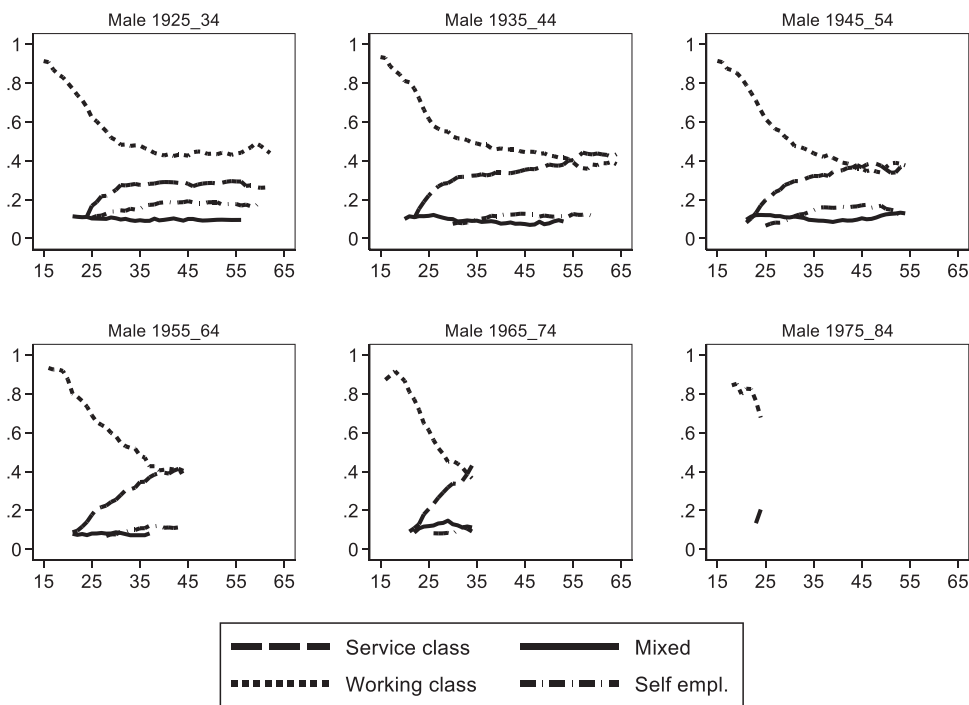
In [Fig. 4](#) the analyses of [Fig. 3](#) are complemented with measures indicating variation by also reporting the first and third quartiles to indicate the level of variation in the age for the last class shift. This is of great interest as it may be the case that quite a few ends up in their class of destination early, while other do not, and this turns out to be the case. The variation in the age for the last class shift is strikingly large for all cohorts as can be seen for the values of the first and third quartiles. Hence, there is indeed a sizeable proportion that ends up in their class of destination at a relatively young age but there is also a substantial proportion that changes class at high ages. Also, across the cohorts the age for the last class shift is even increasing for the first quartile indicating that the group with stable class positions are smaller than 25%.

Another way to deepen the description of career maturation is to study the variation by class. One important aspect of the upgrading of the labor market is a shrinking working class and a growing service class ([Moawad & Oesch, 2023](#)). Hence, the delayed maturation across cohorts seen in [Fig. 3](#) could be a consequence of a growth of classes where maturation typically comes later i.e., the service class since entrance to this class often requires tertiary education and/or promotion. If the cohort differences were driven by a growth of the service class we would not expect cohort differences within classes. To shed light on cohort differences by class, we reran the analyses of [Fig. 3](#) in order to see differences in the timing of making the last class shift by current class held at different ages. In [Fig. 5](#) we see that there are cohort differences in each of the classes that resemble those of the full sample (see [Fig. 3](#)); later cohorts were at higher ages when shifting class the last time, although with some variation, and less so for working class women. The self-employed and mixed class (for men) stands out as the class with the

**A: Women, six different cohorts**



**B: Men, six different cohorts**



**Fig. 1.** Class distribution by age, women and men in different cohorts, *Note:* The y-axis is proportions (from 0 to 1) and the x-axis is the age from 15 to 65 years. Only cells with more than 30 respondents are shown in the figure.

most recent shift into this class. Actually, there are not many self-employed women in our sample, indicated by the missing lines; only cells with over 30 respondents are depicted in the figures. Another specific pattern is seen in Fig. 5 for women in the service class in the oldest cohort where there seems to be a relatively low inflow of women in this class in the ages 30 to 40. Over-all it is worth noting, first, that the cohort differences from Fig. 3 are to a large extent seen in classes as well,

and second, the variation seen in Fig. 4, between the first and the third quartile, is larger than the variation across classes as depicted by means.

So far, we have focused on age of last career transition but another interesting aspect of maturation is the accumulation of transitions between classes and occupations across age, i.e. the number of shifts from the first job which is counted as 1. This is shown in Fig. 6 for class (or occupational prestige see Fig. C2 in the on-line Appendix C). Generally,

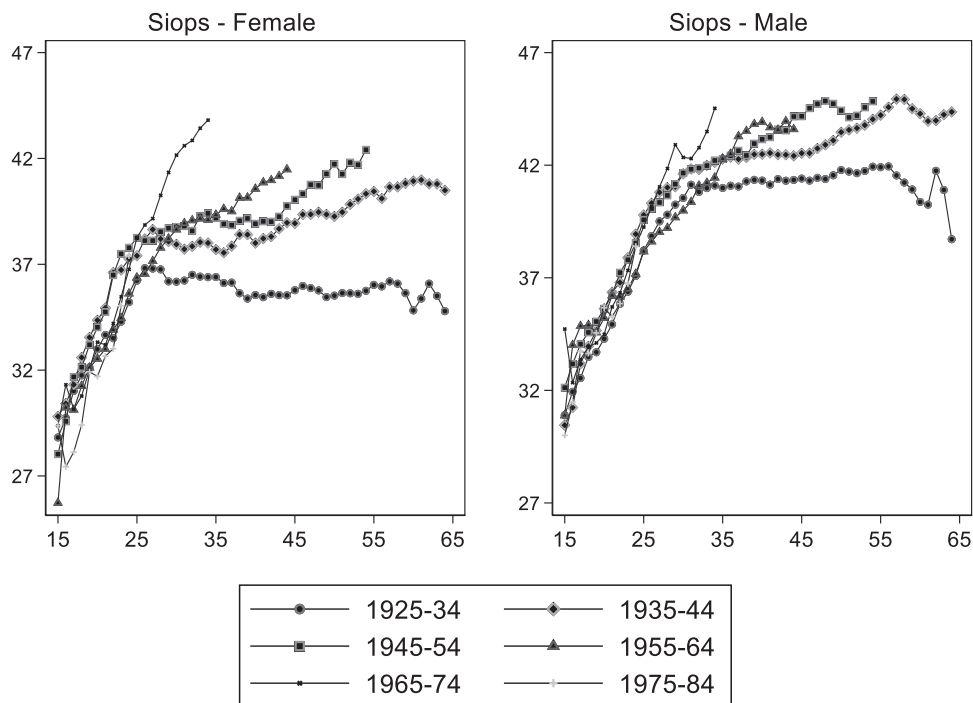


Fig. 2. Mean occupational prestige by age, women and men in different cohorts, Note: The y-axis is siops scores (occupational prestige scores) and on the x-axis is the age from 15 to 65 years. Only cells with more than 30 respondents are shown in the figure.

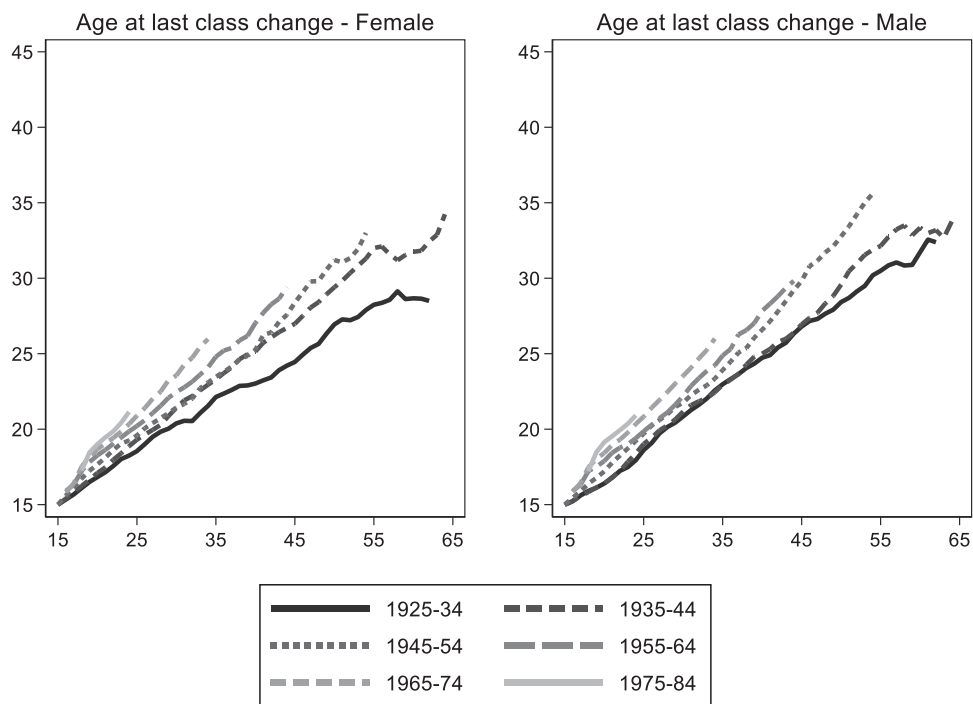
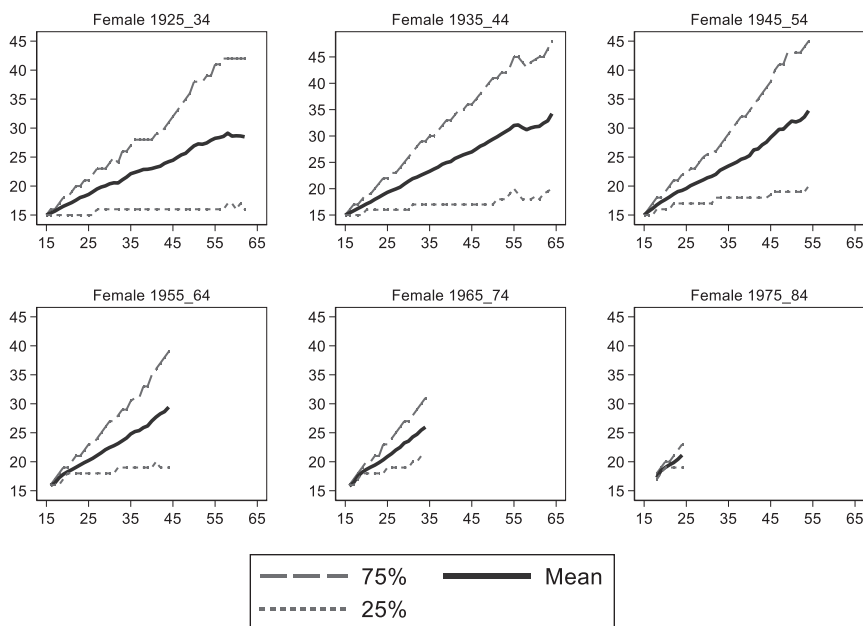


Fig. 3. Mean age at last class shifts by age, women and men in different cohorts, Note: On the y-axis is the mean age at the last class shifts (from 15 to 45) and on the x-axis is the age from 15 to 65 years. Only cells with more than 30 respondents are shown in the figure.

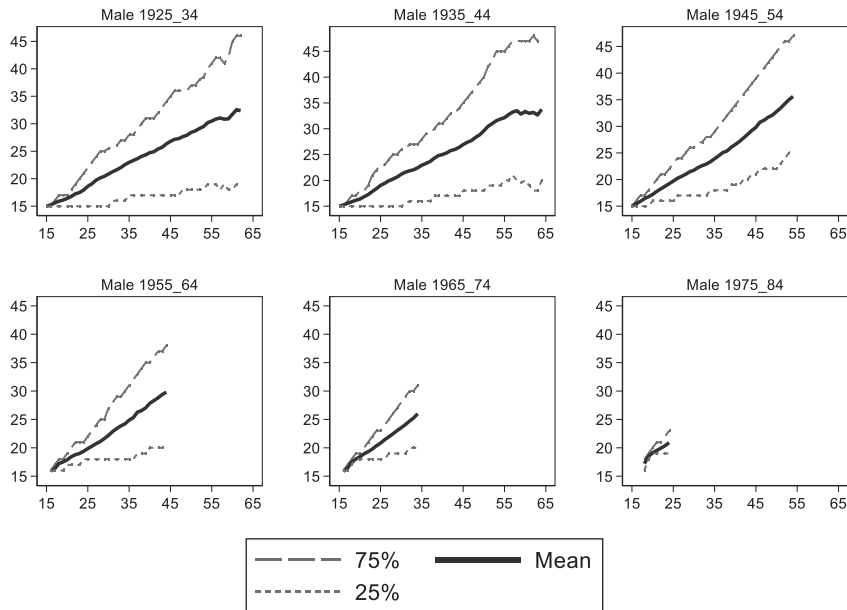
there is a striking similarity in the patterns based on class shifts and occupational shifts, for each gender, although occupational shifts are more common than class shifts as expected. For the oldest cohort there is a clear pattern of maturation from about the age of 25, i.e. the curves are flattening out, but once again they are not flat until the age of around 55 (and also reversed after the age of 55 which indicates that the oldest annual birth cohorts in the aggregated birth cohort had somewhat less

accumulation of shifts). There are some indications of maturation for the cohort born 1935 to 44, as well, and a flattening out of curves around the age of 55 but the maturation phase is not clear as it is even a somewhat increased level of shifts around the age of 45. For the other cohorts, there is more growth in the accumulation of class and occupational shifts. Over all, there is clear evidence of cohort differences where the number of shifts increase for later born cohorts.

**A: Women, six different cohorts**



**B: Men, six different cohorts**



**Fig. 4.** Mean, first (25%) and third (75%) quartile at last class shift by age, women and men in different cohorts, *Note:* On the y-axis is the mean age at the last class shifts (from 15 to 45) and on the x-axis is the age from 15 to 65 years. Only cells with more than 30 respondents are shown in the figure.

Finally, when it comes to results, one important sensitivity analysis to present is to replace “age” by “years since entering the labor market” (defined as having a job for at least 5 months). This since prolonged education may result in a delayed career in terms of age, but not in terms of time spent in the labor market. Hence, it is interesting to show if age patterns across cohorts are replicated when looking at time spent in the labor market instead. Therefore, Fig. 7 is a replication of Fig. 6, but with time spent in the labor market instead of age, and in all, the patterns look very similar. Hence, the cohort differences do not seem to be driven by the prolongation of education.

**8. Discussion**

So, are there empirical support for the idea that individuals tend to establish themselves in an occupation and class relatively early in working life and stay there? Our analyses based on Swedish data indicate that there are substantial levels of transitions throughout work life and increasingly so across cohorts. Actually, there is hardly any evidence of maturity being reached in the Swedish case, at least not in the sense that the lion part reaches their class and occupation of destination before a certain age is reached. For those born before the mid 1940’s there are clearer signs for a slowing-down of transitions in terms of occupation and class, but even for these cohorts, there are, first, considerable levels



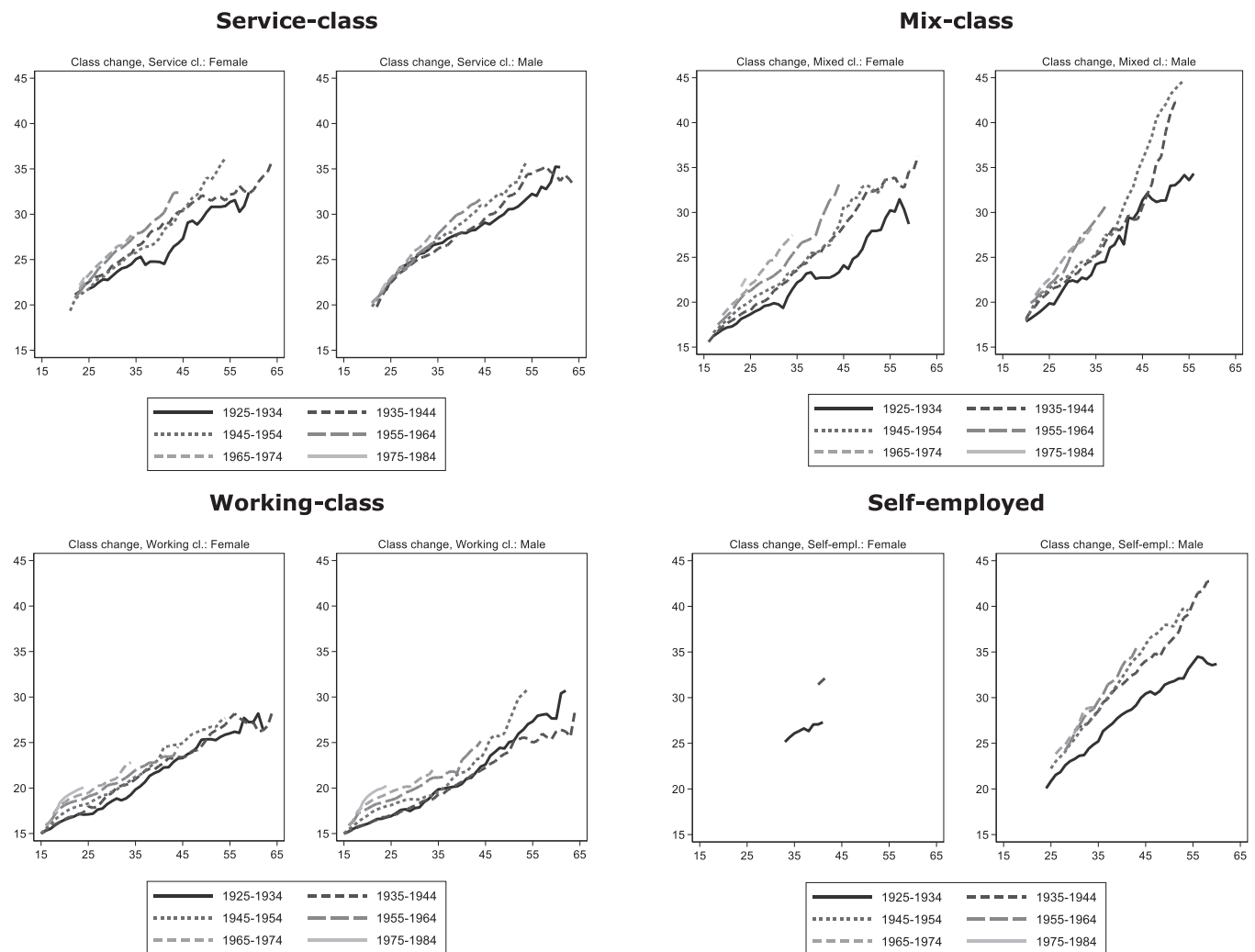


Fig. 5. Mean age at last class shifts by age, women and men in different cohorts and classes, Note: On the y-axis is the mean age at the last class shifts (from 15 to 45) and on the x-axis is the age from 15 to 65 years. Only cells with more than 30 respondents are shown in the figure.

of variation and, second, a continuation of transitions up to the age around 55.

It is of interest that if we only take the distributions of class and prestige into account there are clear indications of a stabilization of the relative sizes of classes, respectively the averages of prestige, from around the age 25 to 35. This could lead to the impression that class and occupational maturity is reached early in life, on average, but it is important to look at direct evidence based on transitions. That there is a stabilization in terms of class distributions and prestige scores, on the one hand, and no corresponding decline in transitions, on the other hand, probably indicates that transitions are more in line with career progression in the first half of working life while being more in both directions in the second half of working life.

When it comes to gender differences the patterns of maturation are generally similar across the sexes. However, women born before the mid-1930s have a pattern more in line with maturation which is likely to be related to career interruptions at child-rearing ages that halted the career progression. This contributes to larger cohort differences for women than for men. Although this cohort of women comes closest to a career pattern of maturation there is still a considerable variation in the typical age of the last class transition.

Given our results, occupation and class should not generally be seen as positions of destination from a certain age but rather as time-varying positions pointing to the need of using longitudinal data. As a first example, if we are interested in mobility across generations this will, on

the one hand, potentially be challenging since the positions are varying for both generations and increasingly across cohorts. On the other hand, if transitions, on average, are less upward after individuals are in their 30s estimates of inter-generational mobility will perhaps not be biased in any specific direction. More research is warranted, in line with Trinh (2023), but where individuals are also followed later in life, to study how intergenerational mobility estimates are affected by differences in the ages of measurement and also across cohorts. As a second example, if we are interested in the class/socio-economic status health gradient it seems warranted to include longitudinal information to measure the time spent in positions that can be detrimental to health (Kjellsson, 2013). It is also worth considering health as one of several potential factors behind having frequent transitions between occupations.

Nevertheless, if class/occupational position should be viewed as a time-varying measure – much in line with how yearly earnings/income is treated in analyses – it would mean that traditional arguments used by sociologists (e.g. Hauser & Warren, 1997) for advocating the use of occupational-based measures in cross-sectional surveys (such as less recall error, more internal-stability, less sensitive) would be less valid.

One interesting avenue of research is to study the variation in maturation (see also Bukodi & Goldthorpe, 2011). Our results indicate that there is a substantial part of the workforce who actually ends up in a class and occupation of destination early in work life but also a larger part that continues to change occupations across the life-course. Put differently, career maturity seems to be reached early in life by a

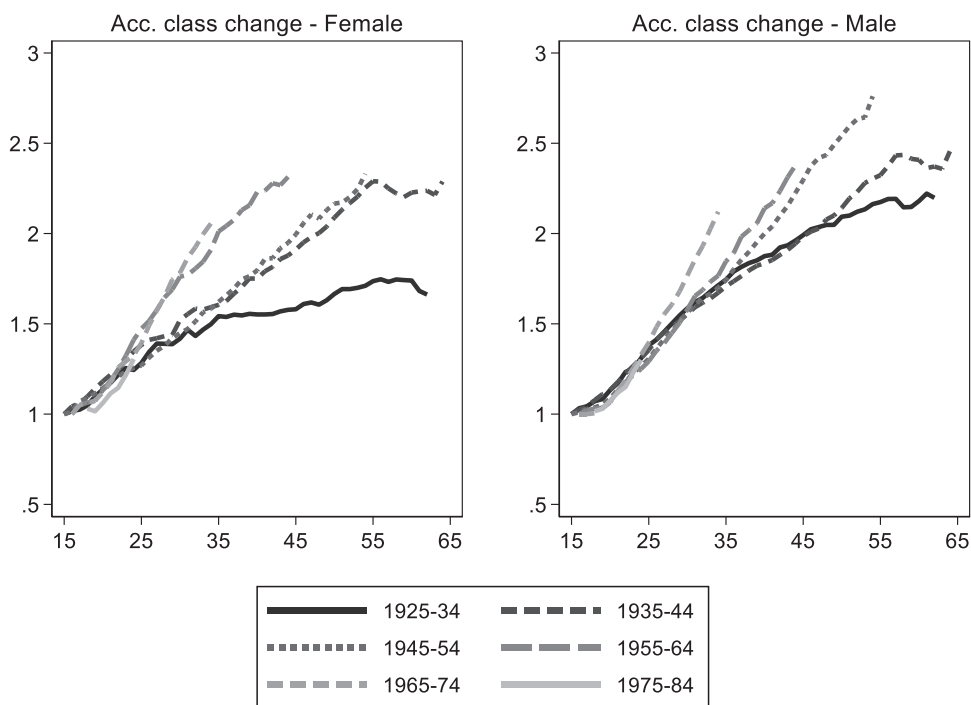


Fig. 6. Accumulative class changes by age, women and men in different cohorts, *Note:* On the y-axis is the mean accumulative class change, and on the x-axis is the age from 15 to 65 years. Only cells with more than 30 respondents are shown in the figure.

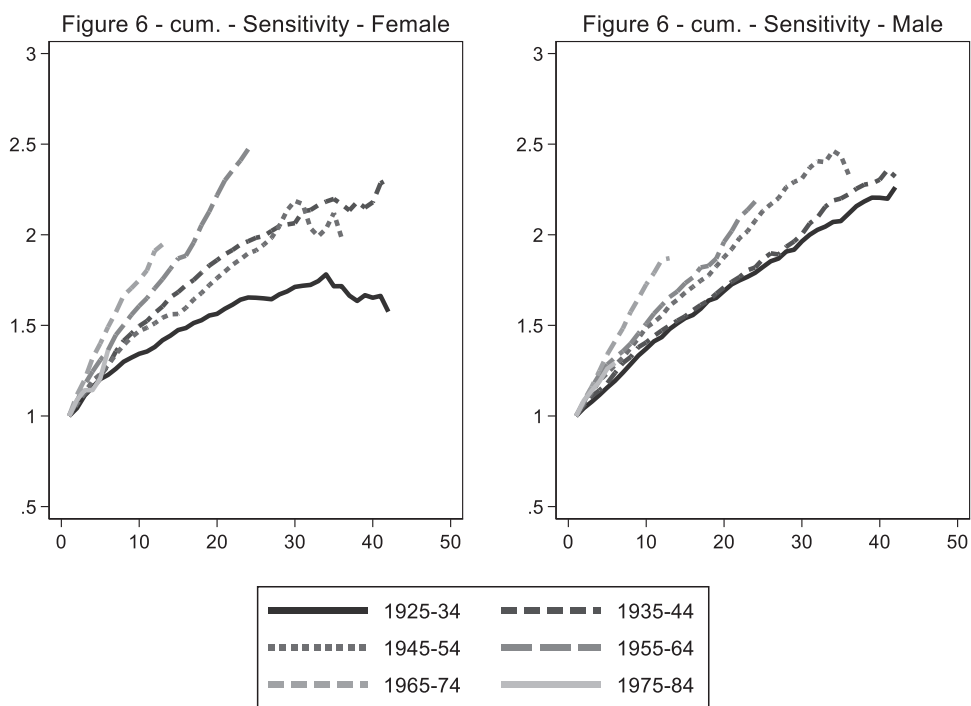


Fig. 7. Fig. 6, but with years from first job instead of age, *Note:* On the y-axis is the mean accumulative class change, and on the x-axis is the years after entering the labor market (from 0 to 50 years). Only cells with more than 30 respondents are shown in the figure.

proportion roughly around one quarter of the working population and this proportion seems to diminish in size across cohorts. It would be interesting to know more about the mechanisms behind this variation and the role of, for instance, restructuring in the labor market, in industries, or in local labor markets, as a driver of the change. Could it be the case that a continuous restructuring of the labor market, e.g. a declining agricultural sector throughout the 20th century a declining

manufacturing sector from the 1970s and a growing service sector, have ‘forced’ individuals to change occupation across the life course? If so, cohort replacement of individuals has not been enough to adjust for changes in the supply of jobs. Our results indicate that the cohort differences are not entirely driven by compositional changes in the way that more individuals are found in the service class across historical time or that labor market entry is delayed (due to more years in schooling).

Hence, there seem to be other driving forces for the cohort differences.

A possibility worth considering is that both the increase in and the magnitude of occupational transitions are superficial and that most transitions are between similar occupations. However, since we use a class schema that only distinguishes four broad and arguably different classes this is not likely to be the case. If a finer-grain class schema would have been used, considerably higher levels of class variation would have been documented. Anyhow, boundaries of social classes may change across time and the renewed research interest in using network analysis to detect boundaries between occupational groups could be fruitful to map potential new boundaries of occupational groups (Cheng & Park, 2020; Lin & Hung, 2022; Toubøl & Larsen, 2017; Villarreal, 2020).

To sum up, the findings of this paper would in general speak against the idea of occupational maturity; although there is a tendency for individuals to slow down in terms of careers this comes later in life, to a smaller extent and less across cohorts than what arguably could be expected from the conventional view. The substantial levels of occupational/class transitions are also in line with research suggesting that class is not a particularly strong predictor of life-time earnings and the volatility in occupational positions could at least be part of an explanation of why this is the case (Brady et al., 2018; Kim et al., 2018; Shahbazian & Bihagen, 2022). The results of this paper are obviously restricted to the Swedish case, and more research is needed to see if the same lack of a general occupational maturity is found in other countries. Previous research indicates e.g. that there is more occupational volatility across careers in Sweden than in Germany (Härkönen et al., 2016). Also, the increasing volatility across cohorts, seen in Sweden, is not found in Britain or Germany (Bukodi & Goldthorpe, 2011; Lersch et al., 2020; Manzoni et al., 2014). Hence, the levels of occupational maturity and career volatility as well as trends between cohorts may differ across countries and more research is warranted to see if Sweden is an exceptional case or not.

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## Declaration of Competing Interest

There is no conflict of interest.

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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.2023.100884.

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