2 Social change and social mobility

In the first part of this chapter, I will discuss selected social, economic and political evolutions that might have affected social mobility over the last century. Between the turn of the century and the demise of socialism, the world experienced not only some of the most gruesome catastrophes but also several technological and social revolutions. Following Hobsbawm (1994), one can describe this century as mainly made up of four decades of crises (the two World Wars and the Great Depression), nearly three golden decades of rising equality and living standards (Golden Age or Trente Glorieuse) and three decades of economic crises and global insecurity.[2] In less than a century, various societies shifted from primarily agrarian or proto-industrial to industrial and, finally, post-industrial societies (Castells, 1996 [2010]). While societies' transformations over the last century were manifold and so substantial that a contemporary society might have more in common with other societies today than with their prior manifestation a hundred years ago, the following fragmentary review focuses largely on the two interdependent social systems which are most important for the mobility process: the economic structure and the welfare state.

In the second part of this chapter, two theories for the evolution of social fluidity trends will be summarized and a third alternative hypothesis about institutional conditions, which arguably drive fluidity levels, will be introduced. While the upgrading of the occupational and educational structure affected absolute mobility for most of the 20th century (Erikson & Goldthorpe, 1992), social fluidity arguably might have evolved in either of three directions. The industrialization and post-industrialization thesis stresses that economic and social changes increase social fluidity because recruitment processes become more universalistic or meritocratic with technological advances (Treiman, 1970). Alternatively, social

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[2] Following Hobsbawm in distinguishing the 20th century in three phases results in concentrating primarily on the West. Moreover, other historians rather concentrated on the continuity (of conflicts) than the substantive social and political change (Ferguson, 2007). The model for explaining change in social mobility that is developed in the following is therefore not easily generalizable. Consequently, any generalization regarding any country beyond the two Western countries studied in the following, particularly regarding countries in other world regions, requires one to take into account the interrelations between these countries and the world economy and power structures and, of course, country-specific historical conditions which shaped the institutions that affect national social mobility patterns.

fluidity may remain stable because it relates to the underlying structure of inequality that discourages overly risky mobility strategies in favor of class reproduction (Goldthorpe, 2007c). Motivated by the contrast of strong social changes and stable social openness, a third hypothesis is offered that formulates conditions under which fluidity might change. According to this effectively maintained inequality in social fluidity argument, societies tend to be more open if two conditions are met. First, if the educational system as a primary mediator between class origins and class destinations becomes more open and, second, if the occupational structure produces more positions than are needed for the reproduction of the elite, discouraging costly discrimination strategies. Once both conditions are met, I will argue, relative and absolute (upward) mobility are likely to increase.

2.1 Societal change and the occupational structure

The great sociological classics Marx, Weber and Durkheim described modernity as continuous processes of social change. While Weber (1922 [1978], 1930 [2002]) identified the ongoing process of rationalization as an inevitable and irreversible transformation, Durkheim (1893 [1960]) saw in the ongoing division of labor the driving forces of societal change. Marx (and Engels) (1848 [2008]; 1867 [1999]), on the contrary, identified the dialectic conflict between the forces of production and the social relations at the core of societal change. As much as their assumptions, methods and findings differed, so did their predictions about the transformation of societies, ranging from Weber's gloomy iron cage of bureaucracy to Durkheim's vision of corporatist solidarism and Marx's (future) communist society in which one hunts in the morning, fishes in the afternoon and criticizes after dinner. While the verdict about the future can never be spoken in the here and now, all three shared a common belief that societal development is not only contingent on social and technological forces, but that a unidirectional evolution may indeed be possible. There are good reasons to be sceptic about predictions of a large-scale international convergence towards one prototypical society (but see, Fukuyama, 1992; Eisenstadt, 2000). The similarity of Western societies in terms of their economic order, political and cultural systems, however, motivates the following stylized and unified account of social change and social mobility.

Economic change over the last century

The most intriguing trend over the last century is the continuous growth of Western economies accompanied by an unparalleled rise in the economic well-being of

its populations. Over the last century, GDP continuously grew in the industrialized countries (Baumol, 1986; Maddison, 1987, 2006). Figure 1 displays the development of GDP per capita growth rates between 1820 and 2014 for the United States, Germany, and the G7 (France, Germany, Italy, the United Kingdom, Canada, the United States and Japan) country average. While economies grew sluggishly over the 19th and early 20th century, growth spiked in the post-war period between 1950 and 1973. Although GDP was constantly growing above 1% until the Great Recession, it never again reached the high levels of the golden age of industrial capitalism (Maddison, 1987, p. 649f.). The peak in the middle of the 20th century arguably resulted from lagged industrialization and prior misallocation of labor (mainly in agriculture), as well as increasing international trade (Temin, 2002).

Figure 1:   GDP per capita growth rates in G7 countries, 1820 to 2014
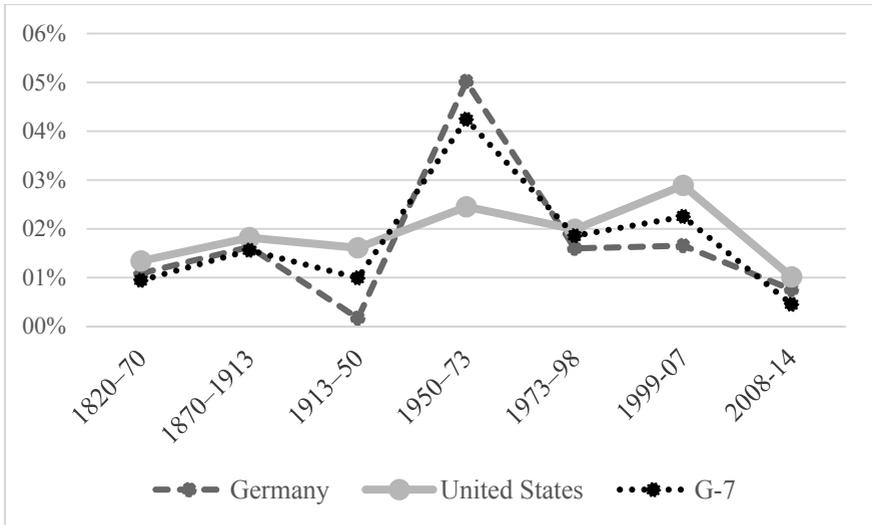
Note: GDP before 1999 is taken from tables A1-d (p.186) and A3-e (p.217) in Maddison (2006). Later values are averages of OECD estimates for the given periods.

This tremendous economic development coincided with massive transformations of the economic landscape in the G7 countries. The change from agricultural to industrial and finally post-industrial economies can be illustrated through studying changing employment rates by industrial sectors. Based on data from Singelmann's (1978), Castells' (1996 [2010]) and the International Labour Organization's *Key Indicators of the Labour Market* data base (ILO, 2014), three trans-

formative phases of the employment structure of the G7 countries can be differentiated over the past century. First, societies became post-agricultural as ever fewer individuals were employed in agriculture. Between the early 1920s and the late 2000s, the share of individuals employed in agriculture or other extractive industries declined in the United States from 29% to 2%, and in Germany from 34% to 2%. Second, from the beginning of the century to the mid-1970s, national economies industrialized so that the manufacturing, utilities and construction industries became the largest employers. In 1970, around 33% of Americans and 49% of Germans worked in the transformative industries and most frequently, of course, in manufacturing. Third, towards the end of the century manufacturing declined in all countries, although to varying degrees, while employment in service industries continued to increase substantially, replacing manufacturing as the most important segment for employment. While in Germany still around 30% of workers were employed in manufacturing in the late 2000s, their share dropped in the United States to one-fifth of the employed population. The expansion of services was driven mostly by two types of industries: employment in producer and business services (mostly banking, insurance, real estate, engineering and accounting) and social services (mostly educational, health and welfare services). Employment in business services increased in the United States between 1920 and 2008 from 3% to 18%, whereas employment in social services grew from 9% to 36%. In Germany, the employment in producer services increased more moderately from 2% in 1925 to 14% in 2008. However, social services increased their fraction of total employment from 6% to 30% of all employed Germans. The same development is observable in the other G7 countries. With the exception of Germany, Japan and Italy, social services became the most important industry for job creation. This most recent transformation is commonly referred to as the rise of the service, information or knowledge economy (Bell, 1973 [1999]; Gershuny, 1978; Castells, 1996 [2010]).

*Occupational change and intergenerational mobility*

The change of the economic systems is associated with the transformation of the occupational structure. As employment in manufacturing declines, occupations in services grow. The technologically driven demand for higher educated labor, especially for technicians, professionals and semi-professionals in the growing health, social and business services sector results in an upgrading of the occupational structure (Goldin & Katz, 2008; Oesch, 2013). At the same time, mechanization, automation and routinization renders routine manual and non-manual occupations unnecessarily costly to sustain (Autor et al., 2003), while non-routine

service positions flourish under the right institutional conditions (Esping-Andersen, 1999; Esping-Andersen, 2000; Wren, 2013). Over the last century, a gradual upgrading and, at least in some countries, a polarization of the occupational structure is the result (Wright & Dwyer, 2003; Bernardi & Garrido, 2008; Oesch, 2013; Wren, 2013). In times of occupational upgrading, upward mobility is likely just because the class distribution between parents and children differ and force individuals to find other, likely better, jobs than their parents had to take up. In contrast, polarization may create job opportunities also at the lower end of the skill distribution which might attract all of those who choose (or were forced) to exit the educational system relatively early. Whether or not mobility increases or decreases in times of polarization is highly dependent on the routinization potential of middle class white or blue collar jobs. If they thin out, mobility from the middle to higher and lower classes becomes more likely. At the same time, women become more likely to be mobile because it is the male domains of agricultural and industrial employment that shrink, whereas employment opportunities open up in (potentially) middle-class, frequently female-dominated care and service positions.

The feminization of work

One side of the feminization of work is the massive influx of women into the labor market (Standing, 1989, 1999). As can be seen in Figure 2, the share of women among the employed population increased substantially in all G7 countries, and in fact in most countries in the world, over time. In the United States, for which the longest time trends are available, the fraction of female workers of all employed persons increased since the end of WWII from below 30% to around 50% in 2011. The same is true for Germany in which the female share of employment increased from the 1970s onwards from 37% to 47% of the overall employed population between 15 and 64 years old in 2014. By 2015, nearly every second employed individual in all G7 countries was a woman.

*Figure 2*:   Women's employment share in selected G7 countries
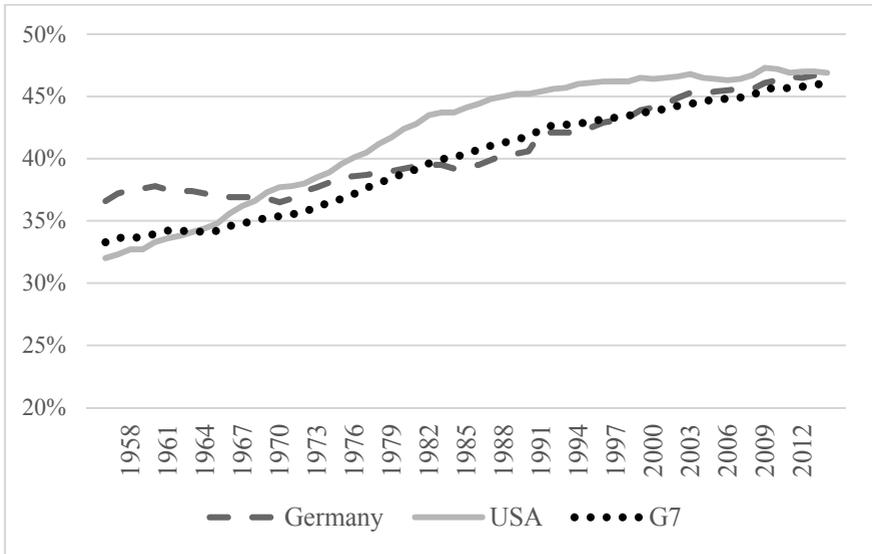
Note: OECD Labour Force Survey; own calculations. Individuals aged 15 to 65.

The increase of women's labor force participation was driven by diverse reasons. The transformation of the economy depicted earlier provides a good starting point (Schäfer et al., 2012). While relegated frequently to unpaid housework in times of mass production and the family wage, women's employment grew with the increase of services. Nevertheless, even in the Fordist heyday, women frequently manned the assembly lines in food processing, e.g., in canneries (Ruiz, 1987). Middle class women, in contrast, entered lower clerical occupations forming the administrative backbone of the Fordist era (England & Boyer, 2009). After the long demise of Fordism, the rise in social service occupations, particularly in education, the health industry, and personal services created those categories of jobs which are traditionally associated with women's fields of work (Esping-Andersen, 1999; Schäfer et al., 2012). Market and state provision of services that are generally expected from women in patriarchal societies, like child and elderly care, not only allow women to work by freeing their time, but also provide (relatively low paid) employment opportunities primarily for women (Esping-Andersen, 1990; Lewis, 1992; Esping-Andersen, 1999). While the post-industrial society offered ample demand for women's work, there are several factors which motivated women to take up paid work. While emancipation, increasing educational attainment and an increasing college premium spurred occupational attainment among

better-educated women (Buchmann & DiPrete, 2006), the decline of the family wage and the male-breadwinner/female-homemaker model as well as higher rates of divorce and singlehood enforced women's labor market participation to make ends meet (May, 1982; Fraser, 1994).

Figure 3:   Part-time employment in selected G7 countries, 1984 - 2012
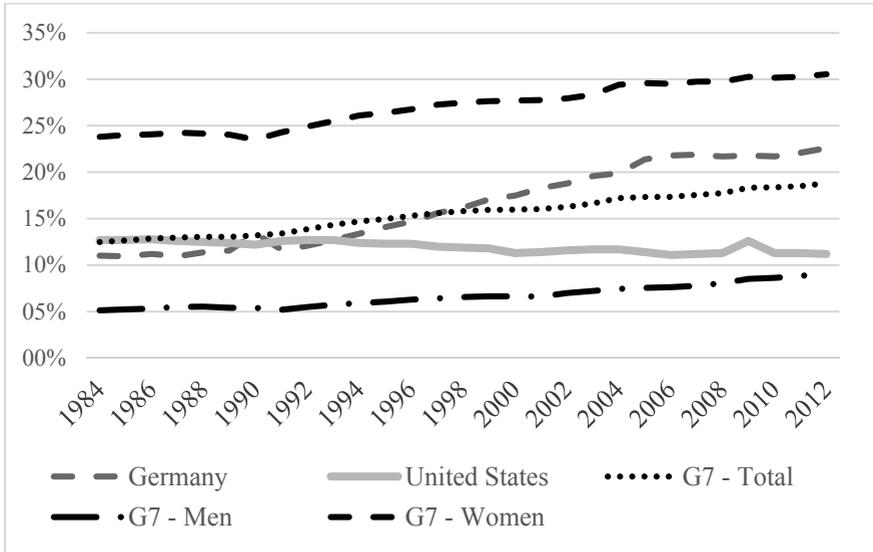
Note: Development indicators of the World Bank 2015; OECD LFS data for Germany before 1991 includes only West Germany.

While women's employment rates rose, employment relations changed frequently for the worse. The buzz phrase of the feminization of work is moreover associated with the demise of the standard employment relation offering full-time, permanent employment with (however limited) career prospects and the rise of atypical employment contracts characterized by temporary contracts or part-time positions (Mückenberger, 1989; Kalleberg, 2000). While women have made inroads into paid employment virtually everywhere since the 1970s, overall working hours declined in most European nations (Alesina et al., 2006). This development was not only driven by the increasing integration of women into paid labor but represented a general feminization of working conditions for both men and women (Standing, 1989, 1999). Figure 3 displays the shares of part-time employed men and women in the United States and Germany and the overall G7 average for all, male and female part-timers. As is usual in international comparisons, part-time is defined

as working less than 30 hours per week, whereas full-time is working 30 hours or more (Kalleberg, 2006).

Overall, part-time employment rates increased in all countries except the United States, where declining shares of female part-timers offset the rise among men. Outside America, however, male and female part-time employment became substantially more frequent. On average across G7 countries, part-time employment increased from 13% in 1980 to 19% in 2012. While part-time work among men increased from 7% to 9%, female part-time rates grew from 23% to 31%. There are of course strong international differences. While male part-time work was already comparatively frequent among Americans in 1980 (~7%), only 1% of German male workers in 1980 worked part-time (Sensch, 1997-2004 [2004]). The respective rate multiplied until 2012 to 9%. While the female part-time rate decreased in the United States between 1980 and 2012 from 20% to 16%, it increased from 29% in West to 38% in unified Germany. While part-time work is only one of the dimensions of atypical employment relations, it is by far the quantitatively most significant (Kalleberg, 2006). More importantly, part-time work, like marginal employment, low-wage jobs and fixed term employment, is strongly associated with jobs in personal and partly social services, and thus with the lower occupational strata in post-industrial economies (Esping-Andersen, 1993; Kalleberg, 2000; Kroos & Gottschalk, 2012).

Feminization of work and intergenerational mobility

The increase of female employment arguably affects the mobility of women. The growing labor force employment of mothers creates role models that encourage daughters to contemplate employment and careers for themselves. While this emancipatory argument cannot be stressed enough, financial reasons may also play along. To the extent that the feminization of work also means the decline of the standard employment relations for both men and women, daughters may learn early that only a dual earner household can afford a certain standard of living or avoid poverty. Thus, future employment not only becomes a chance for self-fulfillment, but also a pure necessity that may lead to early parental strategies which allow for the occupational attainment of daughters.

The dawn of the welfare state and its development over the 20ᵗʰ century[3]

The change of the economic structure and the influx of women into paid employment over the last century was accompanied, and partially produced by, the expansion of social rights and their consolidation in welfare states. Following the universalization of civil and political rights, social rights were established in the 19ᵗʰ and 20ᵗʰ centuries. In his historical analysis of civil rights, Marshall defined social rights as "the right to a modicum of economic welfare and security to the right [...] to live the life of a civilized being" (Marshall, 1949 [1950], p. 11). In essence, social rights offset capitalism's inherent trend towards commodification, i.e. the process by which individuals are forced to sell their labor power (Polanyi, 1944 [2001]). However, there is no uniform evolution of social rights and consequently there are different types of historically grown welfare states (Titmuss, 1974).

Whether the welfare state regimes originally consolidated around pressing political problems like the increasingly hostile labor movement in Germany (Alber & Flora, 1981), or resulted from class coalitions between farmers and workers like in Sweden and Norway (Esping-Andersen, 1990, p. 30), or developed out of the institutional and political structures like in the United States and Great Britain (Orloff & Skocpol, 1984), they expanded (on the established pathways) considerably after the Great Depression in every country. While expansion is partly driven by economic growth, demographic change (the aging of the population) and the incremental growth of welfare systems (Wilensky, 1974), its form is likely to result from the struggle for power between different classes within constraining political structures (Korpi, 1983). Consequently, welfare states differ significantly in terms of their capacity for protecting individuals from life course risks (DiPrete, 2002). At least three types of contemporary welfare regimes are distinguishable (Esping-Andersen, 1990). They differ in their logic of organization, stratification and societal integration and in the degree to which granted rights allow decommodification in the Polanyian sense.

Each of the three types represents a unique combination of the role played by the state, the market and the family in the provision of social rights (Esping-

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[3] In what follows, I will not try to assess the different schools of thought in welfare state research which offer diverse, empirically well-established narrations about the welfare state and its origins, ranging from mere economic development (Wilensky, 1974) to securing the relations of productions (Offe, 1972) or class struggles over power resources (Korpi, 1983) and the institutional arrangements (Skocpol, 1992). Ignoring the question of its conception and contested reasons for its expansion, I will employ welfare state research pragmatically to describe welfare state evolution over the last century and go into more detail where it matters for the study of social mobility. Well written and relatively recent reviews of the voluminous research field are provided in Leibfried and Mau (2008) and in Myles and Quadagno (2002).

Andersen, 1990, pp. 24-29). Liberal welfare state regimes like the United States, Great Britain or Australia, provide only very moderate levels of decommodification, mostly in the form of minimal universal transfers or means-tested benefits for low-income earners to uphold the pressure to work. Additionally, they rely heavily on the market to produce social services in forms of private insurances or employment-based fringe benefits. In effect, the liberal welfare state (re-)produces to a large degree labor market inequalities among the employed and a relative equality among the poor. Social-democratic welfare regimes like Sweden, in contrast, are universalistic with regard to the access to social rights and promote equality through comparatively high flat rate benefits. They rely primarily on the state for welfare production and integrate women into (public) employment instead of relying on them for welfare production within the family. If the liberal welfare regime produces the lowest levels of decommodification, the Scandinavian system exemplified by Sweden offers the highest levels of labor market independence in case of illness, unemployment or other life course risks.

The degree to which conservative welfare regimes, e.g. those in Germany or Austria, decommodify lies somewhere in between the former two welfare regimes. Conservative welfare regimes rely primarily on families and the state to achieve decommodification by means of corporatist insurance-based policies which primarily create status preservation in old age or, today only temporarily, in case of unemployment. Traditional family models like the male-breadwinner/female-housekeeper model are especially prevalent here because the Catholic familiaristic trait embodied in the subsidiarity principle incentivizes care work in private households and does comparatively little to encourage female employment. While this ideal-typical framework has evoked various criticism and reformulations or additions (Leibfried, 1993; Ferrera, 1996; Bonoli, 1997; Hort & Kuhnle, 2000; Aspalter, 2006) and has been substantially questioned by recent implementations of liberal policies also in social-democratic and conservative regimes, it is still useful for understanding basic differences and similarities between welfare system and overall policies (Sainsbury, 1994; Esping-Andersen, 1999; Bambra, 2004, 2005, 2006; Scruggs & Allan, 2006; Sainsbury, 2012).

After a long takeoff phase of social policy experiments between the 1870s and early 1920s, welfare states consolidated and expanded considerably until the late-1960s. Transfer payments institutionalized in social security systems (pensions, public assistance, unemployment insurance and the like) as well as health and educational expenditures grew considerably. In total, social expenditures measured as share of total public expenditures increased between the turn of the century and the 1960s from 30% to 62% in West Germany, from 20% to 47% in the United Kingdom and from 30% to 53% in Sweden (Alber & Flora, 1981, p. 179f.). While institutionalized social rights in the United States date back to the

introduction of veteran pensions during the Civil War (Skocpol, 1992), the (federal) welfare state was created comparatively late in the 1930s as a response to the Great Depression (Edsforth, 2000). During the 1960s, the American welfare state again expanded significantly as a result of Johnson's War on Poverty in the 1960s (Waldfogel, 2013).[4] It created social health care programs for low income groups (Medicaid) and older or disabled Americans (Medicare), work-incentive programs for unemployed cash assistance recipients, nutrition programs (Food Stamps) and employment-related income support programs in the form of the earned income tax credit (EITC), as well as a minimum income (SSI) for the elderly and disabled (Davies, 1996; Scholz et al., 2009; Bailey & Danziger, 2013). Regarding social expenditure levels, the American welfare state, however, lagged behind the European models (Castles, 2009).

Thus, welfare states expanded considerably in almost all industrialized countries over the 1950s and 1960s. Hobsbawm captures the post-war period quite precisely by stating that "[…] the political commitment of governments to full employment and – to a lesser extent – to the lessening of economic inequality, i.e. a commitment to welfare and social security, for the first time provided a mass consumer market for luxury goods which could now become accepted as necessities" (Hobsbawm, 1994, p. 269). Arguably, the Cold War and the competition of the democratic-capitalist and the autocratic-socialist systems motivated much of the increasing social spending to legitimate social superiority claims. While social security programs form a crucial part of modern welfare states, the expansion of education and demand stimulating policies resulting in full employment are even more important for the study of mobility. While the Sputnik crisis increased educational spending to compete with the assumed technological superiority of the U.S.S.R., the GI bill in the United States allowed veterans from WWII and the Korean War to enroll in higher education with generous grants (Meyer et al., 1977; Bound & Turner, 2002). The most important welfare policies, however, were arguably, first, Keynesian macroeconomics with their focus on full employment through demand management (Keynes, 1936 [2007]) and, second, educational expansion, i.e. the increase of available schooling opportunities on all levels, the rise of compulsory schooling age and the reduction and abolishment of schooling costs, resulting in increasing school enrollment on all levels since the 1950s (Meyer et al., 1977).

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[4] One should add here all of the affirmative action programs and civil rights acts which ended Jim Crow and allowed African Americans not only to vote but also to start to enjoy the benefits of the welfare state (Katznelson, 2005). While I lack the space to go into more detail here, the topic will surface again in the discussion of racial differences in intergenerational mobility in the United States.

Figure 4:   Unemployment rate in Germany and the U.S., 1955 - 2014
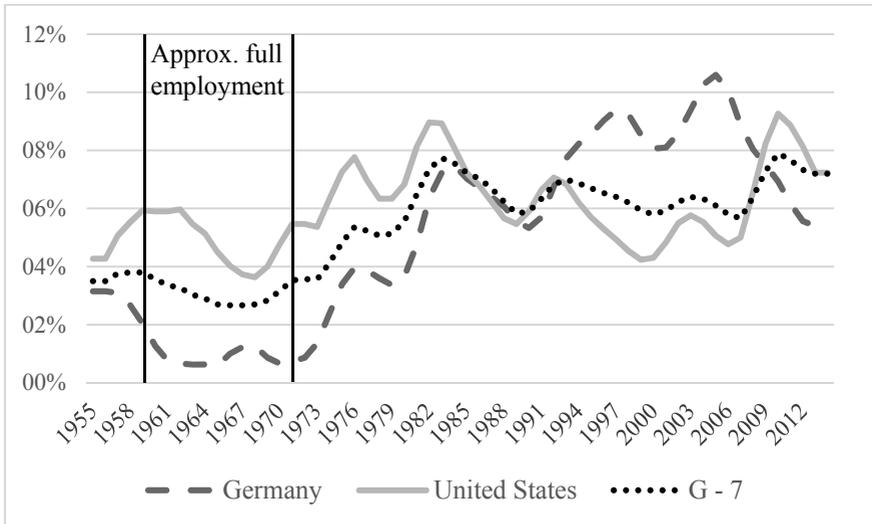
Note: ILO Labour Force Survey; Data for Germany includes West Germany only until 1990; own calculations. Three-year moving average.

As Figure 4 shows, unemployment rates declined in G7 countries over the course of the 1950s and 1960s and approximated full employment levels in the 1960s. While unemployment was below or around 1% in France, Germany, the United Kingdom and Japan, it was around 5% in Italy, the United States and Canada. However, unemployment rose in the mid-1970s after the oil crises and the following phase of stagflation (Burda et al., 1988; Lal & Wolf, 1993). Over the 1990s, unemployment rates were high or increasing in most countries but declined in the 2000s in most G7 countries except for Germany and Japan. While the unemployment rate decreased afterwards in Germany, it grew considerably in several countries until 2014 due to the Great Recession. The latter increase in employment in Germany in spite of the financial crisis and sluggish economic growth was driven by flexible working time accounts, temporary work agencies, wage moderation and the neoliberal workfare reforms that became operative between 2003 and 2005 (Burda & Hunt, 2011). Thus, the German employment miracle is mostly based on the expansion of atypical and precarious employment, especially part-time jobs (Holst & Dörre, 2013).

Welfare state expansion, full employment and intergenerational mobility

The expansion of welfare states may have increased intergenerational mobility in various ways by affecting the cost-utility considerations informing mobility strategies (Goldthorpe, 2007c). The expansion of the social security nets and rising real incomes in the phase of full employment may have increased upward mobility through stabilizing future prospects and reducing costs of sickness, disability or old age. In fact, secure expectations about future real wage growths may also reduce the opportunity costs of educational investment as the latter's impact on actual consumption levels wane. In contrast, the stabilizing effects of rising incomes in lower classes may result in rising opportunity costs of educational investment, especially if knowledge about returns on higher education is spurious and vague. In such a situation, parental investment strategies are highly dependent on two contrary motivations. Either parents aim at upward mobility or focus on the security of status maintenance (Breen & Goldthorpe, 1997). In a situation where educational institutions grow and the public sentiment is in favor of upward mobility to employ all available human resources, gatekeepers to higher education like teachers or admission officers are becoming more likely to lobby children and parents even against their resistance to allow for higher educational attainment. Additionally, the existence of near full employment renders the danger of downward mobility into unemployment meaningless for educational investment decisions. Consequently, upward mobility becomes more likely through the economic security enhancing of expanding welfare states. On the contrary, increasing unemployment may strengthen status attainment motives especially if educational success is uncertain.

Finally, the expansion of the welfare state itself and specifically the expansion of the educational system can increase mobility through generating job opportunities, especially among the higher end of the occupational distribution. This will, of course, only increase mobility opportunities if educational attainment increases (which it did) and recruitment in the public sector is less selective with regard to social origins than recruitment in the private sector (DiPrete, 1989; DiPrete & Grusky, 1990). The rather impersonal recruitment practices in large bureaucracies are potentially more likely to be impartial – i.e. only if the taste for discrimination is not generally shared and reasons for statistical discrimination are limited – because initial screening of potential applicants is performed by personnel departments, which due to the lack of concrete knowledge about the performed tasks must rely on formal credentials and skill certificates to sort through applications. Thus, recruitment strategies might be more universal here than in smaller private establishments. Moreover, the increase of educational systems as part of expanding welfare states also results in more demand for teacher aides, teachers

and professors, all positions that are solely reached through educational attainment. If the demand for qualified labor is high and public employers compete with private employers, it is likely that individuals with lower class backgrounds find abundant upward mobility opportunities, while individuals from higher classes either aim for the highest possible positions in the public service or forego it altogether in order to secure the more individualized career opportunities offered in private enterprises.

Educational expansion

If the creation of full employment and greater social security was an important source of welfare for the workers and their families, the increase of government expenditures on education was important to create prospects for intergenerational welfare, i.e. prospects for the future amelioration of families through educational investment. In almost all countries, educational systems expanded. Educational expansion entailed the creation of new schools especially in rural areas, universities, the abolishment or reduction of school and university fees, the centralization of curriculums, the downsizing of classes and decline of composite or multi-age classes, and the introduction of affirmative action and educational support programs for discriminated groups or low-income families (Breen et al., 2009). As a result, secondary and tertiary school enrollment and graduation rates rose virtually everywhere in the world over the last century (Meyer et al., 1977; Schofer & Meyer, 2005). Especially between 1950 and 1970, enrollment in primary, secondary and tertiary educational institutions increased rapidly on a global scale (Meyer et al., 1977). But also in the following decades, educational expansion increased massively (Meyer et al., 1992). Comparing different cohorts, it is obvious that educational attainment substantially increased in all classes and among both men and women in all industrialized countries (Breen et al., 2009, 2010; Hout, 2011).

The early expansion of the educational system can partly be attributed to the struggle for system legitimation in the Cold War era and the competition for economic advancement even though evidence for any direct relation between educational expansion and economic growth is rather mixed (Aaron, 1992; Meyer et al., 1992; Schofer & Meyer, 2005). On the individual level, however, it is undisputed that returns on higher education are high everywhere and over the life course, far outweigh the costs attached to attending schooling in terms of labor market returns (Psacharopoulos, 1994; Hannum & Buchmann, 2005).

Fgure 5:   Government expenditure and educational attainment
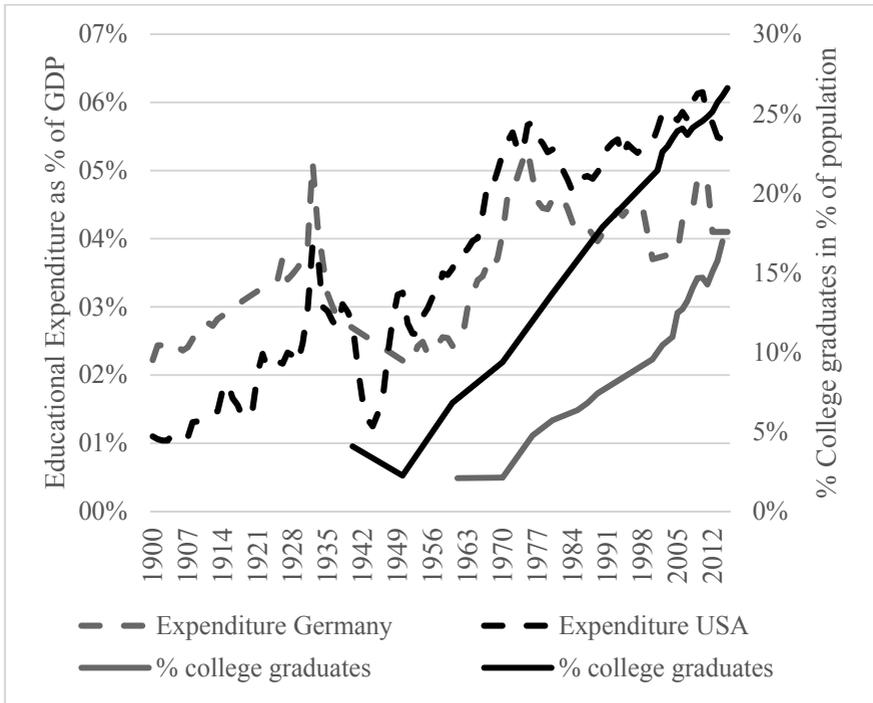
Note: German data retrieved from Diebolt and Guiraud (2000 [2004]) for 1900-1996 and the Statistisches Bundesamt for 2000-2015. American data from US Census Bureau and the president's budget (expenditure) as well as US Bureau of Economic Analysis (GDP) retrieved via http://www.usgovernmentspending.com/; Data on college graduates from Statistisches Bundesamt (Germany) and the Integrated Public Use Microdata Series (United States) (Ruggles et al., 2015). Between 1950 and 1991 Germany denotes West Germany only.

While secondary and tertiary enrollment increased continuously over the 20th century, however, government expenditure on education as a share of national per capita GDP evolved more erratically (Figure 5). Public educational investment rose over the first half of the 20th century, only to decline substantially around World War II. It then increased substantially between the 1950s and 1970s as educational expansion accelerated. Since the mid-1970s, however, educational expenditures either remained mostly stable (United States) or even declined (Germany) even though college graduates still increased. The latter trends are observable in all G-7 nations for which comparable data is available (UNESCO, 2016).

While demographical reasons, i.e., the baby boomer generation, ought to be important for the explanation of national educational expenditures, the stagnating total educational expenditures did not keep pace with increasing tertiary enrollment (Shavit et al., 2007). Arguably, schooling environments may have been best in the phase between the 1950s and 1970s, when expenditure rose at similar paces as college graduation rates.

While the educational infrastructure expanded and ever more children from lower class backgrounds moved on to higher educational levels, the more important question is whether this change more strongly affected the chances of lower classes to attain education than it did for higher classes (Raftery & Hout, 1993). In essence, the question is whether class inequality of educational opportunity (IEO) declined or remained stable over time (Breen & Jonsson, 2005). Earlier cross-national comparative research found that there was little change regarding the influence of socio-economic background on educational attainment in 11 out of 13 countries, including the United States and West Germany (Blossfeld & Shavit, 1993). Studying the association between parental and children's educations across age groups in 20 countries including the United States, Pfeffer rejected models assuming uniform change based on statistical tests (Pfeffer, 2008, p. 551f.).[5] These results, however, have been questioned on empirical grounds. Breen and various coauthors find in a comparative analysis of class IEO in seven to eight European countries that the association between class origins and educational attainment decreased across birth cohorts of the 20th century among men and women (Breen et al., 2009, 2010). While class differences in educational attainment continue to exist, the authors can show that they are becoming smaller over time in almost all countries including West Germany (Breen et al., 2010). More specifically, IEO among men declined in all countries but Great Britain and the Netherlands among cohorts born before the end of WWII and remained mostly stable thereafter or, again increased, as was the case in Poland (Breen et al., 2009, p. 1500f.). Similarly, Pfeffer and Hertel report a decreasing association of class backgrounds and educational attainment among U.S. American men born between the mid-1920s and the mid-1930s and an increasing association thereafter relative to the first cohorts born before 1924 (Pfeffer & Hertel, 2015). Among European women, however, the association of social backgrounds and educational attainment seemed to decrease also across later cohorts (Breen et al., 2010, p. 39f.). Similarly, unpublished findings for American women show that IEO declined among women born between 1935 and 1954, but increased or remained at that

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[5] In fact, Pfeffer found significantly decreasing intergenerational associations in Northern Ireland, Finland and Norway and an increasing association in the Czech Republic and Hungary based on the log-likelihood ratio test (Pfeffer, 2008, p. 551). However, the loss in parsimony did not outweigh the better fit according to BIC, so he chose to discard his findings in favor of a no-change model.

level in later birth cohorts. Why does educational expansion seemingly affect only selected birth cohorts in most countries? Arguably, it was exactly these cohorts which profited most from the post-WWII expansion.[6] Thus, the golden age of welfare capitalism after World War II might have had a strong impact on class differentials in occupational attainment by weakening the association of class backgrounds and class attainment (Blau & Duncan, 1967; Featherman & Hauser, 1978).

Educational expansion and intergenerational mobility

The general increase of educational attainment is likely to have increased upward mobility over the last century, or to be more exact, across consecutive cohorts born over the last century (Breen & Jonsson, 2005). The initial increase of IEO in some cohorts may have had a more positive influence on upward mobility than later similar levels because of overall lower levels of graduates. At later stages of educational expansion, graduates face a situation in which even higher educational attainment might have lost some of its signaling value as any single educational degree decreases relative to the overall available educational degrees of the same sort (Goldthorpe, 2014). In such a situation, social backgrounds may become a handy substitute for recruiters to select upon. That said, it would still be possible that expanding graduation rates result in higher aggregate mobility rates because the association between origins and destinations is lower the higher the educational attainment is (Hout, 1988; Torche, 2011). Against the signaling theory speaks the fact that such an effect on class mobility is likely to be limited due to the highly aggregated class schemes used. However, a weakening of the mobility inducing effect through credential inflation becomes more likely if higher social positions do not expand with the same pace as graduation rates, as seems to be the case in Spain (Marqués Perales & Gil-Hernández, 2015). Educational expansion may also affect mobility through growing educational homogamy (Blossfeld & Timm, 2003), which arguably fosters immobility. While two highly educated parents have more knowledge about the educational system than one, especially if they studied in different fields, increasing numbers of parents without any higher secondary or tertiary educational attainment may have a detrimental effect on the educational attainment of their children.

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[6] Men of lower class backgrounds, arguably mostly through their participation in WWII and subsequent opportunities to study through the G.I. Bill.

The trilemma of welfare states in post-industrial societies

While welfare state expansion coincided with full employment and educational expansion, the following decades saw a consolidation of government social policy. Rising unemployment and ageing populations put increasing strain on welfare states as tax revenue declined and social expenditures increased (Pierson, 2001). After the industrialized countries entered a prolonged phase of stagflation in the late 1970s and 1980s, Keynsianism was increasingly replaced by neo-classical monetarism (Helliwell, 1988). Instead of counter-cyclical policies of deficit spending and full employment, governments increasingly favored price stability in order to cope with the mix of sluggish growth and inflation. Growing labor costs due to increasing taxation and insurance contributions necessary for financing the mature welfare states further limited employment growth, especially in Continental European states (Esping-Andersen, 1999; Esping-Andersen, 2000; Hemerijck, 2002). The increasing use of early retirement packages to limit the impact of de-industrialization by controlling the labor supply and appeasing unions in the face of mass layoffs further exhausted public budgets (Ebbinghaus, 2004). Consequently, public debt increased almost everywhere. Spending on interest payments as a share of the (still modestly growing) GDP more than doubled between 1970 and 1994 from 2% to 5% among G7 countries (Pierson, 2001, p. 91). To be sure, welfare state retrenchment was rather modest over the 1980s and 1990s, even in the extraordinarily hostile and anti-social political climate of the Reagan and Thatcher eras (Pierson, 1994, 1996). However, over the last two decades, deregulation of labor markets and liberalization of industrial relations affected nearly all industrial countries and significantly altered social stratification through increasing employment of policies of dualization and social exclusion (Esping-Andersen, 2000; Baccaro & Howell, 2011; Thelen, 2014).

In the 1990s, governments found themselves in what Iversen and Wren called the "trilemma of the service economy" (Iversen & Wren, 1998), i.e., governments had to choose whether they either favored fiscal discipline and earnings equality at the expense of low levels of employment growth (Continental European model) or employment growth and equality at the cost of deficit spending (Scandinavian model) or generating employment and upholding budgetary discipline while creating a low-wage service market (neoliberal model). While various trajectories were possible in the 1990s, the neoliberal model in tandem with tax reductions for high-income groups seemed the most promising way for various left wing governments in power at that time. In the mid-2010s, almost all states had favored a strategy of employment growth through decentralization of industrial relations and deregulation of labor markets at the expense of rising wage inequality (Emmenegger

et al., 2012b).[7] Employment rates increased in all G7 countries except the USA between 1994 and 2009. Employment growth was strongest in Germany, France and Italy (6%) and weaker in Canada (4%) and the United Kingdom (2%), while employment decreased by 4% in the U.S. due to the Great Recession following the 2007 subprime mortgage crisis (Eichhorst & Marx, 2012, p. 80). These increases were mostly driven by employment growth in services and were accompanied by the increase of fixed-term contracts, part-time employment, increasingly precarious self-employment and the subsidization of low-pay work.

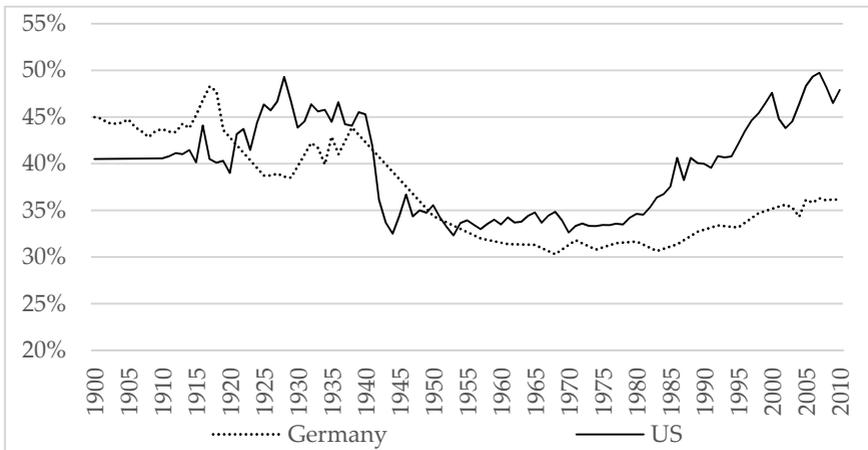*The rise in inequality and the dualization of societies*

The transformation in the economic structure is intimately related to the change in income inequality over the last century. Although the basic story is well known (Piketty, 2014), Figure 6 establishes once again the tremendous decrease and rise of income inequality over the 20th century by plotting the share of total income obtained by the top income decile in various countries. In all countries, income inequality decreased substantially over the first 50 years of the 20th century and was lowest somewhere between the mid-1940s and the mid-1970s. Over the following decades, income inequality increased particularly in the United States, which was the most egalitarian nation at the dawn of the 20th century, but became the most unequal one at the end of it. While some of this increase in inequality is certainly related to increasing returns on education (Goldin & Katz, 2008), the above-average increase of top incomes (the 1%) also drives income inequality, especially in the English-speaking countries (Piketty, 2014). More sophisticated analyses of the U.S. and British increases in wage inequality over the last decades reveal that most of it is caused by increasing between-occupation inequalities (Mouw & Kalleberg, 2010; Williams, 2013).

Comparative analyses have further shown that national institutions are important in moderating the effect of globalization on (household) income inequality as measured by the Gini index (Lee et al., 2007). Moreover, industrial relations, for example, decentralization of the collective bargaining structure, or a stable or declining minimum wage arguably affect wage inequality by reducing the income share of middle and lower classes (Alderson & Nielsen, 2002). In effect, income

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[7] Given the contemporary crises, it is hard to say whether this will lead to solid public budgets. Financial crises, increasingly frequent wars (Afghanistan, Iraq, Syria, North Africa) or "military deployments" (anti-piracy and anti-immigration missions), mass incarceration as a means of controlling superfluous workers, and the social and economic costs of rising inequality may render deficit spending a(n) (ideologically) necessary evil to achieve the domestic and international level of control which is needed to guarantee the freedom of property ownership.

inequality i is not only driven by increasing numbers of high-income "supermanagers" (Piketty, 2014) but also by collapsing unions and the subsequent individualization of pay bargaining coupled with the decline of the minimum wage, advantaging better qualified workers over less qualified workers (Freeman, 1993; Thelen, 2014, p. 37f.). Union density and coverage of collective bargaining declined strongly between 1970 and 2010 in the U.S. (by 58% and 56%) and in Germany (42% and 28%) likewise (Thelen, 2014, p. 35.). Consequently, income inequality increased quite dramatically also in Germany, resulting in a growing polarization of high-wage and low-wage workers (Giesecke et al., 2015).

Figure 6:   Income inequality in the U.S. and Germany, 1900-2010

Note: The World Top Income database (Atkinson & Piketty, 2007; Atkinson & Piketty, 2010).

For adherents of the dualization thesis, the rise in inequality is the output (not only outcome) of social and labor market policies (Emmenegger et al., 2012a, p. 13ff.). The demise of the standard employment relations, active labor market policies coupled with decreasing cash assistance, as well as the growth of low-income substandard jobs increase the divide between the well-trained workers in primary labor markets with economic prospects and career stability, and less-skilled workers, frequently immigrants, women, the disabled or members of a discriminated minority, who are employed in dead end secondary labor markets with little chance of promotion and betterment (Doeringer & Piore, 1971; Deakin & Wilkinson, 1991). Moreover, these policies create labor markets in which employers can use substandard work arrangements and substandard remuneration to raise profits and, as a side product, create jobs especially in the low-productivity service

segment (Oesch, 2006b). While the divide among workers increased, social policy changes additionally target labor market outsiders not only by stigmatizing means-tested assistance programs, but by active labor market policies which enforced the take up of even the worst jobs the post-industrial society has to offer (Lindbeck & Snower, 1984).

Dualization, rising inequality and intergenerational mobility

Arguably, the rising inequality resulting from polarization policies affected mobility in at least two ways. First, the relative income increase at the top of the income distribution allows parents to increasingly invest in their children's higher educational attainment and in enrichment activities (Vincent & Ball, 2007; Duncan & Murnane, 2011). Especially in countries in which higher educational costs increased, like in the United States (Roksa et al., 2007), the advantage gained by relative income increases should grant access to more investment opportunities for better-off parents. At the same time, increasing educational costs may raise the signaling value of the earned degrees by restricting the pool of new entrants from middle class families and thus increasing the returns to education for all those who can afford costly colleges. Hence, immobility within the highest classes is likely to increase (Mitnik et al., 2013). Second, thinning in the middle of the income distribution may decrease upward mobility flows through constraining available resources. However, with incomes increasing at the top, the opportunity costs of foregoing higher education may increase the pressure to take up loans for educational investment. In such a situation, low-income households and minorities, which rely more heavily on grants for their educational strategies and have limited access to credit markets, might suffer most (Carneiro & Heckman, 2002; Hout, 2005; McDaniel et al., 2011). In total, however, the lowest income families are less affected by the change in the distribution because they had already previously limited access to higher education.

2.2 Social mobility in industrial and post-industrial societies

From the cursory review of important economic and social changes, one thing is immediately evident: there are various reasons for intergenerational mobility to have changed substantially over the last one hundred years. The questions about mobility flows and societal openness, however, are more complicated. There are actually two explananda regarding social mobility and trends in social mobility which need to be treated separately (Goldthorpe, 2007c). The first explanandum

is the question of how *experienced* mobility flows have changed over time. The second explanandum is to what extent societies became more open or closed, i.e. how group differences in experienced mobility changed, resulting in changing *relative mobility* chances. While both explananda are related, the one is not derivable from the other. Putting it differently, ever more people can experience intergenerational mobility without a change in the underlying relative chances. Consequently, the aforementioned expectations about the influence of social change on mobility have to be reformulated in order to address either one or both of the two different conceptions of social mobility. Before this task can be pursued, however, the conceptual differences and overlaps between both perspectives warrant a closer examination.

The first perspective focuses on mobility experiences of individuals and social groups and has a long tradition in mobility research (Sorokin, 1927 [1959]; Lipset & Bendix, 1959). The raw mobility flows between social backgrounds and current occupational positions are generally called absolute mobility (Erikson & Goldthorpe, 1992). The interesting thing about absolute mobility is that it is highly dependent on changes in the social structure. If the occupational structure, for example, changes between generations, absolute mobility is driven by these changes to the extent that origin positions become less available mobility destinations while other positions become more frequent for class attainment. Such forms of forced mobility are usually called structural mobility (Sobel et al., 1985). To be clear, whether or not mobility is forced by structural change is not a matter of normative judgment, nor does it imply that individuals have not suffered in the cause of reaching the respective position. The term merely illustrates that mobility has been necessary due to structural differences between prior and actual positional distributions.

While absolute mobility flows are driven by structural transformations, they also change if social barriers become more or less permeable, i.e. if the circulation between social positions increases. Such mobility patterns are frequently called exchange or circulation mobility because they pertain to the exchange of positions independent of structural change. In practice, such mobility would presuppose downward and upward mobility as individuals from lower origins take higher positions and individuals from higher backgrounds are downwardly mobile. While absolute mobility is driven by structural and exchange mobility, there is no way yet to disentangle both elements of mobility without reducing the case to a special case (Sobel et al., 1985).

Here is where the second perspective comes into play. While circulation mobility cannot be measured independently in terms of absolute flows, it can be measured relative to other classes net of structural change. This methodologically more

complex perspective is usually taken if relative intergenerational mobility is stud-
ied (Goodman, 1965). With the change of the perspective, it becomes possible to
consider trends in the openness of societies and their permeability for mobility.
However, this possibility comes at a cost. The studied phenomenon ceases to be
the mobility process itself but becomes the aggregate outcome of the underlying
class relations that produce the degree of relative inequality in mobility chances
(Breen & Jonsson, 2005, p. 230). While relative mobility rates have been criticized
for their degree of abstraction, they allow for the interpretations of fluidity, i.e. the
degree of social permeability, in terms of the classes and differences between the
classes, hence they put emphasis on the relational aspect of stratification. Before
transferring the above made mobility expectations into explicit statements about
changes in terms of either absolute or relative mobility rates (or both), a short re-
view of the dominant explanatory model provides some benchmarks against which
these expectations can be judged (Erikson & Goldthorpe, 1992, pp. 1-27).

Industrialization and increasing universalism

The first theoretic tradition in the study of social mobility is derived from modern-
ization theory. With the ongoing division of labor and specialization in the eco-
nomic system of modern societies, selection processes necessarily become more
universalistic (Parsons, 1940). While in traditional societies ascriptive character-
istics like lineage, place of birth or economic property are important for accessing
higher positions, the modernization theory posits that modern societies are more
likely to employ rational, bureaucratic selection mechanisms to sort individuals on
basis of their skills and capacities (Moore, 1966). From this perspective, stratifi-
cation simply reflects positional differences in functional importance and different
costs associated with achieving the skill set required for a position (Davis &
Moore, 1945). Consequently, social origin characteristics lose their relevance for
occupational attainment and social mobility is likely to grow with ongoing ration-
alization (Blau & Duncan, 1967). In a similar vein, but emphasizing the role of
technological advancement and the role of economic change, Bell argues that se-
lection in post-industrial societies is essentially meritocratic. "The post-industrial
society, in its initial logic, is a meritocracy. […] Without those achievements [F.H.
technical skills and higher education] one cannot fulfill the requirements of the
new social division of labor" (Bell, 1973 [1999], p. 409).[8]

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[8] The liberal-conservative Bell, however, also saw that meritocracy has to be continuously defended
against what he, alongside so many other white male academics, considered a danger to the achieve-
ment selection system. Both affirmative action programs and policies directed at creating equality of

The link between technological development and growing social mobility has been most clearly stated by Treiman (1970, p. 217ff.). Treiman sets out with various propositions to underline the claim that industrialization increases social mobility. Industrialization coincides with the differentiation of the occupational structure, a decline of agricultural and manual employment relative to non-manual work, growing educational attainment and higher wages, as well as lower income inequality. Because all of these characteristics tend to increase with the level of industrialization, the process of stratification or intergenerational mobility differs between societies in different developmental stages. Treiman assumes that the influence of social background on educational attainment decreases, whereas the influence of education on occupational attainment increases with the degree of industrialization. The former is driven by the growing knowledge about educational possibilities and the socialization effect of prolonged educational attainment. The latter results from the increasing demand for skills due to technological advancement. At the same time, more universalistic recruitment strategies belittle the net effect of social origins on occupational attainment, not only because of the selection process but also because geographic mobility, urbanization and a shared mass culture favor individual merits over ascribed properties derived from belonging to an ethnic or social group. Finally, the greater variation of accessible jobs and their continuous upgrading through industrialization increases mobility through the creation of new and better working opportunities.

In accordance with the industrialization theorem and the aforementioned stylized facts of the changing societies, we may argue that the rapid technological development, in addition to the occupational structural change and the rise in educational attainment, increased intergenerational mobility over the last century. Regarding the two different explananda of absolute and relative social mobility, Treiman clearly argues in favor of linearly increasing upward mobility, as well as increasing relative mobility chances as the association between social backgrounds and class attainment declines, especially for individuals with agricultural and manual backgrounds due to increasing meritocratic selection and declining differences between individuals. While mass media and increasing educational attainment enable individuals to get rid of their rural working class habits, geographic mobility eliminates the locally confined knowledge about the social upbringing. Thus, industrialization and, in fact, post-industrialization tend to linearly increase both absolute upward mobility and relative upward mobility chances.

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conditions rather than equality of opportunities were risky in light of the functional imperative of meritocratic selection in post-industrial societies.

The trendless fluctuation theorem

The no-change theorem of trendless fluctuation dates back to the most compre-hensive early study of absolute social mobility by Sorokin (1927 [1959]). Studying mobility across several historic and current societies, Sorokin finds that absolute mobility fluctuates without trend, belying the predictions of unidirectional and evolutionary modernization theories. Assuming generality of this pattern, Sorokin posits that it is "the factor of dissimilarity between parents and children [that] causes a permanent stream of the vertical circulation" (Sorokin, 1927 [1959], p. 366). In other words, the less than perfect parental determination of offspring abil-ity and social selection processes result in circular mobility flows. A broad com-monality between absolute mobility flows across countries was also found in a comparative study of six industrialized countries (Lipset & Bendix, 1959). Nearly two decades later, this finding was questioned by Featherman, Jones and Hauser (1975), henceforth FJH, who compared absolute and relative mobility in the United States and Australia and reviewed several similar studies from Europe. While their results did not confirm the similarity of absolute mobility, they war-ranted a re-formulation of Sorokin's account of trendless fluctuation. Contrary to Lipset and Bendix, who only used three occupational classes, FJH found that ab-solute mobility differed between the countries mostly due to historically grown country-specific occupational distributions. In their analysis of relative mobility chances, however, they found few cross-country differences. Accordingly, they conclude that relative mobility is the same between countries and within countries across time points. FJH further speculate that this cross-national and inter-tem-poral similarity results from the shared institutional characteristics of capitalist so-cieties, i.e. the nucleus family and a market economy with its rather general strat-ification order by property and abilities.

The thesis of similar and stable relative mobility chances has been extensively validated by the most authoritative comparative analysis of social mobility. In *The Constant Flux*, Erikson and Goldthorpe (1992) study absolute and relative social mobility rates in the early 1970s in 12 industrialized nations including the United States, Japan and Australia. In their analysis of absolute mobility flows, they doc-ument strong differences between the 12 nations. These differences, they argued, are mostly attributable to the different timings of industrialization and urbaniza-tion or revolutionary policies following the formation of socialist governments. Much in line with FJH, Erikson and Goldthorpe cannot confirm any claim about the similarity of absolute mobility patterns. However, their findings also indicate that relative mobility chances, though broadly similar between nations, differ due to national idiosyncrasies, hence rejecting the strong claim made by FJH. In fact, they need to fit several effects for country-specific differences in mobility chances

in order to make their topological model fit the mobility data. Nevertheless, their findings clearly indicate a strong resemblance between the relative mobility chances across countries despite large differences in absolute mobility patterns. Thus, they confirm the FJH hypothesis in a weaker form, stating that relative mobility chances are mostly constant in time (except in Sweden and France) and that all nations share a common level of social fluidity (Erikson & Goldthorpe, 1992, pp. 94-101).[9]

These conclusions are not corroborated by a more recent analysis of social mobility in European countries. Based on data from 1970 through 2000, Breen and Luijkx (2004) found in their cross-national comparative analysis of 10 European countries and Israel that neither the commonality of social fluidity patterns nor their stability can be unambiguously confirmed (Breen, 2004a, p. 73). In fact, nations differed quite strongly with regard to aggregate relative mobility chances, i.e. their openness. Moreover, fluidity tends to increase in all countries except Britain, where fluidity remains remarkably stable. With regard to absolute mobility rates, on the contrary, they did find increasing commonality of absolute mobility patterns and judged this finding as the outcome of the joint economic development commencing after the sectoral change from agriculture to industrial and post-industrial societies was far advanced in nearly all countries under study. Similarly, the more detailed country analyses clearly showed that social fluidity increased in various analyzed societies, mostly due to historical transformations in the institutions that affect relative mobility (see e.g., Müller & Pollak, 2004). Other recent comparative analyses which employed comparable (log-linear) methods also found significant differences between countries. Hout and Beller demonstrated that social fluidity differs between countries according to their welfare regimes (Beller & Hout, 2006b). And, in fact, Erikson and Goldthorpe find significant differences in the fluidity level between all analyzed nations, but deem it substantially too little and not consistently interpretable in terms of differences in levels of industrialization to change their final conclusions (Erikson & Goldthorpe, 1992, p. 385f.). Arguably, it is not so much industrialization per se that shapes social fluidity differences, but the way country-specific institutions, i.e. welfare states, mediate the influence of education on the association of origin and destination classes (Beller & Hout, 2006b, p. 362).

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[9] Contesting findings (Ganzeboom et al., 1989) have been forcefully and compellingly rejected on grounds of low data quality and comparability (Erikson & Goldthorpe, 1992, pp. 53, 100-102). More recent comparative analyses (Yaish & Andersen, 2012) which found that the association of parental and individual status is lower the more developed a country is, are neither methodologically comparative nor generalizable due to the limited number (20) of studied countries (Snijders, 2005; Bryan & Jenkins, forthcoming).

While the final verdict has yet to be reached about the future of the similarity thesis, and a general explanation for the observed pattern of change in relative mobility rates is still missing, the expectations that are derivable from this research tradition can be straightforwardly stated. Absolute mobility patterns are likely to change driven by the different timing of occupational structural change. The findings suggest that upward mobility continuously increases through the upgrading of occupational destinations. There is no reason to expect that changes in upward, downward or immobility rates are anything other than short-term fluctuations related to idiosyncratic nation-specific policies. In other words, absolute mobility rates and their change are explainable "primarily by reference to factors exogenous rather than endogenous to processes of class mobility" (Goldthorpe, 2007c, p. 157). With regard to social fluidity, no marked change over time is expected because the system of stratification which creates the differential mobility chances remains intact for most of the observation period (Erikson & Goldthorpe, 1992, pp. 391-392; Goldthorpe, 2007c, p. Ch. 7). If change were to happen, it is likely to point towards increasing relative mobility.

2.3 Same, same but different?

Before the expectations about potential mobility effects derived from the review of social changes can be compared to the theoretic predictions derived from the industrialization theorem or the trendless fluctuation hypothesis, a third alternative about the socio-political influence of social change on social mobility will be formulated. The argumentation can be visualized with the well-known mobility triangle depicted in Figure 7 (Goldthorpe, 2007c). Absolute as well as relative mobility is theoretically decomposable in the three independent factors that affect mobility: class origins (O), educational attainment (E) and class destinations (D). Changes might affect the origin-specific access to education (O → E), the link between education and occupational attainment (E → D) or the net relation between social backgrounds and class destinations (O → D).

Figure 7:   Mobility triangle
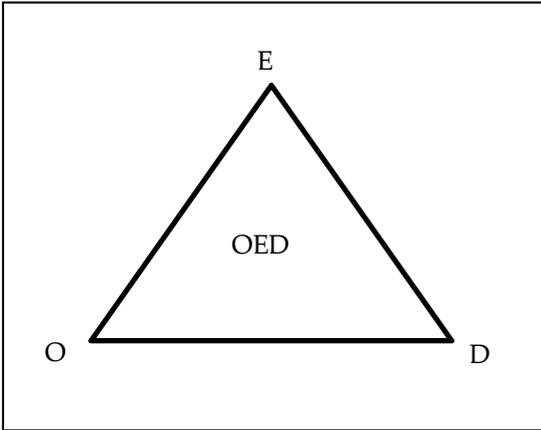
Note: For example Goldthorpe (2007c, p. 160)

Finally, the interaction of all three factors might additionally affect the association between origins and destinations to the extent that the ED link might differ with regard to origins or the OD link might differ with regard to education. For the sake of brevity, the underlying relation to the OED triangle will remain implicit and will not be formalized.[10] An explanation for class differences in mobility chances and a description of class-specific mobility expectations is elaborated further below after the important conceptual decisions are made (Ch. 4.4).

Earlier in the text I argued that industrial change, the feminization of work, the welfare state expansion and its final dualization might have affected intergenerational mobility. Table 1 summarizes the expectations separately for absolute mobility flows and relative mobility chances. Of course, there is no a priori reason for expecting that all societies quasi-naturally evolve from an agricultural to an industrial and a post-industrial society. Although this has been the trajectory of many Western societies, the historical context which made such a trajectory likely ceased to exist at some point in the 20th century. Thus, non-Western contemporary societies may enter the post-industrial era without having to industrialize first, remain mostly agricultural or, most likely in the case of the least developed coun-

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[10] A clear description of each link and a review of theories explaining or assuming change in each of the legs can be found in Pfeffer and Hertel (2015) or Goldthorpe (2007c, pp. 162-163).

tries, experience locally limited industrialization and post-industrialization impulses which are more related to external factors with detrimental effects on the living conditions of vast parts of the population (Davis, 2007).

Changes in absolute mobility flows

In line with the industrialization thesis, it is likely that *industrial change* increases absolute mobility rates substantially over time. The transformation of largely agricultural to industrial societies fosters upward mobility simply because of the decline of the lowest positions of sharecroppers, farm laborers and the simultaneous increase of the urban manual workforce. Accordingly, downward mobility is likely to decrease because the floor of the class distribution is gradually increasing. While the alienating rhythm of manual work, in particular unskilled work in the food industry as packers or graders, might have a detrimental impact on life satisfaction and the subjective identity, the capacity for collective bargaining and the higher productivity of industrial work vis-á-vis agricultural work will eventually result in higher living conditions in these positions far above the level of the agricultural laborer. Horizontal mobility, understood as trajectories between agricultural, industrial manual and post-industrial service occupations, is likely to rise due to the sectoral replacement while immobility declines with increasing work opportunities. The transition to a post-industrial occupational structure is similarly likely to increase upward mobility flows through the upgrading of the occupational structure. At the same time, the bifurcation of the occupational structure into higher and lower non-routine positions arguably also raises downward mobility opportunities, especially for the lower administrative workers which are prone to fall victim to rationalization through automation. Like with the other sectoral transition, immobility is likely to decline, whereas horizontal mobility arguably increases.

Table 1:   Potential relation of social change and intergenerational mobility

	Absolute Mobility				Relative Mobility
	UP	DW	HZ	IM	
Industrial change					
▪ Agriculture → industrial	++	--	++	--	0
▪ Industrial → post-industrial	+	+	++	--	(+/0)
Feminization of work					
▪ Influx of women	++	+	++	--	+
▪ Feminization of work	-	+	0	(+/-)	+
Welfare state expansion					
▪ Full employment	++	-	0	(+/-)	++
▪ Educational expansion	++	--	0		+
Dualization of welfare states					
▪ Dualization	-	++	0	+	-
▪ Rising inequality	-	0	0	++	-

Note: + indicates increase, - decrease, 0 no expected change, signs in brackets indicate partial changes which are very much dependent on the welfare arrangement. Predictions about absolute mobility flows are differentiated in upward (UP), downward (DW), horizontal (HZ) mobility flows and immobility (IM).

The effects of the *feminization of work* are twofold like the phenomenon itself. The influx of women into the labor market might increase absolute upward mobility along the lines of the gendered labor market. As argued above, women may increasingly concentrate on careers outside traditional female occupations once a critical mass of women has entered the labor market and torn down gender barriers resulting in increasing upward mobility. At the same time, however, women are also likely to partly replace men in the lower clerical and manual positions, opening up routes for men to climb up the positional ladder. In contrast, downward mobility may increase, in particular if we compare women's positional achievement with their fathers' class, because women that enter the labor market from high origins might still find it difficult to overcome especially persistent gender barriers, e.g. in the professions or skilled manual work, and move to lower positions, e.g. into semi-professions or unskilled manual positions. Moreover, gender segregation increases horizontal mobility and decreases immobility once women increasingly enter the labor market, in particular if fathers' occupations are taken as a reference point. The feminization of work through the generalization of substandard employment relations arguably constrain upward mobility and increase downward mobility by limiting the economic prospects of precarious middle and

lower classes. Finally, the degree to which immobility changes, very much depends on the degree of growing wage and employment insecurity among social backgrounds.

The *welfare state expansion* arguably affects absolute mobility mainly in two ways. First, full employment offers ample opportunities for current workers and labor market entrants to change employers. Equipped with greater power than normal in the generally asymmetric relation, workers are more likely to find better positions than in times of excess supply and scarce demand for labor. Accordingly, downward mobility might be reduced. Whether or not immobility decreases depends on the effect of future prospects in the respective classes. If working conditions continually improve and real wages increase, upward mobility may already be achieved by immobility without having to leave the familiar context in which individuals grew up. Secondly, the expansion of educational institutions increases upward mobility by allowing access to higher positions via educational attainment for increasing numbers of individuals and likewise creates positions within the educational system which might further offer upward mobility opportunities. In contrast, educational expansion is unlikely to result in increasing downward mobility in the aggregate. Educational expansion may also lead to greater horizontal mobility as the children of managerial elites leave the industrial class hierarchy and use educational attainment to attain entrance into the growing professional classes. While educational expansion may especially benefit higher classes by rendering immobility strategies via educational attainment more successful through a horizontal diversification of educational opportunities, it is likely to decrease immobility at the bottom of the class distribution. Whether or not these trends offset themselves depends on the relative impact of educational expansion at the bottom and the top of the distribution.

The *dualization of welfare states*, finally, might decrease upward mobility flows by reducing policies which, like affirmative action, allow students from lower classes to attend costly educational institutions. At the same time, the deterioration of social security programs for the (lower) middle classes might result in increasing downward mobility as families became more sensitive to detrimental life course events like unemployment, sickness or disability. Due to the same reasons, immobility is likely to increase in the higher well-secured and increasingly less precarious positions. Rising inequality itself might reduce upward mobility flows by relatively increasing the costs to achieve the educational prerequisites of upward mobility. At the same time, rising inequality is likely to fuel immobility in higher and lower classes.

Changes in relative mobility chances and aggregate social fluidity

The degree to which *industrial change* affects relative mobility patterns and overall social fluidity highly depends on whether the transition from agricultural to industrial societies affects the relation of differential mobility chances. Because industrialization does not affect the reproduction strategies of higher classes, it is unlikely to expect changes here. However, the common practice of studying agricultural and manual workers in unison might lead to greater fluidity if mobility strategies in urban areas are in fact positively affected by more frequent contacts with educational institutions and greater labor market opportunities. In that case, the mobility propensities within the lowest classes might grow relative to other classes with growing shares of industrial workers replacing agricultural workers. Similarly, mobility chances may increase in the transition from industrial to post-industrial economies if, and only if, fluidity levels among the post-industrial pink collar laborers are higher than that of blue collar workers. However, this increasing fluidity due to changing compositions of classes might at the same time be offset by increasing fluidity in the higher ranks, as lower grade non-manual workers also become relatively more likely to enter higher post-industrial classes. Consequently, relative mobility rates may increase or remain stable.

Whether or not relative mobility rates are affected by the *feminization of work* is very much unclear. Because fluidity is separately studied for men and women, there is little reason to believe that the pure increase of women in the labor market affects the class differentials in mobility propensities. If, however, employment relations become detrimental with greater numbers of female workers in a given class, a compositional effect could appear across time increasing fluidity. This is mainly because at higher levels of female membership, the class becomes a less desirable destination among men and, everything else being equal, fluidity might increase.

Welfare state expansion may have the clearest effects on relative mobility chances. While full employment reduces the risk of investing into upward mobility strategies by rendering failure much less costly, it also improves economic prospects and decreases the opportunity costs of educational investments in terms of actual consumption. Consequently, especially lower classes are likely to increase their mobility propensities, hence, ceteris paribus, increasing social fluidity. Similarly, educational expansion may affect relative mobility chances by reducing the class differentials in educational attainment through lower educational investment costs. The relative effect, however, is conditional to what extent lower classes gain access to higher educational attainment relative to the increasing participation of higher classes (Hout, 2006b). The important point is that at the time in which both

phenomena, i.e., full-employment and educational expansion, fall together, fluid-ity is most likely to increase.

Dualization and the resulting rising inequality, finally, might affect social fluidity in different ways. In lower classes dualization might affect economic pro-spects and the ability of parents to invest in their children's educational and occu-pational attainment. At the same time, the existence and potential increases of out-sider populations increase the risk perception of downward mobility possibilities and render ambitious mobility strategies more risky. In fact, the status mainte-nance motive should become stronger with higher economic and moral barriers being attached to the outsider population. To the extent that immobility strategies become more likely at the bottom of the class distribution, they are also increas-ingly attractive in higher positions. Consequently, fluidity might decrease overall. Rising economic inequality might additionally constrain upward mobility strate-gies by increasing the costs of educational investments and, due to relatively lower household incomes, increase the opportunity costs of prolonged education. In con-trast, it is not likely that the reduction of social rights will have any effect on higher class immobility propensities which generally command enough resources to make up for the higher risks. In fact, heightened fears about failure in the educa-tional system may additionally motivate parents to do anything possible to guar-antee their children's class reproduction.

Different, different but same?

All of these trends might, of course, coincide and reinforce or attenuate each other. While the simultaneity is a problem for identifying the right interpretation in case we observe change in mobility, some changes (full employment, dualization, ine-quality) fall into distinctive periods of the last century and arguably are constrained in their effect on fluidity of particular cohorts. These trends, however, are clearly at odds with the optimistic expectations derived from the industrialization theorem *and* the trendless fluctuation hypothesis. At their core, my assumptions carry the idea that changes in absolute and relative mobility can have the same causes, al-though the way they affect either absolute or relative social mobility differs accord-ing to the respective underlying logic. Because some of the aforementioned changes did happen in various different states at the same time, we would further expect that fluidity trends across those countries are similar and maybe even con-verge. A basic theoretical framework which might link relative mobility to the underlying institutional formations might be derived from the adaptation of a con-cept from research on educational inequality.

The starting point for a theorem of change in relative mobility rates is the general stability of fluidity. Because of the quite persistent effects of class situation on life chances, it makes sense to think of the stratification order as at least rudimentarily stable across time and relatively similar between countries if they share the same primary stratification dimensions of property, skills and arguably authority relations (Featherman et al., 1975; Erikson & Goldthorpe, 1992; Wright, 1997). In fact, only against the background of relative stability does it make sense to argue in favor of systematic and politically driven changes. To explain those changes, I adapt the theorem of *maximally maintained inequality* (MMI) for the explanation of fluidity. Raftery and Hout (1993) employed this concept in the study of inequality of educational opportunity. Studying transition rates in the Irish educational system across several educational levels, Raftery and Hout found that educational equalization at lower educational levels can coincide with constant inequalities at higher educational levels. To explain this pattern, MMI assumes that class inequalities of educational opportunities, i.e. class differentials in educational attainment, do not automatically weaken if transition rates between primary, secondary and tertiary education increase because enrollment expansion on each level caters to the educational demands of all classes to the extent that relative inequality of educational opportunity (expressed in odds ratios) can remain stable over time. They argue that educational equalization, i.e. the decline of the association between social backgrounds and educational attainment, only increases if the demand of higher classes for a given educational transition is saturated (near 100%) so that any further expansion of enrollment at that level benefits exclusively lower classes. MMI fits to the pattern of educational expansion and persistent origin class differentials in the transition to higher education in Britain, West Germany, Switzerland, Italy, Poland, Hungary, the Philippines, France, Japan, Russia, Scotland, Spain, the former Czechoslovakia, Israel, Australia and Taiwan, but failed to explain the existing social selectivity in track choice in the almost universal secondary education in the United States (Hout, 2006b). Facing the changing tracking system within American schools, Lucas (2001) generalized MMI to *effectively maintained inequality* (EMI) by suggesting that high class parents "secure for themselves and their children some degree of advantage wherever advantages are commonly possible" (Lucas, 2001, p. 1652), hence freeing maximally maintained inequality from its link to quantitative changes in enrollment. The difference between EMI and MMI is that even if saturation of a given educational level is reached, higher classes may still maintain their advantage by attending qualitatively different tracks, vocational training, universities or fields of study. Thus, EMI adds a qualitative dimension to the quantitative dimension of MMI to explain persistent inequalities.

In its most general form, EMI states that higher classes will utilize whatever resources are at their disposal to secure the highest class positions. Because the concept is relational, this means that even if occupational upgrading or educational expansion or declining wage dispersion will affect mobility strategies "from below", higher classes will still try to evade the equalization of opportunities by pursuing more prestigious education, bequesting social networks or attaining higher positions within the same class. In terms of social fluidity, that means that societies only become more open in times in which a certain degree of saturation is achieved across generations for the strategies "from above" to maintain class positions. Only then will the potentially fluidity-increasing effects lift relative mobility chances also in the bottom classes and, ceteris paribus, result in higher permeability of the class structure.

Applying MMI/EMI to relative mobility, we might expect that the expectations derived in Table 1 mostly offset each other to the extent that stability or maximally maintained inequality is indeed the primary description of social fluidity (Erikson & Goldthorpe, 1992; Breen, 2004a). However, social fluidity might have increased in the period between the 1950s and 1970s due to the deliberate policy decisions which resulted in educational expansion *and* full employment. While educational expansion allowed even the less able from higher class backgrounds to attain higher education, expanding welfare states and constant economic growth allowed the highest classes to secure reproduction through the labor market. Thus, the equivalent to enrollment saturation was reached through high levels of class reproduction. At the same time, both the expansion of the educational institutions and the more favorable labor market conditions might have, in additional to the saturation at the highest levels, increased fluidity from below by not only reducing inequality of educational opportunities but also by reducing the interaction between social backgrounds and the association of education and class attainment. In other words, full employment created a situation in which the taste for discrimination in terms of class backgrounds is too costly to uphold. In later or earlier periods where one or both of these conditions were not met and other trends like dualization or the feminization of work might have even increased the boundaries between lower and higher classes, fluidity may not markedly change.

Therefore, the underlying idea is that the change in the institutional context may in fact affect relative mobility as much as it can affect absolute mobility. While absolute mobility changes in direct response to structural changes, it will only change if structural changes jointly affect the change of mobility chances differently in the highest and the lowest classes. The task ahead is to study intergenerational mobility in the United States and Germany over the last century. While the hypotheses and assumptions formulated in this chapter are nothing other than speculation until empirically tested, they are developed here in order to make

sense of other findings than those expected by either the industrialization or the no-change hypotheses.

Before the study of intergenerational mobility can commence, however, one conceptual point needs to be addressed first. The described societal change that happened over the last century was by any account tremendous. However, the dominant paradigm of social mobility research is that societies hardly grew more open. This contradiction may be because any change short of a revolution cannot alter the inequality relations which result in fluidity. However, it could also result from the way class is measured in contemporary stratification research. Thus, conceptual decision in the following part will precede the actual study of social mobility.