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Upward and downward social mobility probabilities have converged for men and women

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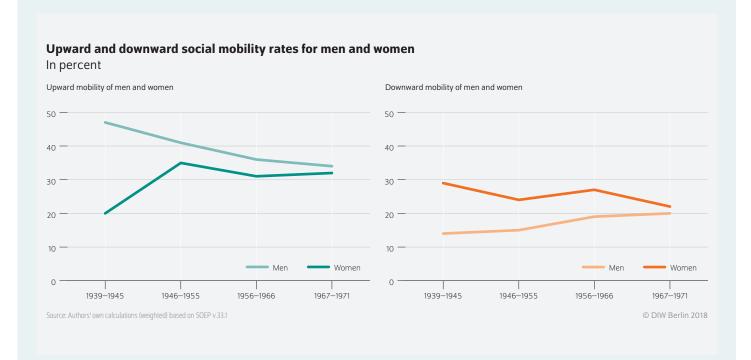
### **DIW** Weekly Report

#### AT A GLANCE

## Upward and downward social mobility probabilities have converged for men and women

By Nicolas Legewie and Sandra Bohmanr

- Analysis of upward and downward social mobility in regards to occupational status relative to that
  of parents
- · Changes in the overall level of social positions were observed
- The probability of achieving a higher occupational status still strongly depends on the parents' occupational status
- · Mobility patterns for men and women largely converged during the observation period
- Men experience downward mobility more often than before while women experience upward mobility more often



### FROM THE AUTHORS

The rates of upward and downward mobility for men and women have almost converged.

— Nicolas Legewie, survey author —

### MEDIATHEK



What about with Nicolas Legewie and Sandra Bohmann (in German)
www.diw.de/mediathek

# Upward and downward social mobility probabilities have converged for men and women

By Nicolas Legewie and Sandra Bohmann

#### **ABSTRACT**

This study investigates professional social mobility, i.e., changes in one's occupational status compared to that of their parents. It uses data from the German Socio-Economic Panel (Sozio-ökonomisches Panel, SOEP) on middle-aged, western Germans who were born between 1939 and 1971. On average, social status relative to parents has increased (absolute social mobility). However, looking at how positions change from parents to their children relative to their respective cohorts (relative social mobility) shows that, on average, little has changed in this respect since the Second World War. A person is still much more likely to achieve a position in the top status group if the parents already had such a position. Looking at specific social groups, the picture is more differentiated. Mobility patterns for men and women have largely converged during the observation period: men experience downward mobility more often than before and women experience upward mobility more frequently.

### Introduction

The idea of the "downwards escalator" has presented a new image of social mobility in Germany¹ that conflicts with the idea of the "elevator taking everyone upwards."² The former depiction questions the image of German society as upwardly mobile and shows there is still a great need for research on this topic.

A look at structural changes over the last decades allows various assumptions about how patterns of social mobility may have changed. One study recently showed that in Germany, income inequality before taxes and transfer payments has increased since the Second World War.³ Additionally, the "Great Gatsby" curve, which has been much discussed in recent years, could suggest a negative correlation between income inequality and social mobility: in countries with high income inequality there is less social mobility.⁴ It could therefore be assumed that social mobility has decreased since the Second World War. However, the fact that a large number of those from the younger generations attain a higher level of education than their parents and the economic upswing of the post-war period could have led to greater social mobility regarding occupational status.

This study examines professional social mobility since the Second World War in more detail using SOEP data for western Germany.

### Social mobility should be viewed in a differentiated manner

In this context, social mobility refers to changes in one's occupational status in comparison to the parents' status. Absolute social mobility describes the change in social status relative

<sup>1</sup> Oliver Nachtwey, Die Abstiegsgesellschaft: über das Aufbegehren in der regressiven Moderne (Berlin: Suhrkamp, 2016) (in German).

<sup>2</sup> Ulrich Beck, Risikogesellschaft: Auf dem Weg in eine andere Moderne (Frankfurt/Main: Suhrkamp, 1986) (in German).

<sup>3</sup> Charlotte Bartels, "Einkommensverteilung in Deutschland von 1871 bis 2013: Erneut steigende Polarisierung seit der Wiedervereinigung," DIW Wochenbericht, no. 3 (2018): 51–58 (in German; available online).

<sup>4</sup> Miles Corak, "Income Inequality, Equality of Opportunity, and Intergenerational Mobility," Journal of Economic Perspectives 27, no. 3 (2013): 79–102.

to one's parents: a person who is a skilled worker whose parents were unskilled laborers his upwardly mobile. Relative social mobility, on the other hand, measures the extent to which children are in a better position relative to their peers than their parents were: if many others in society move up at the same time by becoming skilled workers, the person may not have changed positions or may even have experienced downward mobility relative to others in society. That means that relative mobility abstracts from structural changes that lead to upward mobility in all positions—the previously mentioned elevator effect. Thus, relative mobility measures how easy it is to advance in a society.

Out of several possible approaches to measure social mobility, transition matrices are used in this study since they provide a differentiated picture of opportunities for upward and downward mobility (Box 1).

Data from the Socio-Economic Panel (SOEP), a long-term study conducted by DIW Berlin together with Kantar Public (formerly *TNS Infratest Sozialforschung*), are used to analyze social mobility.<sup>5</sup> In order to increase the comparability within the sample, our analysis is limited to people who were 45 years old<sup>6</sup> at the time the survey was conducted and who lived in West Germany before reunification. Respondents who had recently migrated to Germany at the time the survey was conducted were excluded.<sup>7</sup> Thus, our study focuses on middle-aged people who were born between 1939 and 1971 and either come from West Germany or at the time of measuring their occupational status, had lived at least ten years in West Germany.

A classification system based on occupational status, which has proved its value in the German mobility analysis, is used in this report to measure social status.<sup>8</sup> This classification system considers one's occupation as well as an individual assessment of occupational status (Box 2). If information is available on both parents, the higher classification is used.

#### Box 1

### Measuring dynamics in the distribution of social goods

Transition matrices are one method to measure social mobility, which is used primarily used in sociological research (Table). Unlike income and education elasticity, which represent a measure of social mobility "on average," transition matrices allow a more differentiated view of intergenerational social mobility. The method maps the origin and destination occupational status groups into a table and makes group-specific mobility movements between individual cells visible. For example, it can be seen that out of 317 people whose parents were executives, almost a third later occupy such positions themselves.

#### Table

### Transition matrix for the observed sample

Weighted number of observations

		Status of destination: Occupational status 45-year olds				
		Professionals and executive employees	(Highly-) qualified employees	Skilled craftsmen and employees completing simple tasks	Un- and semi-skilled workers	Total
Status of Origin: Parents' occupational status	Professionals and executive employees	105	117	81	15	317
	(Highly-) qualified employees	108	424	344	54	931
	Skilled craftsmen and employees completing simple tasks	199	878	1,446	475	2,998
	Un- and semi-skilled workers	21	192	392	279	884
Total		432	1,612	2,262	823	5,129

Note: The transition matrix above cross-tabulates the occupational status of children with their parents' occupational status. Rows contain the status of origin, i.e., parents occupational status, while columns contain the occupational status of the children measured at the age of 45, i.e. the status of destination. Transition matrices thus show from which origins the respective occupational status groups are recruited (columns) and which occupational statuses are reached by individuals from a particular status of origin (rows). The cells on the diagonal contain individuals who obtain the same occupational status as their parents.

Source: Authors' own calculations based on SOEP v.33.1.

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<sup>5</sup> SOEP is an annual representative tracking survey of private households that has been conducted since 1984 in western Germany and since 1990 in eastern Germany as well; cf. Gert G. Wagner, Jan Goebel, Peter Krause, Rainer Pischner, and Ingo Sieber, "Das Sozio-oekonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland – Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Anwender)," Arst Wirtschafts- und Sozialstatistisches Archiv 2, no. 4 (2008): 301–328 (in German). The SOEP data of transfer v33.1 is used in the following analysis.

**<sup>6</sup>** It makes sense to measure the outcome variable at a uniform time at the age of 45 since at this age few status changes are to be expected within the occupational status scheme used. Missing information at 45 will be gradually filled in with the next closest information if available, meaning information from 44 or 46, 43 or 47, and so forth. The final age range is therefore 40 to 50 years, with over 90 percent of our observations referring to 45-year-olds.

<sup>7</sup> This applies in particular to the M2, M3, and M4 samples, which specifically interviewed migrants and refugees. Martin Kroh, Simon Kühne, Jan Goebel, and Frederike Preu, "The 2013 IAB-SOEP Migration Sample (M1): Sampling Design and Weighting Adjustment," SOEP Survey Papers, Series C – Data Documentation (2015) (available online); Martin Kroh, Axel Böhm, Herbert Brücker, Jannes Jacobsen, Simon Kühne, Elisabeth Liebau, Jana A. Scheible, Jürgen Schupp, Manuel Siegert, and Parvati Trübswetter, "Die IAB-BAMF-SOEP-Befragung von Geflüchteten: Studiendesign und Feldergebnisse der Welle 1," Politikberatung kompakt, no. 123 (2017): 4–17 (in German; available online).

<sup>8</sup> In the style of Robert Erikson and John H. Goldthrope, *The constant flux*. A study of Class Mobility in Industrial Societies (Oxford: Clarendon Press, 1992). See also Reinhard Pollak, "Kaum Bewegung, viel Ungleichheit Eine Studie zu sozialem Auf- und Abstieg in Deutschland," *Schriften zu Wirtschaft und Soziales*, vol. 5 (2010) (in German); Olaf Groh-Samberg and Florian Hertel, "Ende der Aufstiegsgesellschaft?" in *Oben – Mitte – Unten, Zur Vermessung der Gesellschaft* from the Bundeszentrale für Politische Bildung (2015): 256–267 (in German).

#### Table 1

### **Occupational Status Groups**

- Professional and executive positions: High-level civil servants, professionals with and without employees (e.g., lawyers, medical doctors), employees with extensive managerial and supervisory functions
- 2 (Highly) qualified positions: Employees in jobs demanding a high level of qualifications and managerial functions, higher-level civil servants, self-employed with more than 10 employees.
- Intermediate positions: Employees with simple tasks and vocational training, middle- and low-level civil servants

  Skilled craftsmen: foremen, qualified craftsmen with supervisory tasks, master workman, (Meister/Clerk of works)

  Self-employed and farmers: self-employed individuals with up to 9 employees, farmers with up to nine employees
- 4 Semi- and unskilled positions: Employees with simple routine tasks without vocational training

Source: Authors' own depiction

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#### Box 2

### Coding of the occupational status scheme

To create the occupational status groups, groups were initially formed based on respondents' subjective assessments of their occupational position (Table 1). Respondents' assessments are examined by evaluating information about their occupation. If the two indicators clearly diverged, the respondents in question were regrouped according to occupation. Thus, judges, lawyers, chemists, other scientists, directors and chief executives, and university professors were assigned to the first status group, even if the respondents placed themselves in a lower group. Technicians and other non-technical professions belong to the second group. Employees with simple tasks (ISCO88 codes above 4,000) and technical employees and craftsmen (ISCO88 codes 7,000 to 8,999) are grouped in the third status group. All laborers (ISCO88 codes above 9,000) as well as unskilled sales staff, promotion staff, and ticket inspectors are assigned to the fourth status group (semi- and unskilled workers).

The schema used divides occupations into four status groups (Table 1). The first group consists of professionals and executive employees, such as doctors. The second group is comprised of qualified and highly-qualified employees, such as accountants. The third group includes employees completing simple tasks and skilled craftsmen, such as industrial mechanics. Finally, the fourth group is made up of semi- and unskilled workers, such as unskilled workers in production. The self-employed and farmers are assigned to the second or third group depending on the number of employees they have.

The labor market has changed significantly since the Second World War. Typical occupations in the four status groups have changed and some jobs have completely disappeared. In order to ensure comparability over time, the occupational group classification used in this analysis differentiates primarily according to occupational status and the complexity of the required skills rather than according to the each

Figure 1 Overview of cohorts and time of observation In percent; number of observations in each cohort (weighted) (1,402) Cohorts Observations 1984-1990 1. War children (1939-45) 2. Post-war children (1946-55) 1991-2000 3. Baby boomers (1956-66) 2001-2011 4. Generation X (1967-71) 2012-2016 Note: The professional status was measured when the observed persons were middle aged, circa 45 years Source: SOEP v33.1. © DIW Berlin 2018

occupation's specific activities. Using a definition of occupational groups independent of specific tasks and activities makes it possible to compare occupational groups over a long period of time.

### **Structural changes foster social mobility**

Many of the following analyses were conducted separately according to birth cohort groups in order to show how social mobility in Germany changes over time (Figure 1). People were divided into the following groups: those born during the Second World War, those born after, baby boomers, and Generation X.

Looking at the distribution of educational attainment and occupational status for parents and children by birth cohorts, it becomes clear that, on average, younger generations reach a higher level of education than their parents (Figure 2). The share of *Gymnasium* (the most advanced of German secondary schools) and university graduates increased from about 19 percent for those born between 1935 and 1945 to almost 45 percent for Generation X, while the share of *Hauptschule* (the less advanced secondary school) graduates decreased from 65 to 23 percent.

The above-mentioned elevator effect can also be clearly seen in occupational status. The observation group has a larger share of higher status positions in each cohort group relative to their parents. This elevator effect is also visible between the cohort groups. The share of people in the first and second

Figure 2 Distribution of educational degrees and occupational status of 45 year olds and their parents By cohorts (weighted); in percent Distribution of educational degrees—45-year-olds Distribution of educational degrees—parents 80 Tertiary Higher secondary Intermediate secondary 20 20 Lower secondary No school leaving degree 1939-45 1946-55 1939-45 1946-55 1956-66 1956-66 1967-71 Distribution of occupational status groups—45-year-olds Distribution of occupational status groups—parents 100 100 80 80 Professional and executive positions 60 -60 -(Highly-) qualified positions Intermediate positions 40 . 40 Self-employed and farmers 20 20 Skilled craftsmen Semi- and unskilled positions 1939-45 1939-45 1946-55 1956-66 1967-71 Source: Authors' own calculations (weighted) based on SOEP v.33.1. © DIW Berlin 2018

Educational expansion as well as structural changes in the occupational distribution are clearly observable.

status groups rose from 35 to about 45 percent. At the same time, the share of people who are in the fourth status group (semi- and unskilled workers) has decreased. The structural changes in the educational and employment landscapes imply there must be more absolute upward social mobility than downward in every cohort group. Changes in the rates of absolute mobility in a society can therefore in principle be due both to changes in societal mobility as well as structural changes such as technological change. Below, we will take a closer look at absolute mobility rates, which are determined in part by structural changes.

### More upward than downward mobility was observed in all cohort groups

How widespread is social mobility across the cohort groups observed? Analyzing transitions between generations in relation to the four status groups can shed light on this (Figure 3). It appears that more than half of the respondents have a different occupational status than their parents (Table 2). The

share of those who have a similar status to that of their parents did not significantly change during the observation period. Upward and downward mobility also show few significant changes over time: in every cohort group, more people experience upward than downward mobility.

These small contrasts between cohort groups are accompanied by some specific differences. For example, the cohorts of the post-war period have particularly few instances of strong downward mobility. We refer to changes in which at least one status group is skipped (for example, the daughter of an industrial mechanic who becomes a doctor) as "strong upward and downward mobility." "Weak upward and downward mobility" describes a change to the next higher or lower status group (for example, the son of an accountant who becomes a bricklayer). Those who remain in the same status group as their parents are regarded as "stable." The especially small rates of strong downward mobility in the post-war cohort group could be due to the large influx of often semiand unskilled guest workers into the German labor market

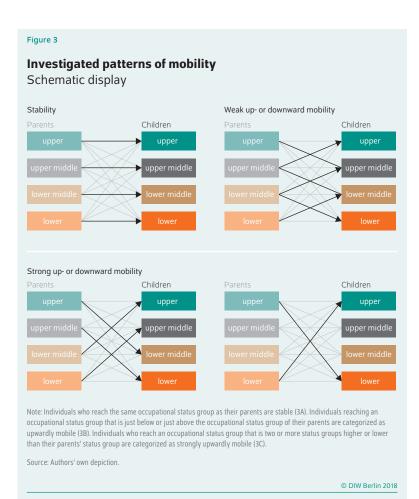


Table 2

Patterns of absolute mobility by birth-cohorts
In percent (weighted)

Mobilty total								
	Strong upward mobility	Weak upward mobility	Stable	Weak down- ward mobility	Strong down- ward mobility	Mobility total		
Lower bound	8	24	42	15	3	58		
1939-1945	9	26	44	16	4	56		
Upper bound	11	28	47	18	5	53		
Lower bound	8	27	40	16	1	60		
1946-1955	9	30	43	18	2	57		
Upper bound	10	32	45	19	2	55		
Lower bound	7	25	42	18	3	58		
1956-1966	7	26	44	19	3	56		
Upper bound	8	27	46	21	4	54		
Lower bound	6	23	43	16	2	57		
1967-1971	8	25	46	18	3	54		
Upper bound	9	28	49	20	4	51		
Observations		5,129						

Note: The table gives information about the percentage of individuals in each cohort which show (strong/weak) upward or downward mobility or who obtain the same occupational status as their parents.

Source: Authors' own calculations (weighted) based on SOEP v.33.1.

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Patterns of absolute mobility have remained relatively stable across cohorts.

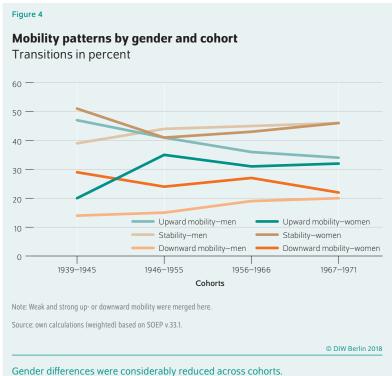
in the late 1950s and 1960s. The baby boomers have a significantly lower rate of upward mobility relative to downward mobility compared to the other cohort groups.

### Mobility rates for men and women have converged

When looking at the development of upward and downward mobility by gender (Figure 4), a significant decline in upward mobility for men from around 50 to just under 35 percent can be observed, accompanied by an increase in downward mobility. As was shown in previous studies, upward mobility for women has increased over time from 20 to 32 percent. This development is probably due to the increasing participation of women in education and the labor market.

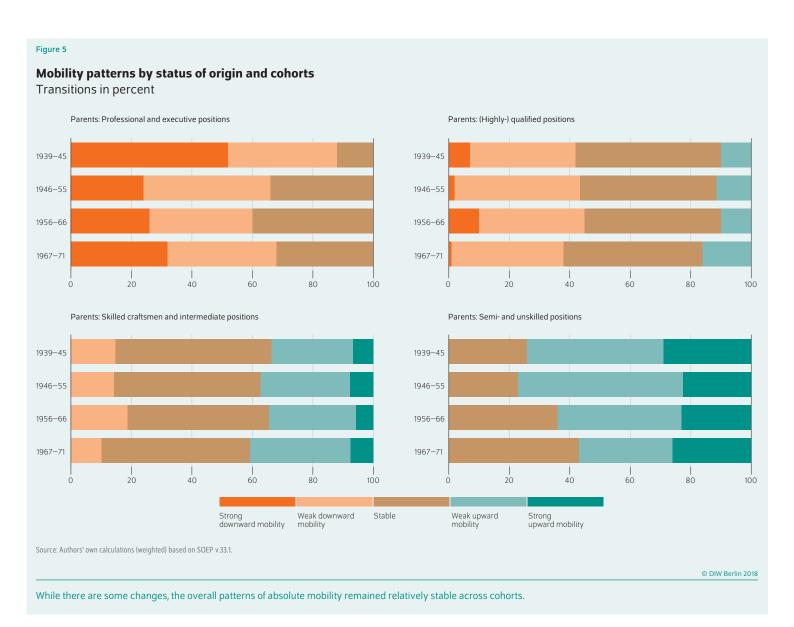
Whether or not mobility leads to more or less inequality depends on who is mobile. The findings discussed so far paint the picture of an upwardly mobile society: in each

<sup>11</sup> Gudrun Quenzel and Klaus Hurrelmann, "Geschlecht und Schulerfolg: Ein soziales Stratifikationsmuster kehrt sich um," K\u00f6lner Zeitschrift f\u00fcr Sozialogie und Sozialpsychologie 62, no. 1 (2010): 61–91 (in German); Rainer Gei\u00edler, Die Sozialstruktur Deutschlands (Wiesbaden: VS Verlag f\u00fcr Sozialwissenschaften, 2006): 372 ff.



**<sup>9</sup>** Rainer Geißler, *Die Sozialstruktur Deutschlands* (Wiesbaden: VS Verlag für Sozialwissenschaften): 241f (in German).

<sup>10</sup> Reinhard Pollak, "Kaum Bewegung, viel Ungleichheit: Eine Studie zu sozialem Auf- und Abstieg in Deutschland," Schriften zu Wirtschaft und Soziales, vol. 5 (2010); Olaf Groh-Samberg and Florian Hertel, "Ende der Aufstiegsgesellschaft?" in Oben – Mitte – Unten, Zur Vermessung der Gesellschaft from the Bundeszentrale für Politische Bildung (2015): 256–267 (in German).



cohort group, more people experience upward mobility than downward mobility, while just over 40 percent experience no change in status. The share of upward mobility changes little among the cohort groups, with the rates for men and women converging. However, to answer questions about social inequality, it is important to know which groups in society are especially mobile or immobile. If mobility increases in the lowest and highest occupational status groups, inequality may decrease. High stability in these status groups tends to cause the gap to widen further. Additionally, it is important to consider which dynamics are present in the middle groups: stability, upward mobility, or downward mobility? Again, the different status groups can be examined for more detailed insights (Figure 5). The following sections will shed more light on the dynamics in the different status groups.

### Status stability has increased amongst semi- and unskilled workers

The increase in status stability is most evident in the fourth status group, among semi- and unskilled workers. The two youngest cohort groups differ significantly from the older cohort groups; a fear of falling behind does not seem to be unfounded. Nevertheless, in all cohort groups, about a fourth of people beginning in the lowest status group manages to move upward to the second or first status groups. However, only 0.4 percent of the respondents managed to make the leap from the fourth to the first status group of professionals and executive employees (such as the daughter of unskilled workers in production who becomes an attorney). Thus, this strongest form of upward social mobility is very rare.

In the first status group (professionals and executive employees), the Second World War becomes a clear turning point. The birth cohorts of the children born during the war experienced significantly more strong downward mobility than all other cohorts. Even though there was an increase in strong downward mobility from 23 to 32 percent for the younger cohorts, these differences are not significant due to the low number of observations.

Very few cases of strong downward mobility are going from the very top to the very bottom: only 0.3 percent move from the first status group to the fourth. With the exception of those born during the war, the status stability in the first status group remains unchanged at around 30 percent.

### No increase in downward mobility in the middle status groups

Both of the status groups in the middle show relatively few differences between the cohorts overall, with the exception of slightly increasing rates of upward mobility in the second status group.

The second status group (white-collar workers) shows increasing upward mobility into the first status group for the youngest cohorts in comparison to the preceding cohorts: the rates of upward mobility in the second status group increased from 10 to 16 percent. About half of the people in the second status group keep their status. However, about 40 percent of people move down to the third status group. Significantly more people born during the war and baby boomers had to endure downward mobility than the youngest cohorts and those born after the war. Overall, the second status group shows the fewest differences between the cohorts.

There are also relatively few changes between the cohorts in the third status group. Strong upward mobility remains constant at a low level, around seven percent. Weak upward mobility also remains stable for the most part at about 30 percent. About half of the people who begin in the third status group stay there. The youngest cohorts show significantly less downward mobility than all other cohorts. The baby boomers stand out with a particularly high rate of downward mobility. Overall, the situation in the groups in the middle of the distribution appears to be relatively stable.

### Barely any changes in social permeability

The findings on absolute mobility presented so far paint a differentiated picture of social mobility since the Second World War: there is increased status stability in the fourth status group and some instances of upward mobility from the second to the first status group in the youngest cohorts. Overall, there is relatively high stability across cohorts. The question now arises if these findings are confirmed when one abstracts from structural developments and investigates relative mobility. Looking at odds ratios can shed light on this (Table 3), which compare relative mobility opportunities for people beginning in different status groups by cohort group. The odds ratio indicates the factor by which the probability of a transition into a certain status group relative to the comparison group differs depending on the parents' status group (Box 3). In this analysis, the reference group are people whose parents pertained to the third status group

Compared with a person whose parents were in the third status group (meaning they were skilled craftsmen or in intermediate positions), it was a good two times more likely for someone born during the war to parents in the first status group to achieve a position in the same status group as opposed to a profession in the third status group. In the two following cohort groups, this ratio increased to a good eleven-fold probability, meaning it became harder to transition into the first status group. In the youngest cohort group, children of parents from the first status group had "only" just under 5.5 times as high a chance of being in the first status group as children of skilled craftsmen or intermediate positions. This could be interpreted as a small increase in permeability of the top status group, but the data do not show a clear trend in this regard.

The situation is somewhat different for the second status group. The probability for weak downward mobility from the first status group has slightly decreased while the probability for weak upward mobility from the third status group (skilled craftsmen and intermediate positions) for the baby boomer cohorts has increased slightly and remained at that level since. This may suggest that relative status stability in the second status group and especially in the first status group has decreased somewhat when comparing cohorts.

There are indications of increasing status stability across the cohorts in the fourth status group (semi- and unskilled workers). For children beginning in the first status group, the probability of experiencing strong downward mobility into the fourth group is somewhat reduced, although this trend is only slightly significant. The probability that children of parents in the fourth status group will land in this group themselves was the lowest for the post-war cohorts (almost a 1.5-fold probability) and has been rising since, up to a three-fold probability in the youngest cohort group (Generation X). This indicates increased status stability in the fourth status group.

Despite such smaller changes, the overall picture remains largely unchanged: it is still much more likely for one to have a profession in the first status group if one's parents are in the same group. That means that structural changes may have partly led to an increase in absolute mobility; however, we are still quite far from strong social permeability in both directions—from low to high professional positions and from high to low positions.<sup>12</sup>

### **Conclusions**

Our findings suggest that changes in patterns of social mobility should be assessed in a nuanced way. While changes in absolute mobility can certainly be observed, relative mobility has barely changed since the Second World War. It is still much more likely to have a profession in the first status group if one's own parents had such a profession. Thus, we are still quite far away from strong social permeability. Supporting

<sup>12</sup> This estimation is confirmed by using a calculation model that considers all possible odds ratios at once (Log-Multiplicative Model, see Yu Xie, "The Log-Multiplicative Layer Effect Model for Comparing Mobility Tables," American Sociological Review 57 (1992): 380–395 (available online). The results of this model, available upon request, confirm the finding that the correlation between family background and professional status has changed little over time.

Table 3

### Status changes by status of origin

### Odds Ratios

	1939-1945	1946-1955	1956-1965	1966-1971	
Status of origin: professional and executive positions					
Status of destination: professional and executive positions	2.372	11.167***	11.112***	5.419***	
	(0.122)	(0.000)	(0.000)	(0.000)	
Status of destination: (highly-) qualified positions	2.111	2.020***	2.373***	2.368***	
	(0.101)	(0.021)	(0.000)	(0.001)	
Status of destination: skilled craftsmen and intermediate positions	Reference category				
Status of destination: semi- and unskilled positions	0.316	0.324**	0.338***	0.622***	
	(0.127)	(0.020)	(0.001)	(0.272)	
Constant	0.140***	0.168***	0.180***	0.185***	
	(0.000)	(0.000)	(0.000)	(0.000)	
Status of origin: (highly-) qualified positions					
Status of destination: professional and executive positions	0.881	0.980***	0.999***	0.762**	
	(0.296)	(0.004)	(0.000)	(0.047)	
Status of destination: (highly-) qualified positions	1.151***	1.183***	1.197***	1.203***	
	(0.000)	(0.002)	(0.000)	(0.000)	
Status of destination: skilled craftsmen and intermediate positions	Reference category				
Status of destination: semi- and unskilled positions	0.978	0.720	0.836	0.896	
	(0.939)	(0.118)	(0.188)	(0.634)	
Constant	1.686***	1.885***	2.015***	2.005***	
	(0.000)	(0.000)	(0.000)	(0.000)	
Status of origin: skilled craftsmen and intermediate positions	Reference category for status of origin				
Status of origin: semi- and unskilled positions					
Status of destination: professional and executive positions	0.233	1.709	0.436*	0.162*	
	(0.163)	(0.357)	(0.063)	(0.078)	
Status of destination: (highly-) qualified positions	0.776	0.232***	0.551***	0.260***	
	(0.595)	(0.002)	(0.003)	(0.001)	
Status of destination: skilled craftsmen and intermediate positions	Reference category				
Status of destination: semi- and unskilled positions	1.784*	1.426*	1.966***	3.025***	
	(0.055)	(0.096)	(0.000)	(0.000)	
Constant	0.287***	0.366***	0.382***	0.309***	
	(0.000)	(0.000)	(0.000)	(0.000)	
Observations	538	953	2,794	1,650	

Note: The table shows odds ratios of the odds of individuals from different origin statuses to obtain a position in a certain status group, rather than obtaining a position in the group of skilled craftsmen and intermediate workers. For a more detailed explanation of odds ratios, please refer to Box 2. Individuals from the highest status of origin group (professionals and executive positions) still are more likely than individuals from all other groups to obtain a position in the highest group themselves. At the same time, the probability of children from individuals in the lowest status group to remain in the semi- and unskilled status group increased across birth cohorts.

p-values in brackets. \* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

Source: Authors' own calculations (weighted) based on SOEP v.33.1.

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### Box 3

### Calculating relative mobility probabilities with odds ratios

The odds ratio is a measure by which two odds, or probabilities, are combined into a ratio. The probabilities of people from different status backgrounds to land in a certain status group are compared. The probabilities are always compared to a reference group.

If one assumes that there are only two status groups, "high" and "low," it is first calculated how likely it is for people from the high and low groups to reach an occupation in the high group. Furthermore, it is calculated how likely it is for people from the high or low groups to have a job corresponding to the low group. The odds ratio is obtained by combining these probabilities into a ratio. Using the fictitious probabilities "high"  $\rightarrow$  "high": 70 percent; "high"  $\rightarrow$  "low": 30 percent; "low"  $\rightarrow$  "high": 40 percent; and "low"  $\rightarrow$  "low": 60 percent, the following calculation results:

Odds Ratio = 
$$\frac{\frac{70\%}{30\%}}{\frac{40\%}{60\%}} = \frac{2.33}{0.66} = 3.53$$

In this simplified, fictional example, a person from the high group has a 3.5 times higher chance of ending up in a profession in the high group compared to a person from the low group.

Odds ratios can be calculated for the most diverse comparison pairs of origin and end occupational status groups. They are an attractive way to measure coherence, as they make it possible to abstract from structural changes in the labor market that affect the entire birth cohort group the same way.

The third professional status group of white-collar workers and skilled workers serves as a reference group in Table 3. The odds ratios displayed show the different groups' probability of reaching a certain professional status relative to the corresponding probability of the reference group.

### **UPWARD AND DOWNWARD SOCIAL MOBILITY**

policy measures should be considered, such as state-funded support programs for children from disadvantaged household, e.g., in the areas of early childhood education, school selection, or career entry.

On the positive side, the likelihood of upward mobility for men and women has converged since the Second World War. Men experience upward mobility less frequently while women are experiencing it significantly more often than before. There has thus been a significant reduction in gender inequality in this respect. However, stronger gender equality can exacerbate social inequality between families or households—for example, if people prefer partners from their own occupational status and income groups when starting a family.

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