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Social mobility in 20th Century. Switzerland

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Summary

The study of social mobility enables us to assess the extent to which a given society is “open”. Addressing this issue is particularly crucial in our democratic societies, where it is expected that the place of individuals in society should no longer be determined at birth, but rather by individual quality. The present inquiry investigates this issue in the context of Switzerland, a country characterised by specific institutional settings, notably through the close association its educational system shares with the labour market.

Through a detailed empirical analysis based on robust statistical analyses carried out from a unique tailor-made dataset, I demonstrate that Swiss society has not become more open throughout the twentieth century. Although some barriers have lost some salience, Swiss society has overall remained extremely rigid. In particular, because it channels individuals into highly segmented tracks very early on, the Swiss educational system does not attenuate social background differences. Thus, Switzerland is found in a particular configuration where an individual's place in society is highly determined not only by his or her educational attainment, but also by his or her social background. In other words, Switzerland constitutes a sort of “non-meritocratic meritocracy”.

Résumé

L'étude de la mobilité sociale permet d'évaluer dans quelle mesure une société donnée est « ouverte ». S'intéresser à cette question est particulièrement crucial dans nos sociétés démocratiques, où il est attendu que la place des individus ne soit plus déterminée à la naissance, mais plutôt par les qualités individuelles. La présente étude examine cette question dans le cadre de la Suisse, un pays aux caractéristiques institutionnelles spécifiques, particulièrement de part le lien étroit que son système éducatif entretien avec le marché du travail.

A travers une analyse empirique détaillée fondée sur des analyses statistiques robustes menées à partir d'un jeu de données unique construit sur-mesure, je démontre que la société suisse n'est pas devenue plus ouverte au cours du 20ème siècle. Même si certaines barrières ont perdu de l'importance, dans son ensemble, la société suisse est restée extrêmement rigide. En particulier, parce qu’il oriente très tôt les individus dans des filières fortement segmentées, le système éducatif suisse n'atténue pas les différences entre milieux sociaux. Ainsi, la Suisse se trouve dans une configuration particulière où, d'une part, la place d'un individu dans la société est hautement déterminée par son niveau d'étude et, d'autre part, par son origine sociale. En d’autres termes, la Suisse apparaît comme une sorte de « méritocratie non-méritocratique ».

"*Pessimism is intellectually easy, perhaps even intellectually lazy. It often reflects a simple extrapolation of past experience into the future*". Erik Olin Wright (2013:21)

Forewords

I have realised this PhD thesis during my five years of assistantship at the University of Lausanne. My time in Lausanne has been one of the most enriching experiences of my life so far, therefore I would like to seize the opportunity to thank these people who, being far or close, in Lausanne or elsewhere, have taken part in this wonderful adventure in some respects.

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In addition to Dominique, Daniel Oesch has been a extremely inspiring peer for the completion of my PhD thesis. From the moment he was hired during my second year, Daniel's expertise has proven very valuable, for me but also for the whole research team. One of Daniel's multiple qualities indeed stems from the – usually three! – sharp and clever remarks he points out in order to improve one's research. I have really benefited from your many more than three remarks, Daniel, either while I presented at internal meetings, or, more importantly, for the assessment of my PhD

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Lausanne, November 2013

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IAM, Nés sous la même étoile.

Life is beautiful, destiny moves away from it.
No one plays with the same cards.
The cradle lift the veil,
multiples are the roads it unveils.
Too bad, we weren't born under the same star.

1 . The coming of meritocracy? Intergenerational social mobility in the Swiss social stratification mountain

1.1 . Democracy, meritocracy and social mobility

For centuries, individuals' place in society was determined at birth and quasi-impossible to reverse. Those born *sous une bonne étoile*[1] enjoyed a life of wealth and privilege whereas the others – the vast majority – experienced a life of hard work and deprivation. Children of nobles became noble, children of peasants remained peasants. This is basically how the social stratification was defined: a minority of "blessed" on the one side and a majority of "damned" on the other. However, with the burgeoning of the *Lumières*[2], this feudal hierarchical order tottered.

The eighteenth century indeed marked a turning point in humanity's history. The emergence of intellectual thought based on rationality and knowledge, as opposed to tradition and religion, provided justification to overthrow this old hierarchical order. This transformation began following the American Revolutionary War and the French Revolution, notably through the formalisation of the very first founding texts defining human rights as a core universalistic principle: the United States Declaration of Independence and the Declaration of the Rights of Man and of the Citizen. This was translated by the settlement of democracy as a political regime. Since then, democracy has become the leading governance model in the world.

Democracy, by stating that each citizen is eligible for political representation and has the right to participate to the political life, implies that "all human beings are born free and equal in dignity and rights", as it was put by *the Universal Declaration of Human Rights* adopted in 1948 by the United Nations. Principles of liberty and equality indeed form the cornerstone of democracy. Under democracy, individuals' destinies no longer depend on a *bonne fée*'s[3] mood but rather the ability an individual has to take control of his or her life. Because in democracy, everyone is given such ability, including the unconditional access to education, everyone has a chance to succeed in life. From this standpoint, it is commonly believed that with the emergence of democracy, the impact of social origin on a person's social position gradually erases in favour of achieved characteristics such

1 Understand: Under a good star
2 Understand: Enlightenment
3 Understand: good fairy

as education, and intergenerational social mobility[4] as well as equality of opportunity increase, leading to the coming of meritocracy.

In a meritocracy, it is expected that one's social position does not depend on social background but results from a fair competition based on the sole criteria of talent and merit. What counts and is rewarded is achievement, not longer ascription, as was the case in feudal times. As a result, since each individual is offered equal opportunity to demonstrate his or her talent and succeed in society, meritocracy defines (1) that individuals are only responsible for their own destiny and worth, occupying the place they hold in the social stratification, whether it be an elite position or an under-class position, and (2) that social mobility chances are high, being upwardly or downwardly. Thus, with this rationale, social mobility constitutes a straightforward indicator of equality of opportunity. Indeed, "it is widely held that if there were greater equality of opportunity there would be more social mobility and, conversely, that more social mobility indicates greater equality of opportunity" (Breen 2010b:414). However, this vision is misleading insofar as these are fundamentally two different concepts: equality of opportunity is first and foremost an *ideological* concept, whereas social mobility describes a very *concrete* situation.

The metaphor of the lottery adjusts quite well to the idea of equality of opportunity: in a lottery each participant receives the identical probability of winning. In the same vein, according to meritocratic statements, each individual in a democratic society gets the same chance in life to succeed and potentially reach the most prestigious occupations of the social hierarchy. Equality of opportunity in this sense combines two fundamental tenets of democracy which are liberty and equality that are crucial for a functioning democracy. Therefore, the concept of equality of opportunity defines *avant toute chose*[5] a model of social justice. It provides grounds with respect to what is fair and what is unfair. While a person succeeding for ascribed reasons – for instance, because of his or her social background, gender and/or national origin – would be considered unfair and would not fit with democratic tenets, a person who reached a high social position owing only to achieved characteristics – such as talent and merit – would. Achievement is not only legitimate and rewarding, but desirable.

However, as a matter of fact, equality of opportunity is not a natural reality: some people are born into rich families and other into poor ones; some grow up during periods of deprivation and war, while others come of age during economic prosperity. As a consequence, it is democracy's responsibility to ensure that opportunities are as equally distributed as democratic requirements

4 From here onwards the term "social mobility" will be referring to intergenerational social mobility if not otherwise specified.

5 Understand : before everything

demand. The implementation of diverse policies promoting equality of opportunity undoubtedly serve to achieve this. However, as there exists no *magical potion* to fulfil these requirements, the implementation of equality of opportunity can take different forms over time and place.

For instance, as it is usually assumed that the educational system serves to make equality of opportunity an operative institution,Western societies implemented reforms of their educational systems during the post-WWII years in the form of educational expansion. The rationale for this endeavour at that time was primarily to invest in human capital to identify talents that were needed to enhance the economic development characteristic of this period. The main concern was to not waste talents that would have certainly been lost if access to education had not been expanded, and correspondingly, which would have constituted a loss for society (Kahn 2011). In other words, equality of opportunity at that time was considered a *democratisation of selection* – everyone should have the same chances to be selected to reach elite positions. Nonetheless, since the emergence of economic crises, equality of opportunity has been conceived as a *democratisation of success* – everybody should have an equal chance to earn a degree and enjoy the corresponding professional integration (Kahn 2011). Thus, the concept of equality of opportunity and the way it is envisaged is highly dependent on the economic, social, political and historical context in which a society is embedded. Clearly, it reflects societies' orientations and what they perceive as *unequal opportunities*, which in turn political intervention can transform into *more equally distributed opportunities*. In this sense, social mobility can only be seen as *one* measure of equality of opportunity, that based on social background.

Social mobility, in fact, describes a very precise situation: that of a change in a person's social position. This change can be observed either *inter*generationally, meaning compared to family background, or *intra*generationally, meaning over a person's life course. The former is usually thought of as a measure of equality of opportunity. Even theoretical developments on *inter*generational social mobility testify to the close link the two concepts entertain together. The *liberal theory of industrialism* maintains that social mobility in industrial societies will increase and therefore logically result in more meritocracy. Our research will nevertheless demonstrate that even when expectations of this theory are met, no greater meritocracy can be uncovered.

To demonstrate this, we will concentrate the present research on the study of *inter*generational social mobility. Specifically, we will investigate how social background and education condition individuals' life chances – *Lebenschancen* (Weber 1978) – and their social mobility opportunities. We will particularly pay attention to the influence of the recent macro-structural changes that should have led to greater social mobility opportunities, and in turn, the coming of meritocracy. In fact,

throughout the twentieth century, in Switzerland as in other Western countries, the educational structure changed significantly as a consequence of educational expansion, as well as the occupational structure with the coming of industrial and post-industrial societies (Oesch 2006b, 2013).

1.2 . From ladders to mountains: consequences of changes in the social stratification on social mobility opportunities

Over the past century, Western societies have witnessed considerable macro-structural changes. Opportunities to reach a higher educational level have increased globally, as have opportunities to reach the highest fractions of the structure of occupations. As a consequence, some scholars, notably post-modern ones (Beck 1992), argued that social class inequalities were no longer relevant and that social classes were dead. In fact, since a growing share of the population continues to attain higher class fractions, no more ascribed obstacle seems to hinder such progression. As a consequence, post-modern theorists state that inequalities have become individualised, essentially stemming from differences in achievement, and that our societies have become fluid and open – classless societies, so to speak. These statements would seem to find some support from recent empirical research that concluded that educational inequality decreased (Breen et al. 2009, 2010) and that social fluidity increased (Breen and Luijkx 2004a). Conclusions of these empirical studies are, however, more subtle and should be understood in light of the historical, economic and societal context in which they took place. Therefore, what we would like to underline here is that the expectations of post-modern theorists are quite simplistic. Their vision is misleading insofar as they interpret the social structure from a unidimensional stance, as common thinking usually implies.

In everyday language, we often use the expression *to climb the social ladder* as a metaphor of intergenerational social mobility. However, this metaphor is often found problematic, since it imposes several theoretically dubious assumptions. First, viewing the social structure as a ladder implies that the social structure is ordered on a sole unidimensional hierarchical axe according to attributes such as education and income. This vision is mistaken, as it completely ignores potential conflicts that different groups might have. In fact, with a ladder, the distance between each rung is exactly the same, while in reality some groups of occupations are close to each other, others further. A second problem of the ladder is that it implies that there is only one way to climb (being up or down). Thirdly, it imposes a fixed vision of the social stratification. The ladder does not account for social changes in the hierarchical structure.

That being said, consequential social changes happened over a rather short period of time in

Western societies. First, educational expansion considerably transformed educational opportunities for all. Second, the feminisation process enabled women to gain access to education and the labour market, areas from which they used to be excluded. Third, the tertiarisation of the labour force resulted in a growing share of the population reaching higher rank social positions. As a consequence, it has been argued that social class inequality transformed, and even in some respects increased, rather than totally disappeared, as post-modern theorists argue. We indeed agree that there has been a form of a "new deal" in the distribution of inequality, resulting from the transformation of the social stratification. While old hierarchies faded away, new ones emerged, implying that old forms of inequality disappeared, while new ones are being uncovered. This is an extremely important point, since this argumentation provides a completely different interpretation to the observation that many people were able to reach the highest social class fractions. It might be the case, for instance, that new division lines are currently emerging in the highest social class, as recent research suggests (see Güveli, Luijkx, and Ganzeboom 2012; Güveli 2006), implying that new cleavages are appearing within some social classes. The same point could be made in regard to educational attainment: when more and more people attain a higher educational level, it might be the case that differentiation criteria between different tracks within the same educational level could arise (see Ichou and Vallet 2011).

Therefore, to correctly understand what these social changes imply for social mobility opportunities, a new metaphor can be put forward: instead of comparing the social mobility process to *the climb of a ladder,* we would prefer to envisage it in terms of a *mountain climbing*. Mountains indeed display interesting features that are of importance for the understanding of the social stratification. First, mountains have the advantage of being irregular and multidimensional. In the climbing of a mountain, there are usually several stages located at different distances and altitudes from each other. Sometimes barriers arise that make the climbing more difficult. In this sense, the mountain metaphor adjusts well to the theoretical vision of social classes. Second, infrastructures such as the development of a path, the construction of a cable car, or of railway line can be developed to facilitated the climbing of the mountain. Third, the mountain metaphor resolves the old criticism raised by Marxist sociologists about the term *stratification*. Stratification, similarly to ladders, was seen as anti-Marxist "since it places emphasis on the vertical ranking of classes rather than the exploitative relations between them" (Grusky and Ku 2008:26 see note 1). In fact, on the same mountain, you can find different villages and environments that offer different opportunities, even on the same level: for instance, more sun on one side of the mountain and more green grass on the other side. In other words, the mountain metaphor displays the advantage of emphasising the

multidimensionality of the social stratification by allowing us to acknowledge its vertical and horizontal dimensions. Indeed, within the same hierarchical level, different groups can have access to different resources. To arbitrate which dimension is the most salient, one can observe the shape of the mountain: the larger the mountain is, the more horizontal differentiation exists; the thinner it is, more vertical distinctions can be assessed. Last but not least, mountains have the ability to change with the passage of time. They can rise as a consequence of the succession of earthquakes; they can erode with the force of the atmospheric conditions and landslides. This is one of the main strengths of the mountain metaphor: not only do mountains take different shapes, but they can turn into new ones. Their shape does indeed evolve – slowly but surely – depicting new dynamics. Of course, most of the time, it takes thousands of years for mountains to change, but this metaphor still provides interesting insights for the understanding of social change, since social change is also a long process[6].

Altogether, we can envisage macro-structural changes that modified the structure of opportunities in our Western societies since the last century, similarly to erosion and earthquakes. In fact, the tertiarisation process resulted in some erosion of the former industrial mountain, implying that the mountain has become larger at its top. With educational expansion, the climbing path has been enlarged and new infrastructures have been constructed so that an increasing share of the people can get a chance to reach the peak. Finally, with the feminisation process, an increasing share of women are allowed to climb the mountain. Thus, more opportunities to climb the mountain exist today. However, it could be the case that different climbing paths actually lead to different outcomes. From this standpoint, we can wonder whether the ascension of the social stratification mountain in Switzerland has become more common. In other words, have social mobility opportunities increased? Subsequently, did increasing meritocracy and equality of opportunity arise? Switzerland is indeed an interesting case to study. With its specific institutional features, it might add new insights to the comparative study of social mobility.

1.3 . The Swiss social stratification mountain as subject of enquiry

Switzerland is a little Eldorado in the middle of Europe. Extremely stable, this country has built one of the most prosperous economies in the world and has been only marginally affected by the recent economic crises. The massive demand for a foreign labour force constitutes one indicator of the continuous prosperity of the Swiss economy, since today more than 20% of the population comes

6 When sudden changes do occasionally happen such as revolutions or economic crisis, they could be referred to as earthquakes, avalanches or volcanic eruptions.

from a foreign country. Only Luxembourg displays a larger share of foreign population in Europe.

Additionally, Switzerland, like Germany, is a country with an important vocational education tradition. It has been often claimed that this specific type of educational system shapes social mobility chances differently, since Germany has often been pointed out as a rather special case in this respect when compared to other European countries. Switzerland, from this standpoint, will prove to be an interesting case to study. Significant similarities between these two countries in regard to their social mobility regime could indeed be expected.

A further characteristic of the Swiss social stratification mountain pertains to the persistence of considerable gender inequality. Switzerland indeed remains a rather traditional country in several respects. Therefore, in Switzerland, significant social mobility opportunities differences should exist according to gender, despite the feminisation process.

Altogether, all these Swiss specific institutional settings should be of relevant importance for the comparative study of social mobility. However, social mobility research in Switzerland remains scarce and, to some extent, outdated. In fact, the Swiss social mobility regime has only been marginally investigated. Furthermore, no studies systematically addressed issues of social change, gender differences and the influence of the foreign population on social mobility opportunities in this country. We thus hope to fill a considerable gap, not only from a comparative perspective, but also at the national level.

Our contribution to this field of research is thus threefold: (1) we aim to address how recent changes in the social stratification impacted on the structure of opportunities; (2) we wish to thoroughly examine social mobility dynamics in Switzerland, being in terms of trends or pattern; (3) we intend to systematically analyse gender differences on these issues and also assess how social mobility opportunities differ between the Swiss citizen population and the foreign population living in Switzerland.

In Chapter 2, we will introduce research on social mobility and how the issue of macro-structural changes might impact the dynamics of social inequality, and in turn, social mobility opportunities. We will argue that changes documented by recent research stating that inequalities are *non-persistent* do not necessarily imply that social inequalities considerably weakened. In contrast, we will maintain that inequalities may have taken new forms and adapted to the new social stratification order as a consequence of macro-structural changes including educational expansion, tertiarisation and feminisation. Next, we will introduce the Swiss context more thoroughly in Chapter 3. The unique situation of Switzerland in Europe, having never been affected by World

Wars within its borders, unlike its neighbours, and having enjoyed high levels of economic prosperity, therefore attracting foreign workers, makes it a interesting case to study. Furthermore, Switzerland displays quite significant institutional affinities with Germany, most notably through its dual educational system. Finally, investigating social mobility in Switzerland will also provide to be instructional with respect to gender differences, as it remains a highly gender-traditional country.

In Chapter 4, we will discuss our methodological design. With the construction of a unique dataset based on twelve surveys collected between 1975 and 2009 and divided into birth-cohorts, we will be able to capture temporal change in intergenerational social mobility. We will discuss the choice and construction of our indicators, then assess the quality of our data. With the use of robust methodological tools, we will be able to thoroughly analyse dynamics in the intergenerational social mobility process in the Swiss Confederation, something we will do in our empirical chapters.

Our empirical analysis is distributed into three chapters: we will first address how the direct effect of social origin on social destination changed over time. In other words, we will show to what extent intergenerational social mobility increased over time in Switzerland, both in absolute and relative terms. Next, we will analyse the extent to which education mediates social mobility in Switzerland. This will consist of analysing the extent to which educational inequalities decreased and return to education increased and whether this has in turn generated more meritocracy and equality of opportunity. Our last empirical analysis will be concerned with the shape of the social mobility pattern in Switzerland. We will fit a model to our Swiss data that depicts the social mobility pattern of industrial countries to see how this model describes the Swiss social mobility pattern, and we will propose some adaptations. We will furthermore address the issue of whether heterogeneous social mobility dynamics can be observed in some specific class fractions of the service class. Finally, in Chapter 8, we will underline the main conclusions of our research and what they imply. We will explain why we find that meritocracy did not increase in Switzerland despite consequential changes to the social stratification mountain.

Part I:

Research background and study design

2 . How can social mobility increase (or not)? Theories of social mobility and current challenges

The core research question with which social mobility scholars have been fascinated by concerns to which extent social mobility can increase. This question has given rise to much empirical analysis, since this field of research has been one of the most – if not the most – prolific and active of all sociological areas. Very technical, these empirical analysis have been particularly concerned with measurement issues. As we will underline, measuring social mobility is far from straightforward, as it can be measured in two ways. First, in *absolute* terms. In this case, the absolute measure of social mobility refers to *observed* mobility. Second, in *relative* terms, a measure which provides an indication of the extent of openness in a society. Also often called *social fluidity*, this latter measure has attracted much attention in empirical assessments of social mobility. Yet in spite of these empirical analyses, the question of increasing social mobility still remains highly debated today. on the one hand, some scholars argue that social mobility remained quite constant and that small variations observed should be interpreted as *trendless fluctuations*. On the other hand, recent research suggests that it increased and that inequalities are *non-persistent.*

This fascination with the empirical assessment of trends in social mobility in turn has often been criticised for hindering theoretical developments on social mobility. In fact, besides the liberal theory of industrialism, theoretical contributions to the field have been rather scarce and usually extrapolated from empirical observations without paying much attention to the actual mechanism in progress. However, since the new millennium, new prospects in social mobility theory have arisen under the common framework of rational action theory. While these developments were first of all designed to explain the persistence of inequality, more recent attempts have been made to actually account for these latest empirical assessments demonstrating changes in social mobility dynamics.

In this chapter, we propose to present a general state of the evolution of empirical reflections concerning social mobility research and to discuss recent findings of *non-persistent inequality* in light of important macro-structural changes that Western societies went through since the last century. This outline of the research context will in turn enable us to highlight the Swiss specificity as compared to international research in the next chapter.

2.1 . Social mobility and the achievement of meritocracy

While the development of empirical research on social mobility started to emerge in the post-WWII years in the American context, the concept of social mobility is actually rooted in the nineteenth century. Social mobility was then envisaged as a way to serve the democratic ideology. Through the promotion of an ideology of equality of opportunity, it was expected that democratic societies would logically exhibit the rise of meritocracy. This ideology has been significant in the United States, since at the time of the first sociological developments in the field, the belief in the *American dream*, personified through the *self-made man* character, influenced early theoretical developments regarding social mobility. According to some scholars, social mobility was the key instrument to achieving meritocracy in modern societies characterised with industrial and economic development. Yet while the association between social mobility, meritocracy, and economic growth can look rather straightforward from the outside, such claims actually look overly simplistic and optimistic, very much in line with the American ideology.

2.1.1 . The American Dream and the "from rag to riches" myths

As underlined by Cuin (1993), the concept of social mobility emerged during the nineteenth century in the context of the United States of America, then the utmost example of modern democracy (Tocqueville 1850). At that time, social mobility was perceived as an ideological instrument to fulfil democratic ideals of liberty and equality. In fact, social mobility became a common sense belief that anyone could achieve, through the elaboration of an *American Dream ideology*, notably diffused under the form of *from rags to riches* myths by authors such as Horatio Alger (see Wohl 1953, cited in Cuin 1993:42).

The emergence of this formative belief relied on three fundamental notions, namely those of a classless society, equality of opportunity, and social achievement (Cuin 1993). The concept of a *classless society* constitutes the first condition to believe in social mobility. It assumes that society is open and that individuals can circulate freely within the social structure without facing barriers. In other words, in the American ideology, no structural determinism can retain individuals in pursuing their goal; individuals are all equal. While the concept of a classless society defines the freedom of movement within the society, the *equality of opportunity* can be seen as an instrument to legitimise existing inequalities within the social structure. The rationale is the following: as there exists no structural barrier to hinder individuals to fulfil their goals, individuals have all the same chances to succeed in life. Finally, the concept of *social achievement* is the consequence of both previous notions. Individuals owe their social achievement only to their own talents. From this

liberal stance, every individual is seen responsible for their own social condition and social mobility is perceived as a "natural" phenomenon.

This supposed "natural" character of social mobility was not questioned until the middle of the twentieth century, as social mobility had hardly ever been a subject of enquiry by social scientists before – though Sorokin's (1927) pioneering work in the 1920s, which will be presented later on, is a notable exception. Yet the very first studies undertaken of social mobility in the United States of America were still permeated with the American ideology. These studies had the ambition to demonstrate the *cultural exceptionalism* of the United States, a country which was expected to have particularly high levels of social mobility. This culturalist intuition was especially guided by expectations that "the absence of an inherited aristocracy in the American history" (Hout and DiPrete 2006:4), "the rejection of deference in interpersonal relations, the generalization of ambition, and the pervasive influence of the American Dream of material success" (Erikson and Goldthorpe 1992b:14) would generate higher levels of social mobility in this country as compared to older European nations.

Such claims provided some theoretical foundations to the liberal theory of industrialism. Integrated with the influential Functionalism paradigm of the post-WWII years, this theory contended that meritocracy and social mobility would increase logically with the development of industrial societies. While we will point out that this theoretical approach accounts a certain number of weaknesses, we should not undermine the fact that the liberal theory of industrialism still constitutes one of the most serious theoretical formulations about social mobility carried out hitherto, as it provides quite systematic insights in regard to the mechanism in place.

2.1.2 . When theory meets the American ideology: the liberal theory of industrialism

Developed in the 1960s, the liberal theory of industrialism – also known as the industrialisation thesis – contends that industrial societies, compared to pre-industrial ones, would be characterised by increasing social mobility rates and equality of opportunity (Blau and Duncan 1967; Kerr et al. 1960; Parsons 1960; Treiman 1970). Directly inspired by Functionalism, this theoretical approach states that in industrial societies, (1) rates of social mobility will be higher and upward mobility will predominate over downward mobility, and that (2) individuals will compete on a more equal basis to attain a particular social position, resulting in an increase in the equality of opportunity and in the achievement of meritocracy.

From this standpoint, *achieved* characteristics are expected to succeed to *ascriptive* ones in the

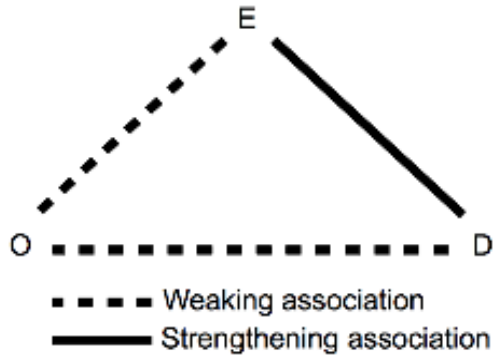

Figure 2.1: Changing relations over time among class origins, educational attainment, and class destinations as expected under the liberal theory of industrialism
Note: Figure replicated from Godthorpe (2007b:159).

attainment process. Working-class children have equal chances to reach an upper-class social position as upper-class children, if the former prove to be as talented and as deserving as the latter. Indeed, while with the development of industrialism, allocation into the social structure increasingly operates on the basis of individual talent and effort, regardless of ascriptive characteristics such as social origin, sex, race, or national origin, it is implied that individuals own their social position owing only to personal merit and talent (or non-merit/non-talent). In other words, under this perspective, inequality essentially stems from differences in merit and talent between individuals (Bihr and Pfefferkorn 2008:19).

Proponents of the liberal theory of industrialism formally explained how achievement would dominate over ascription by introducing the notion of the *OED triangle*. This triangle, as represented in Figure 2.1, depicts how the relationship between social origin (O), educational attainment (E) and class destination (D) is expected to change in industrial societies. With the coming of industrialism, the association between social origin and educational attainment as well as that between social origin and class destination weakens. Conversely, the association between educational attainment and class destination strengthens. In other words, under industrialism, the individual's social position increasingly depends only on the individual's talent and "the chances of 'success' are steadily improved for all." (Erikson and Goldthorpe 1992b:6).

The mechanisms through which increased social mobility occur are threefold. First, the increase in social mobility rates and equality of opportunity are driven by changes in the social structure. In fact, the rapid change in the structure of the social division of labour generates increasingly differentiated occupations. Further, the shifts from the agriculture sector to the manufacturing sector

and then from the manufacturing sector to the service sector bring a rising demand for technically and professionally qualified personnel. In turn, this generates an overall upgrade in levels of employment as well as a respective increase and decrease in upward and downward social mobility as "industrial societies become increasingly middle-class (...) societies" (Erikson and Goldthorpe 1992b:6).

Second, in order to respond to the growing demand for highly qualified personnel, the educational system is reformed and expanded to ensure that everyone's talent is fully exploited and meets its function. Thus, all social backgrounds can access education and have equal opportunity to be allocated to any given social position, as selection is operated increasingly following principles of achievement and universalism according to meritocratic assets rather than by ascription and particularism. Under this prospect, "what counts is increasingly what individuals can do, and not who they are" (Erikson and Goldthorpe 1992b:6).

Third, as social selection based on achievement tends to be higher in expanding economic sectors and selection on ascription persists only in declining sectors, it is expected that achievement will in the future become the only criterion of selection. In fact, as Erikson and Goldthorpe remind us, in industrial societies "the proportion of population that is subject to the new 'mobility regime' characteristic of industrialism increases not only as that regime imposes itself, but further as those areas and modes of economic activity that are most resistant to it become in any event ever more marginal" (1992b:6).

Blau and Duncan (1967) empirically assessed the validity of the liberal theory of industrialism in their seminal book *The American Occupational Structure*. What is central in their analysis is that they consider education as *both* the main factor behind upward mobility as well as the reproduction of status from one generation to another. This proposition is significant since it was previously thought that education must *either* promote mobility *or* reproduction.

To highlight the central rationale of Blau and Duncan's proposition, Figure 2.2 depicts the mechanisms of their status attainment model. Directly inspired from the OED triangle, this model shows how education (E) can either be determined by social origin (O) or by all things that are independent of social origin (U). For instance, in a society where social origin (O) has more influence on education (E) than other factors independent of social origin (U), a *reproduction social mobility regime* will characterise this society. In contrast, in a society where these independent factors (U) have a greater influence on education than social origin (O), this society will enjoy a *mobile social mobility regime*.

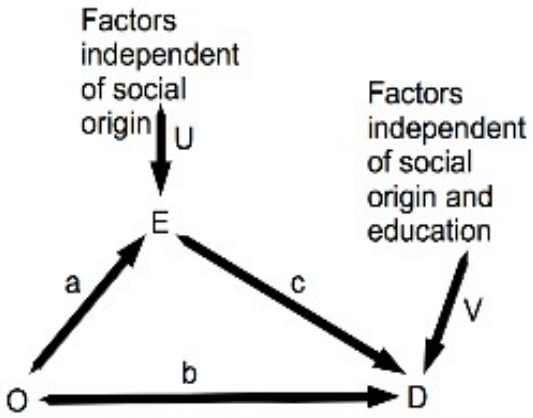

Figure 2.2: Simplified path diagram of how destination depends on social origins and education.
Note: Figure replicated from Hout and DiPrete (2006:6)

They tested this assertion empirically using path models to determine which social mobility regime characterised the American society at that time. They first investigated whether the indirect effect of social origin via education (ac) was greater than the direct effect of social origin (b) on social destination (D). Secondly, they investigated whether the indirect effect of factors independent of social origin via education (*Uc*) was greater than the indirect effect of social origin (*ac*) on social destination (D). They found that both relations were important in status attainment. Thus, status attainment was not only determined by social origin but also by independent factors. Blau and Duncan concluded that an important share of social mobility was mediated by education and as a consequence that achievement was more important than ascription in determining occupational status in mid-twentieth century United States of America, consistent with the liberal theory of industrialism.

However, in spite of the fact that the liberal theory remains a serious and influential theorisation of social mobility today, it met an amount of criticism. Noted for being slightly too optimistic in regard to increasing social mobility and equality of opportunity chances, it was qualified as Functionalism *rose*[7] (Erikson and Goldthorpe 1992b). Overall, the main weaknesses of this theoretical approach stem from the confusion made between social mobility, equality of opportunity and industrialism.

7 Understand: pink. As opposed to Functionalism *noir* – understand: dark – referring to the Marxist tradition (see Braverman 1974)

2.1.3 . The common confusions between social mobility, equality of opportunity, and economic development

Conventional wisdom dictates that economic development increases social mobility and greater social mobility means more equality of opportunity. Yet these are actually very strong assumptions, as there exists no straightforward relationship between economic development and social mobility as well as between equality of opportunity and social mobility.

It is indeed tempting to view economic development as a vector of increasing social mobility. Some studies carried out during the liberal theory of industrialism years did, in fact, find a positive relationship between indicators of economic development and indicators of social mobility (Cutright 1968; Hazelrigg 1974); however, others did not (Hardy and Hazelrigg 1978; Hazelrigg and Garnier 1976).

Therefore, it must be emphasised that no systematic link exists between economic growth and increasing social mobility (Breen 1997a). Furthermore, when this link does exist, social mobility does not necessarily increase gradually. For instance, it was found that in Brazil, a country that exhibited rapid industrialisation, the increase in social fluidity was not monotonic (Torche and Ribeiro 2010) Conclusively, while it is not totally unfounded that economic development could be one possible explanation of increasing social mobility, it cannot be automatic at any time.

Regarding the association between social mobility and equality of opportunity, the confusion is even more fixed in one's mentality. It should be reiterated that equality of opportunity is very much an ideological concept, stating that individuals should be allocated in the social structure according to achieved criteria. However, to disentangle confusion between social mobility and equality of opportunity, three points can be made, in line with Breen (2010b).

Firstly, it remains important to note that opportunities are not distributed equally. It is indeed one of the most well documented empirical findings that those located in the lowest social positions tend to come from a low social background, while those holding the highest social positions originate from a similar position. Secondly, while it may be the case that increasing social mobility does actually correspond with increasing class-based equality of opportunity, this does not imply that all opportunities are equally distributed. We can certainly say, for example, that in one generation educational inequality decreased and return to education increased, however, we cannot say whether these opportunities have been more equally distributed within the population. It might be the case, for instance, that opportunities increased for, say, only white females with an intermediate class background. Would this mean that equality of opportunity increased? Certainly not, say, from a

black working-class male point of view. Finally, even though it was the case that opportunities would have been more equally distributed, this would not necessarily generate more *absolute* social mobility, as the social structure is shaped by external changes like economic context and industrial development, and therefore are independent of changes in equality of opportunity. Therefore, for all these reasons, we will try to avoid speaking of equality of opportunity when referring to social mobility. Yet in cases when we should employ this expression, it should clearly be understood as referring to class-based inequality of opportunity.

All in all, for all these reasons, the liberal theory of industrialism accounted major weaknesses. It is from this standpoint that a new current of social mobility research emerged, having the express goal of empirically invalidating this theory.

2.2 . Basically cross-national invariance in social mobility

Alternative views to the liberal theory of industrialism and to the idea of an education-based meritocracy arose from the 1970s onwards, primarily on the other side of the Atlantic Ocean in Europe. After a rigorous empirical analysis of social mobility, Erikson and Goldthorpe (1992b) concluded that social mobility was basically characterised by cross-national and cross-temporal invariance. They were able to arrive at such an outcome thanks to important methodological innovations and the undertaking of rigorous data collection under a common framework.

2.2.1 . Methodological innovations: one small step for sociologists, one giant leap for social mobility research

The achievement of a total renewal in social mobility research was pushed forward in the mid-1970s by two important methodological innovations: (1) the introduction of a social class schema and (2) the implementation of new statistical models.

Firstly, the development of a social class schema jointly by Erikson, Goldthorpe and Portocarero (1979 henceforth the EGP class schema) constituted a major advancement in social mobility research. While from the outside, the introduction of a social class schema in social mobility research can look rather anecdotic, it has actually imposed a completely different vision of social mobility. Indeed, most previous social mobility research, and in particular that emanating from the liberal theory of industrialism, used to measure social position through various socio-economic status indexes. Yet such scales, based on the ranking of occupations according to prestige, income and education, depict a unidimensional hierarchical order. From a class theorist point of view, such practice poses a problem as it ignores class conflict and multiple relational dimensions between classes that are characteristic of capitalist industrial societies. A reasoning in terms of social class is

indeed able to envisage the structure of social positions interdependently, a vision that cannot be captured with continuous measure as proposed in socio-economic scales. Therefore, introducing a social class perspective to the study of social mobility, allows social mobility to be thought of from a multidimensional stance. This shift from a unidimensional to a multidimensional vision constitutes a considerable difference, which actually injected much creativity into social mobility analysis.

In addition to the fact that the introduction of a social class perspective opens *de nouveaux horizons des possibles*[8] to social mobility analysis, it also has the noteworthy particularity to be seriously theoretically rooted in the Weberian tradition of class analysis, which states that individuals share common life chances – *Lebenschancen* (Weber 1978). The neo-Weberian EGP class schema based its construction logic under the two core concepts of e*mployment relationship* and *employment regulation*. In regard to employment relationship, it distinguishes between (1) the employers, (2) the self-employed without employees, and (3) the employees; as for the employment regulation, it discriminates within employees between (1) those with a service relationship regulation, (2) those with a labour contract regulation, and (3) those with an intermediate form of regulation (Lemel 2004:51).

While the first division line is quite straightforward, the second requires some detailed explanation. A service relationship employment regulation defines situations where employees enjoy incremental advancement, employment security, and the possibility of exchanging commitment to the job against a high level of trust on the part of employers. The service relationship regulation characterises the service class, also called the salariat. The labour contract employment regulation in contrast describes employees who have closely regulated payment arrangements and who are subject to routine and greater supervision. Stated differently, "service-class employees are controlled by the "carrot" of long-term benefits, and workers by the "stick" of close regulation and the labor contract" (Evans 1996:214; quoted in Oesch 2006b:21). In regard to the definition of the intermediate employment regulation, it is somewhere in between and also more blurred.

Notwithstanding these theoretical considerations, it must also be said that the EGP class schema has a pragmatic primary goal. Erikson and Goldthorpe indeed underline that it should be considered "essentially as an *instrument de travail*" (1992b:46) to serve analytical purposes. Still, the creation of a class schema for social mobility analysis happened to be significant for the second methodological innovation: the implementation of log-linear models.

To correctly understand the importance of this second methodological innovation, it may certainly

8 Understand : New possible prospects.

be informative to briefly travel into past empirical social mobility analysis undertaken in the 1950s. At that time, a first set of comparative social mobility analysis had already been undertaken, notably in countries such as the United States (Kahl 1957; Rogoff 1953; Warner and Abegglen 1955), Great Britain (Glass 1954), the Federal Republic of Germany (Bolte 1959; Janowitz 1958), Sweden (Carlsson 1958), and Denmark (Svalastoga 1959). While this first generation (Ganzeboom, Treiman, and Ultee 1991) of comparative research resulted in the creation of the Research Committee on Social Stratification and Social Mobility (RC28) of the International Sociological Association, empirical assessments were rather crude given the small possibilities of statistical tools then available to researchers. Thus, at that time, the analysis of social mobility was usually limited to the inspection of inflow and outflow percentages of mobility from manual to non-manual occupations. However, some problems arose in this method of measuring social mobility as soon as some scholars realised that it was problematic to compare cross-nationally and cross-temporally different social structure to correctly measure social mobility. Indeed, as Crompton reminds us in regard to cross-temporal differences, "given long-term changes in the occupational structure, a certain amount of "upward" mobility is "built in" or "forced", given the under-supply of non-manual sons" (1998:211). The same argument equally applies for cross-national comparison: to what extent are social mobility rates between different countries comparable if these countries have a different marginal distribution of manual and non-manual occupations?

Aware of such problems, several scholars made attempts to overcome it, such as with the development of the mobility ratio (see Hout 1983:16). However, it turned out to be inadequate. It was only in the 1970s that such statistical limitation was surpassed through the introduction of log-linear models for the analysis of categorical variables (Featherman, Jones, and Hauser 1975; Goodman 1965, 1969). These models have the advantage of disentangling structural effects from net effects in a mobility table that cross-classifies – in the case of social mobility – social origin and social destination. In other words, these models enable researchers to disentangle the effects implied by the marginal distribution of categories in table, as well as the effects related to the intrinsic association between variables within the cells of the table with the odds-ratio statistic.

This considerable innovation generated a massive reorientation in the concrete analysis of social mobility by allowing it to be measured in two different ways. First, in *absolute* terms with a description of flows between social origin and social destination; second, in *relative* terms with a measure of the association between social origin and social destination – often referred to as social fluidity. A further interesting feature of log-linear models is that, when specified in a topological form (Hauser 1978), they are very powerful to inspect specific relations within certain cells in a

table. In that, “such models make it possible to treat a bivariate association as a multidimensional pattern and, in particular, to model the diagonal (which represents class immobility) separately from the off-diagonal cells” (Ganzeboom et al. 1991:287). This latter specification of log-linear models happened to be highly crucial for Erikson and Goldthorpe's (1992b) finding of cross-national invariance in social mobility.

2.2.2 . The CASMIN project and the finding of cross-national invariance in social mobility

These two methodological innovations constituted a perfect match to achieve advancement in social mobility research, especially as social mobility scholars at the time had the express goal of undertaking comparative analysis of social mobility to challenge the industrialisation thesis. The availability of these new standardised tools indeed happened to provide the condition of success for the undertaking of the first large-scale comparative social mobility data collection project, latter known as the CASMIN project (Comparative Analysis of Social Mobility in Industrial Nations).

Launched in the 1970s, preliminary analysis of social mobility in Australia and in the United States of America had already been undertaken by the mid-1970s by Featherman, Jones, and Hauser (1975). Interestingly, their findings were at odds with statements of the liberal theory of industrialism. In their two-country comparison, scholars reported substantial cross-national differences in terms of *absolute* mobility rates due to the different patterns in the farming, manufacturing and service sectors. However, they found that both countries shared common *relative* rates of mobility. In other words, when applying log-linear models to the mobility table, they noticed that the association between social origin and social destination was the same in both countries. Such observation led the authors to conclude that patterns of mobility are expected to be “basically the same” in industrial societies with a market economy and a nuclear family system (Featherman et al. 1975:340). This theoretical statement, which came to be known as the FJH hypothesis, constituted a first step towards the empirical invalidation of liberal theory of industrialism.

It is worth noting that in the late 1950s, Lipset and Zetterberg's analysis pointed in the direction of cross-national similarities in social mobility between both the United States of America and European nations, as they had found that in the countries they studied, rates of mobility were high and not substantially different. Thus, they concluded that “the overall pattern of social mobility appears to be much the same in the industrial societies of various Western countries”(1959:13). However, this observation that came to be known as the LZ hypothesis held only for *absolute* levels

of social mobility, unlike the FJH hypothesis which holds essentially in *relative* terms.

These first empirical assessments fostered the development of social mobility data collection. This endeavour was formalised between 1983 and 1988 through the undertaking of the CASMIN project conducted notably by Müller and Goldthorpe initially and latter on with Erikson (Erikson et al. 1988). It resulted in the publication in the early 1990s of *The Constant Flux*, by Erikson and Goldthorpe (1992b). They demonstrated the large-scale empirical invalidation of the industrialisation thesis through a detailed and innovative comparative analysis of social mobility in twelve industrialised countries, namely Australia, England and Wales, France, the Federal Republic of Germany, Hungary, the Irish Republic, Japan, Northern Ireland, Poland, Scotland, Sweden, and the United States. What is noteworthy from their empirical analysis is that they applied in line with the aforementioned methodological innovations' "new standards in comparative analysis by the rigorous recoding of occupational information in nationally representative data sets" (Breen and Jonsson 2005:230) in addition to log-linear modelling techniques.

To challenge the industrialisation thesis, Erikson and Goldthorpe's contribution was twofold: (1) assessing the extent of cross-national variation in social mobility pattern, and (2) determining the degree of change over time in relative social mobility.

To assess the extent of cross-national variation in social mobility pattern, they built a sophisticated topological log-linear model which they later called *the model of core social fluidity*. This model presents the advantage of partitioning a mobility table into different levels of (net) association between social origin and social destination in order to find a general pattern of social mobility. While some regions of the table are expected to have positive association, others should depict negative association. Erikson and Goldthorpe theoretically define four main dimensions of the social (im-)mobility process according to the relative desirability, advantages and barriers that characterise each cells of the mobility table. These dimensions take the form of effects: (1) inheritance effects, (2) hierarchical effects, (3) sectoral effects, and (4) (dis)affinity effects[9].

They found firstly that inheritance effects and sectoral effects were more important than hierarchical ones in explaining relative mobility patterns. This directly challenges the assumptions made by the liberal theory of industrialism. Secondly, and more importantly, they were able to corroborate findings of Featherman, Jones and Hauser as all twelve countries that were compared to the model of core social fluidity showed little variation in the general pattern of social fluidity. They thus concluded that, since the model of core social fluidity adequately describes the social mobility

9 These effects that take the form of matrices are depicted in Table F.5 in Appendix F. In Appendix E we provide an overview of the rationale for the core model of social fluidity.

pattern of all countries in the study, industrial nations share a common multidimensional pattern of intergenerational social mobility, and the small observed differences between nations only account for countries' idiosyncratic historical and political circumstances.

The second contribution of Erikson and Goldthorpe aimed at determining the degree of change over time in relative social mobility. They were able to test this by introducing a new log-linear model: the Unidiff, Uniform Difference model (Erikson and Goldthorpe 1992b; see also Xie 1992 who proposed simultaneously the same model under the name "log-multiplicative layer effect model"). This model, which allows the relative strength of the association between social origin and social destination to vary by a specific cohort, is able to detect a uniform change towards either greater or lesser social fluidity. In other words, this model enabled Erikson and Goldthorpe to test whether the amount of relative social mobility had increased over time. In their analysis they observed small differences between nations in their degree of social fluidity, as the strength of the association between social origin and social position remained the same between cohorts in most countries. Nonetheless, in Sweden – a nation with a long-term social-democratic tradition – and in the United States – until recently the most economically advanced country – they did find that relative mobility had slightly increased over birth-cohorts. Yet overall, Erikson and Goldthorpe concluded that "although there may have been an increase in *absolute* rates of social mobility, the class differences in *relative* mobility rates persists, that is, that there is "constant social fluidity" across different societies" (Crompton 1998:69).

These findings actually echoed Shavit and Blossfeld's (1993) conclusions on educational inequality published the subsequent year. This comparative study on changes in educational inequality undertaken in thirteen industrialised countries revealed that in most industrialised countries, inequality in educational opportunity had remained remarkably stable over the twentieth century. Only gender educational inequality narrowed and equalised in all thirteen countries, but not those based on social origin. Yet two exceptions to the observation of persistent education inequality were found in the cases of Sweden and the Netherlands, given that these two countries exhibited a reduction in inequality in educational attainment. According to Shavit and Blossfeld, such improvements could be attributed to sharp social welfare policies that equalised living conditions and overall life opportunities in the two countries. However, with only two countries out of thirteen depicting increasing educational equality, overall educational inequality proved to be significantly persistent.

By the 1990s, Erikson and Goldthorpe, as well as Shavit and Blossfeld, were able to empirically invalidate claims of the liberal theory of industrialism. Rather than demonstrating a general trend

towards increasing equality, both sets of research documented the persistence of inequality in spite of economic development. In this sense, these findings lent general support to the FJH hypothesis of cross-national invariance in social mobility.

Interestingly, such conclusions remind us to some extent of Sorokin's (1927) early observations on social mobility. From his pioneer analysis of numerous data sources with rudimentary statistics, Sorokin sustained that no society is actually characterised by either an increase or a decrease in social mobility but instead by alternating waves of increasing and decreasing social mobility, taking the form of *trendless fluctuations* (Sorokin 1927). He put forth two main reasons to account for such observations. Firstly, that social mobility decreases with endogenous factors, and increases with exogenous factors. For instance, “periods of relative social stability in which the inherent tendency for stratification to become more rigid is unimpeded are punctuated by bursts of increased mobility and openness occurring in times of social uncertainty and dislocation.” ((Erikson and Goldthorpe 1992b:20) Secondly, that “while certain barriers to mobility have been largely removed – for example, juridical and religious ones – it is important to recognize that other barriers have become more severe or have been newly introduced – for example, those represented by systems of educational selection and occupational qualification” (Sorokin 1927; cited by Erikson and Goldthorpe 1992b:20).

Yet this *grand bond en avant*[10] in social mobility research primarily achieved by Erikson and Goldthorpe encompassed some weaknesses, particularly in regard to the way the temporal dimensions of social mobility and women's social mobility were treated.

2.2.3 . The incomplete picture of cross-national invariance in social mobility

In fact, the two main weaknesses addressed to Erikson and Goldthorpe's Constant Flux thesis stemmed from the rather static and imbalanced picture they provided of cross-national invariance in social mobility.

Firstly, it was static in that the reliability of trends in relative social mobility they drew over time were highly questionable. Indeed, some scholars argued that the conclusion of no increase in social fluidity across cohorts was “suspect, since they have data for only one point in time and hence must rely on the dubious assumption that there are no age effects on mobility and hence that age differences may be interpreted as cohort effects” (Treiman and Ganzeboom 2000:125). This came to be the most striking criticism.

10 Understand : Great Leap Forward

Secondly, it was imbalanced in that women's social mobility was addressed only in one chapter and not from a systematic stance. Such a criticism was not new in social mobility research, as for a long time social mobility scholars simply ignored women's social mobility. Thus, the mere fact that Erikson and Goldthorpe dedicated one chapter to analyse women's social mobility constituted a considerable improvement. However, notwithstanding this advancement, Erikson and Goldthorpe were mainly interested in analysing men's social mobility, only analysing women's social mobility to demonstrate "how little women's experience of class mobility differs from that of men" (1992b:275). However, the measurement approach they adopted to derive such observation was problematic, as they still considered the family to be the unit of class analysis, not the individual. Indeed, such observation was derived respectively from the *conventional approach* and the *dominance approach* (Erikson 1984b). While the former describes marital mobility, derived from women's husband's social position, the latter attributes the class position of the spouse who holds the dominant position in the labour force. In practice, it often consists of inferring the married woman's social position according to that of her husband. Although the latter position constitutes an improvement, it still does not acknowledge fully women's employment situation. In fact, when Erikson and Goldthorpe applied the *individual approach* to women by measuring only women's employment situations, they arrived at slightly different results. They found that women display greater downward mobility than men in absolute terms, even though no gender differences would have been observed in relative terms.

Thus, it seems that Erikson and Goldthorpe's research failed to adequately capture temporal dynamics, and in turn address societal changes that resulted from them, such as women's new role in Western societies. This is partly due to reasons of data availability, but also to the historical context that preceded the publication of *The Constant Flux*. In fact, not only was the phenomenon of women's increased labour force participation ongoing at the time they undertook their analysis, but also the data they used for it had been collected in the 1970s. In spite of these criticisms, the publication of *The Constant Flux* marked a turning point in social mobility research, but also to a wider extent in social stratification research. Not only did Erikson and Goldthorpe succeed in setting rigorous methodological standards in comparative research, but they further inspired a new generation of sociologists to walk in their footsteps and undertake large scale comparative research projects. This is how more recent research was able to address remaining empirical criticism and filling major gaps.

2.3 . Non-persistent inequality and new challenges

2.3.1 . The complete picture of actually non-persistent inequality

Since the publication of Erikson and Goldthorpe's study, further comparative research has more systematically analysed temporal trends in intergenerational social mobility, as well as women's social mobility, and came to more qualified conclusions. These new studies in fact found some evidence of non-persistent inequality regarding both (1) social mobility and (2) educational inequality.

Breen's (2004a) edited *Social Mobility In Europe* collective book constituted the logical continuation of Erikson and Goldthorpe's analysis. This comparative research provided a detailed analysis of temporal trends and cross-national variation in social mobility in eleven European countries between 1970 and 2000. This time, in contrast to Erikson and Goldthorpe (1992b), authors were able to make real period comparison through the use of several surveys for each country. Furthermore, they analysed women's social mobility systematically, applying the individual approach.

What is noteworthy about this new comparative research is that in several respects, "the main findings (...), which held true for both sexes, were at odds with those of *The Constant Flux*" (Breen and Jonsson 2005:230). Firstly, authors observed that from the 1970s to the 1990s, rates of absolute social mobility had become more similar. The Lipset-Zetterberg hypothesis states "overall pattern of social mobility appears to be much the same in the industrial societies of various Western countries" (Lipset and Zetterberg 1959:13). Although wrong in a strict sense, this hypothesis has become closer to the truth than it used to be. Secondly, this research brought out a general tendency towards increasing social fluidity, even though this trend was not statistically significant in every case (Breen and Luijkx 2004a:389). Thirdly, considerable differences in the strength of fluidity between some countries and within some countries over time was proven (Breen and Luijkx 2004a:400). Finally, this analysis further underlined that social fluidity was greater in state socialist (Poland and Hungary) and social democratic (Norway and Sweden) countries, but also in Israel (and the United States, for which data was made available to authors by Michael Hout).

In a similar vein, recent comparative research analysing long-term trends in educational inequality in eight European countries (Breen et al. 2009, 2010) contradicted Shavit and Blossfeld's previous conclusions on persistent inequality in educational attainment. Using more recent data and a larger sample size as well as different modelling techniques, Breen, Luijkx, Müller and Pollak (henceforth BLMP) reassessed empirical evidence concerning persistent inequality in educational attainment

and found a marked decline in inequality in educational attainment over time for both men and women. This trend particularly holds for children from farming and working-class origins.

Thus, from this recent research it appears that *The Constant Flux* thesis was rejected on empirical grounds. Indeed, as underlined by Beller and Hout, "once in doubt, the consensus view now is that differences are substantial" (2006:353) in relative mobility rates. While such contradictory findings between previous research and the most recent research may look bewildering to some scholars, others argue that a large part of differentials in outcomes would be mainly imputable to technical reasons (Breen and Jonsson 2005, 2007). The data used in more recent research involves longer observation time periods because more cross-sectional data is available and accounts for a larger sample size. All this allows for more robustness in the models estimated. Scholars have also made an increasing use of dynamic modelling techniques designed to test change (Breen and Jonsson 2005:236). Furthermore, while older research focused on assessing change by adopting a period approach, some recent research suggests that change is more likely to be driven by a process of cohort replacement rather than through period change, which would explain why former research failed to detect change (Breen and Jonsson 2007:1805). Lastly, the majority of data collected now includes women, whereas previous survey samples were often confined to men (Breen and Jonsson 2005:235).

This reversal trend in findings on educational inequality and social mobility in less than two decades raises a certain number of questions. First, what could explain such a non-persistent inequality trend? Second, to what extent does this trend result from macro-structural changes? Third, will this trend last or come to a halt at some point in time? While we will address the latter two issues later on, for now we would like to present the emerging theoretical model of *Rational Action Theory*, which was originally formulated to explain persistent educational inequality.

2.3.2 . Rational Action Theory: the emerging new paradigm of social mobility research

Since the rejection of the liberal theory of industrialism, theoretical developments in the field had been rather weak. It was only at the eve of the new millennium that new developments based on the Rational Action Theory (henceforth RAT) emerged (Breen and Goldthorpe 1997). This theoretical framework was first constructed to explain *educational inequality*. However, more recently, some attempts have been undertaken to generalise it to *social mobility*.

Breen and Goldthorpe developed a model of educational choice to uncover mechanisms driving *persistent* educational inequality (1997; see also: Goldthorpe 2000 chap. 9, and 2007b chap. 3).

Taking the form of micro-level explanation, this theoretical model aims at explaining how individuals from different class origins make different educational choices. They sustain that individuals' differences in subjective rationality according to social origin cause the perpetuation of inequality of outcome.

To assess the mechanism through which educational inequalities persist, they directly draw some inspiration from Boudon's theory of inequality of opportunity (1985). Boudon proposed to decompose the allocation process into the educational structure between the primary and secondary effect. The primary effect simply encompasses cultural heritage – in other words, the academic ability of children, which differs with social background. The secondary effect, however, is much more central in Boudon's theory. It is at this level that individual action is acknowledged in the allocation process into the educational structure. It describes the process of individuals' educational choices made during the educational career in order to maximise the social utility of a given educational level. Yet as the social utility of a given educational level is met when the expected benefice of education is higher than its cost, and as the social utility of education differs by social origins, it is likely that equally talented individuals from different social origins will make different rational choices in their educational career. Indeed, the social utility of a high educational level is much higher for individuals from upper social classes than for individuals from lower social classes. In other words, from Boudon's point of view, “educational inequalities are thus essentially due to the exponentials effects of social position conditioned expectations and, to a much more limited extent, to a cultural inequalities effect” (1985:177 own translation)[11].

In this sense, Boudon's theory constitutes a significant criticism of Bourdieu and Passeron's cultural reproduction theory (Bourdieu and Passeron 1964, 1970) which contends that educational and social inequalities are created and reproduced within the educational system because children of different social backgrounds are endowed with different *habitus* and *cultural capital*. In short, the *habitus* defines a set of dispositions, orientations, and modes of conduct that a child acquires and adopts during his or her socialisation and whose influence remains pervasive throughout the life course. The *habitus* is shaped and transmitted through *cultural capital*, corresponding to cultural resources possessed by families. According to the cultural reproduction theory, since the educational system imposes a pedagogy that relies on the dominant class *habitus*, children of the dominant class background will be better rewarded by the educational system than children of a working-class background, because the former have the appropriate *habitus* and *cultural capital* – the main idea

11 Original quote : Les “inégalités devant l'enseignement sont donc essentiellement dues aux effets exponentiels du conditionnement des attentes par la position sociale et, dans une mesure beaucoup plus limitée, à l'effet des inégalités culturelles”

being that the dominant class preserves its dominant position and legitimises existing inequality through educational institutions. In the authors' own words: “Today the School succeeds, with the ideology of natural “endowments” and of innate “tastes”, to legitimise the circular reproduction of social hierarchies and of educational hierarchies”[12] (Bourdieu and Passeron 1970:250 own translation; see for similar theoretical developments conflict theory Collins 1971; cited in Graaf 1986). However, this theory has been heavily criticised, particularly in regard to its extreme determinism and its difficult empirical demonstration, since the definition of *cultural capital* remains quite blurred (Goldthorpe 2007a).

In their RAT model, Breen and Goldthorpe integrate both primary and secondary effects under the common label of *likelihood of success*, one of the three main factors that shape educational choices. In line with Boudon, the primary effect is referred to as ability and the secondary effect is referred to as expectation of success. The difference in expectations of success is shaped by pupils' own knowledge of their ability and the *subjective probability* they attach to being successful in the next stage of education.

The two other factors that shape pupils' educational choices are (1) *the cost* of remaining at school, which includes the direct cost of education as well as forgone earnings, and (2) *the value* or *utility* that children and their family attach to the three possible different educational outcomes: pass, failure, or leave a given education level. Yet Breen and Goldthorpe argue that as families are concerned that their children acquire a class position at least as advantageous as that from which they come in order to avoid downward social mobility, the value or utility attached to a given educational outcome will vary by social class. This third factor, also known as the *relative risk aversion*, is argued as being the most important.

Thus, middle class children can more easily bear the costs of higher education, they further believe to expect higher rates of success in education, and they are more inclined to continue to higher education than working-class children because by doing so they are more likely to avoid the risk of downward mobility. All these reasons explain why educational inequality remains *persistent*. Yet with the recent new deal in empirical research, theoretical explanation of *non-persistent* educational inequality was articulated with the original RAT model.

BLMP argue that the non-persistent educational inequality trend observed came through both the decline of primary and secondary class effects. The primary effect declined first through the general improvement of the standard of living driven by both economic growth and welfare-state protection

12 Original sentence : “l'Ecole parvient aujourd'hui, avec l'idéologie des “dons” naturels et des “goût” innées, à légitimer la reproduction circulaire des hiérarchies sociales et des hiérarches scolaires”

since the end of WWII (Erikson and Jonsson 1996b:81). In particular, this should have benefited children of working-class and farmer-class families. Furthermore, “this should have been reinforced by changes within educational institutions, such as the growth in public provision of early child care and preschool education; the development of full-day rather than part-time schooling; increased school support to counteract performance gaps of pupils; and differences in the timing, extent, and manner of tracking, all of which may reduce class differences in school performance” (Breen et al. 2009:1479). At the secondary effect level, they point in the direction of the decreased cost of education. Not only has the direct cost of education become smaller as school fees have been largely abolished, but simultaneously the average disposable family income has increased, making education costs easier for families to bear.

These observations are in line with Goldthorpe and Breen's claims in the latest version of their RAT model (see Goldthorpe 2007b chap. 3). They suggest two ways through which educational class differentials can be reduced, located essentially at the *cost* level of their original theoretical model. Either (1) through the subsidisation of young people according to their class of origin, or (2) through the general reduction in inequality of condition between classes. In other words, class differentials in educational attainment are expected to decrease when class differentials in resources also decrease.

The issue of class differences in resources is crucial to explaining trends in social mobility. Goldthorpe draws *an outline theory of social mobility* in his essay *On Sociology* (2007b chap. 7). He builds his theory on the central notions of mobility strategies and differentials in resources and goals to explain why, overall, social mobility should remain constant. He highlights how different social classes face different constraints according to their employment relations (employer, self-employed and employee) and more importantly, given the predominance of employees in modern societies, according to their employment regulations. Significant differences indeed exist among employees, from salariat to the working class. The former enjoys long-term contract, a salary with regular increments and career opportunities, whereas the latter “are typically engaged by their employer or employing organization through a contract that implies a short-term and specific exchange of discrete amounts of labor in return for wages calculated on a piece or time basic” (Goldthorpe 2007b:164).

Such differences significantly impact resources available within the different social classes. Not only do individuals in the salariat class have higher average earnings than other classes, but they also enjoy (1) “greater economic security through their better protection against the risk of job loss and subsequent unemployment”; (2) “greater economic stability in that their incomes from

employment will show less short-term fluctuation in relation to amount of work performed and will be less subject to interruption as a result of sickness or accident"; and (3) "more favorable economic prospects in that their incomes will tend to follow a rising curve until a much later stage in the course of their working lives, peaking in their fifties rather than in their late twenties or thirties" (Goldthorpe 2007b:165). Therefore, the availability of resources is differentially constrained by social classes and thus this will in turn shape individuals' social mobility strategies differently.

In line with the concept of *relative risk aversion* presented above, individuals' goals for their social mobility strategy will primarily be directed towards maintaining "a class position that is no less desirable than that of their parents or, in other words, to avoid downward mobility" (Goldthorpe 2007b:167). Thus the achievement of upward social mobility will only be of a secondary concern.

To ensure social class maintenance, each class develops their own social mobility strategies, which Goldthorpe calls the strategies "from below" pursed from less advantaged class origins and strategies "from above" for more advantaged class origins. The strategy from below implies that individuals of working-class background will opt for vocational training rather than remaining in mainstream education in order to ensure that they attain a skilled position rather than an unskilled one. This choice will be the safest indeed, as continuing in mainstream education would constitute a higher risk in terms of qualification gained as well as in terms of cost. Furthermore, "such a strategy could also give chances of short-range upward mobility into intermediate-class, especially manual supervisory or lower technical, positions" (Goldthorpe 2007b:170). The strategy from above, in contrast, involves children of salariat class continuing in mainstream education. This will be the safest option, as the priority is the intergenerational maintenance of class position. Furthermore, children of salariat background may benefit at some point from their social connection to find relevant employment, regardless of their educational qualifications. In particular, for some specific positions, such as personal services and sales sectors, employers seem to attach higher importance to social skills and various personal or lifestyle characteristics such as "appearance, self-presentation, savoir faire, manners and accent" (Goldthorpe 2007b:175) than to formal qualification.

Ultimately, insofar as each social class pursues different social mobility strategies because of the different constraints they face, social fluidity should not exhibit higher levels. Yet the possibility of increasing social fluidity can actually come if a change in resources happens: "fluidity will be greater, the more the class-linked inequalities in resources, or the immediate outcomes of such inequalities, are in some way modified" (Goldthorpe 2007b:180). Breen also advances similar arguments in several publications, but in more general terms (1997a; see also Breen and Luijkx

2004a; and Breen and Jonsson 2007). He states that changes in social fluidity can come through two fundamental mechanisms: through change in class returns to assets and/or in transmissibility of assets. For instance, in the case of the educational asset, he argues that class return can decrease if education becomes less important in the labour market, while class transmissibility can decrease when education depends less on social origin (for example, after it undergoes school reforms).

Two specific effects were identified to explain how social fluidity can increase through education (Breen and Jonsson 2007; Breen 2010a). First, the *equalisation effect* describes the declining association between individuals' social origin and their educational attainment. Besides the aforementioned studies undertaken by BLMP, preceding research had already pointed towards such equalisation effect in the context of France (Thélot and Vallet 2000), Germany (Erikson and Jonsson 1996a), Italy (Shavit and Westerbeek 1998), the Netherlands (Sieben, Huinink, and De Graaf 2001), and Sweden (Jonsson and Erikson 2000). Second, the *compositional effect* stems from the observation that the effect of social origin on social destination tends to be weaker at higher levels of education (Hout 1984, 1988). Breen speaks of a *differential association* to refer to this observation (Breen 2010a:368). As a consequence, with the expansion of the educational system, an increasing number of people reach higher levels of education, so the association between social origin and social destination correspondingly declines. In other words, "if class origins are less important in shaping destinations among highly educated people then, as more people come to acquire higher levels of education, the overall association between origins and destinations will decline." (Breen 2010b:419). This compositional mechanism was corroborated empirically in the case of France (Vallet 2004a), Germany (Breen and Jonsson 2007) and Sweden (Erikson and Jonsson 1998). Finally, Breen (2010a) underlines that both effects can happen together. While he finds that only the compositional effect explains increasing social fluidity in the United Kingdom, he finds that the equalisation effect dominates the compositional effect in Sweden, whereas in Germany the compositional effect dominates the equalisation effect. Breen further concludes that educational expansion constitutes a way to increase social fluidity, even when there has been no equalisation effect (Breen 2010a:382). However, other research finds that social fluidity in Brazil increased while neither the equalisation effect nor the compositional effect happened (Torche and Ribeiro 2010). Thus, these mechanisms do not systematically explain increased social fluidity.

Altogether, it must be recognised that scholars have attempted to formalise more systematic processes driving both persistent and non-persistent inequality. While these theoretical developments are serious and indeed provide interesting insights for the understanding of the social mobility process, we wonder to which extent the recent macro-structural changes that our Western

societies have undergone challenge these developments. For instance, how have educational expansion, tertiarisation, and feminisation, coupled with the general equalisation of living standards, affected the relative importance of primary and secondary effects in the allocation process? In particular, it has been argued that women's new role in the educational and social structures stems from “shifts in the perception of educational returns that have been prompted by changes in women's labor market participation” (Goldthorpe 2007b:66) rather than from changes in costs of education or in resources among families, suggesting that more complex mechanisms to the basic tenets of RAT actually take place. From this standpoint, discussing how to account and integrate macro-structural changes in the analysis of social mobility constitutes the greatest challenge of our research field.

2.3.3 . Non-persistent inequality or offset inequality ? Actual challenges posed by macro-structural changes

While research undertaken within the auspices of what we could call the non-persistent inequality thesis constitutes a major advancement in the study of social mobility, it poses major challenges to social stratification research – in particular, regarding the question of educational and social class boundaries. The most straightforward explanation of non-persistent inequality would be that class boundaries declined over time and that today's societies have indeed become more open and more equal in certain respects. However, it remains unclear as to which extent class boundaries actually declined. Several points of observation indeed qualify the non-persistent inequality statements.

First of all, when distinguishing finer boundaries within educational categories, equalisation and compositional effects lose some relevance (see for instance Ichou and Vallet 2011; Torche 2011). In the meantime, as educational opportunities equalised, return to education decreased (see for instance Breen and Goldthorpe 2001; Goldthorpe and Mills 2004; Vallet 2004a). In other words, the occupational advantage afforded by educational titles weakened, implying an educational downgrading. Furthermore, other studies underlined the persistence of non-meritocratic assets in the occupational attainment process (Goldthorpe and Jackson 2008; Jackson, Goldthorpe, and Mills 2005). Last but not least, it must also be underlined that the social structure has been considerably modified over the time frame considered. BLMP in this respect highlights that the classes that enjoyed the most educational equalisation are also those who shrank the most, namely the farmer class and the working class.

Therefore, some scholars have acknowledged some skepticism towards the lasting duration of the non-persistent inequality trend. Goldthorpe (2007b) as a supporter of Sorokin's (1927) *trendless*

fluctuation thesis, notably wonders to which extent Western societies will undergo a reversing trend in social mobility – like decreasing social fluidity – given the overall increase of inequalities in recent years. He underlines that the general trend towards increasing social fluidity observed in industrialised countries was exhibited in particular in the postwar decades, in a context where inequalities of incomes decreased, unemployment was very low, and social welfare policies were implemented. Considering that since the mid-1970s income inequalities have trended to increase, unemployment rates reached significantly higher levels and welfare policy became less class redistributive, there are good reasons to expect that a decline in social fluidity will characterise birth cohorts that entered the labour market since the 1980s. Some research already suggests this reversal trend has taken place. In the United States, a turndown in social fluidity occurred among men born in the 1970s (Beller and Hout 2005) and in the United Kingdom, men and women who entered the labour market in the 1980s experienced a decline in intergenerational income mobility (Blanden et al. 2004).

Thus, it may be the case that non-persistent inequality that we observe today is actually characteristic of past societies. There is an amount of suspicion that in a context of massive macro-societal changes, inequalities were offset rather than vanquished.

2.4 . Macro-structural changes, social stratification and the emergence of new social inequality dynamics

During the past century, Western societies, as well as the whole world, have undergone massive macro-structural changes. Unprecedented changes in humanity's history have indeed been witnessed and have had enormous repercussions on human lives. At the historical level, the twentieth century has been affected by totalitarian regimes and, more dramatically, by two World Wars. At the economic level, economic fluctuations were as diverse as the Great Depression of the 1930s and the "Thirty Glorious Years" long boom economic growth of the post-WWII years, followed by the development of the globalised economy. Fluctuations at the societal level included the emergence of global emancipatory processes amongst different groups of the population throughout the century, from the suffragette movement in the early 1900s to the Civil Rights Movement, the decolonisation process, and the sexual revolution from the 1960s onwards. Altogether, these changes turned the face and the fate of humanity upside down. As a consequence, today's societies are hardly comparable to those that existed one century ago.

In turn, these changes impacted, at the macro-level, on the social stratification structure and, at the micro-level, on the opportunities and constraints faced by individuals in regard to their social

mobility chances. The central question which we wish to address here concerns the extent to which these changes resulted in decreasing inequality, or rather, in the reorganisation of the structure of social inequality, after a short adjustment period to the new stratification order. In order to correctly understand how macro-structural changes modified the social structure and impacted on individuals' life chances, we shall underline how important these changes have been, describe them and discuss what they imply for social mobility research. We shall achieve this by first outlining briefly the unique context of the post-WWII years that characterised Western societies.

2.4.1 . The unique post-WWII economic boom context under the historical lens and the recent strengthening of social inequalities

The end of WWII marked a turning point in twentieth century history. In the context of the reconstruction, the Western world and Europe in particular went through an unprecedented economic boom in human history. The demand for labour force was so high that full employment was the norm and mass immigration was needed to fill vacancies. In this context, new labour market entrants were ascertained to enjoy enviable employment prospects and a lifelong career. Even the population from the lowest social strata enjoyed the benefits of economic growth, as the expression "the affluent worker" testifies (Goldthorpe et al. 1968), since the overall population got wealthier. It is also during this time period that educational systems were expended, primarily to meet demand for qualified workers, thus offering new opportunities to the general population. From this standpoint, in this specific context, climbing the "social ladder" and enjoying upward mobility no longer looked unrealistic.

The contrast with the previous socio-economic period and the situation of older generations is enormous. Indeed, generations who were born or lived in the period prior to 1945 were marked with extreme ideologies, totalitarian regimes, the Great Depression, and more dramatically, two World Wars (Sapin, Spini, and Widmer 2007). They were confronted with harsh socio-economic conditions, war injuries and severe sanitary issues through the spreading of epidemic disease (Chauvel 1998:6–7). In this context of global deprivation, social mobility, if any, was more likely to be of a downgrading kind. From this standpoint, the overall increase in upward social mobility in the post-WWII years, rendered possible with the gradual upgrading of the social structure, was at odds with what could actually have been achieved a few decades before. As a consequence, social class boundaries were gradually eroding and that anything could be achieved, in particular in the context of the "wind of freedom" characteristic of the post-WWII years. However, as the expression "Thirty Glorious Years", coined by French economist Fourastié (1979), translates, this unique period of economic prosperity came to an halt at the edge of the 1970s.

From the mid-1970s onwards, the economic situation worsened as Western societies experienced an economic downturn caused by the first oil shock in 1973. Given the recurrence of economic crisis since then, younger generations have not been able to find as good labour market entry conditions as the post-WWII baby boom generations to catch up with their senior counterparts. In contrast, they have endured increasing uncertainty in many respects, fostered by the consequences of the development of globalisation.

First, these younger generations have suffered massively from the risk of unemployment. More importantly, given the harsh conditions of the labour market, they have been subject to long-lasting unemployment leading potentially to social exclusion, given the scarring effect of such unsuccessful transition to adulthood. Second, with economic fluctuations, weak economic growth and increasing unemployment rate, younger generations' professional integration has become increasingly chaotic. Even the highly educated do not seem to be protected from these fluctuations. Third, with the liberalisation of the labour market, younger generations have been increasingly subject to precarious and flexible forms of employment, such as irregular working hours, short-term contracts, and hired labour. Fourth, with the growing share of industrial firms' delocalisation, bankruptcy, and mass redundancy, transition to unemployment can be sudden and affect large categories of the population. In other words, over the recent decades, the post-WWII model of a career for life and of sizeable upward social mobility chances has eroded, since individuals' employment careers have become less predictable and more uncertain.

Nevertheless, authors such as Beck (1992) and Giddens (1990) argue that this new context leads to a decrease in social inequalities. They maintain that as uncertainty encourages individuals to act responsibly and to manage their own way, modern societies have shifted from being a “class society” to an individualised society exhibiting increasing risk in terms of employment career through increasing flexibility, but that affects all individuals the same. This is the so-called *risk society thesis*. In fact, traditional factors of inequality, such as social origin and education, are expected to weaken and be replaced by new forms of life trajectories and risks. This trend should further be reinforced with the decreasing salience of gender, race and national-origin inequalities fostered by the development of different emancipatory movements since the 1960s, such as feminism and civil rights movements. For all these reasons, inequality should be expected to become increasingly individualised and social mobility chances could actually be enhanced – being both upwardly and downwardly.

Alternative claims, however, have been made. Notably, Breen (1997b) asserts that recent changes experienced in Western societies, specifically with the development of globalisation, are likely to

trigger the strengthening of existing social inequality. He maintains that increasing uncertainties and risks, notably provoked by the flexibility of the labour market, primarily affect individuals already in disadvantaged social positions, whereas those in qualified salariat positions should be rather well protected from such changes. As a result, not only is social class inequality expected to remain an important factor in shaping inequalities, but social inequalities are amplifying, given the asymmetrical uncertainty and risk that the different social class groups face.

A large scale comparative research study supports such claims (see the GLOBALIFE project coordinated by Blossfeld Blossfeld, Buchholz, and Hofäcker 2006; Blossfeld and Hofmeister 2006; Blossfeld, Mills, and Bernardi 2006; Blossfeld et al. 2005). While men in mid-career, especially among those who are well-established in the labour market, keep on enjoying stable and enviable labour market prospects, their female counterparts depict a trend toward *marginalisation* on the labour market, since their labour market integration is often precarious and since they gravitate significantly towards flexible forms of employment. Moreover, among women themselves, inequalities polarise those who have resources and those who do not. In particular, educational resources are of crucial importance for women, since the (non-) investment in individual resources constitutes an important (dis-) advantage that is cumulative: "well-educated young women in modern, knowledge-based business fields possess the greatest chances of avoiding unemployment and advancing their careers. In contrast, the disadvantaged (...) are women with few qualifications, little work experience and earlier childrearing breaks in employment along with those who have more frequent and longer phases of unemployment. They face a particularly high risk of having to work in insecure and precarious jobs or of becoming (repeatedly) unemployed" (Buchholz et al. 2009:62). Young people do not enjoy better situations than mid-career women, either. Far more educated than older cohorts, young people paradoxically face higher uncertainties with an "increase in precarious, atypical forms of employment (e.g. short-term jobs, part-time jobs, precarious forms of self-employment, and, compared with older cohorts, lower income)" (Buchholz et al. 2009:57). Those who are poorly qualified face even worse labour market entry conditions "because individual (human capital) resources gain in importance through the growing relevance of the market and individual competition" (Buchholz et al. 2009:57).

Overall, these empirical observations echo with Chauvel's work on France (1998). He demonstrated that the post-WWII "baby boom" generations born between the late 1940s and the early 1960s were clearly the winners of this unprecedented economic upturn in several domains of life chances. Many people indeed reached top level positions, whereas generations who entered the labour market a few years later, though being better educated thanks to the educational expansion over this period, faced

less enviable employment prospects.

Altogether. the upward mobility opportunities that arose during the Thirty Glorious Years have decreased, or at least levelled, within the most recent decades. In other words, this most likely indicates that only those who entered the labour market during the unique historical context of the post-WWII economic boom – a limited part of the population – have been significantly more likely to enjoy favourable fate and life chances as compared to other generations born throughout the twentieth century. This observation certainly results from a form of adaptation to the new social stratification order that has been modified as a consequence of structural changes with the expansion of educational systems and, notably, the tertiarisation of the labour market. Yet it must be underlined that the post-WWII economic boom benefited primarily, if not essentially, to men, since this epoch displayed the culmination of the male-breadwinner model. While the feminisation process that started in the 1970s certainly contributed to equalising inequality between men and women, it remains unclear whether this gender equalisation came at the price of increasing social class inequality.

We will now address the consequences of the considerable transformations in social structure that our Western society went through since the 1970s with regard to the dynamics of social inequality. Three major labour market trends can be underlined in this respect: (1) educational expansion, (2) tertiarisation, and (3) feminisation (Oesch 2006b chap. 2). We will discuss what these three trends imply for social mobility research today. We are particularly interested in discussing the extent to which the salience of social class still remains relevant in today's societies. It seems to be the case that rather than a gradual disappearance of social class inequality, when we use a different lens, we observe new dynamics of social inequalities within our societies.

2.4.2 . Educational expansion, increasing educational differentiation and decreasing labour market rewards

Since the demonstration of non-persistent educational inequality (Breen et al. 2009, 2010), scholars have been interested in understanding how educational expansion modified educational inequality and, to a wider extent, the social stratification process. One core of explanation for the reducing educational inequality trend can be found in the *Maximally Maintained Inequality* hypothesis asserted by Raftery and Hout (1993). This hypothesis states that privileged groups take advantage of the existence of class differentials in educational attainment and try to maximally maintain educational inequality with their counterparts of lower social classes. Yet with educational expansion, they argue it is very much likely that the attainment of a given educational level will

become universal among children of higher social classes and will in turn generate a decreasing association between social origin and educational attainment.

This hypothesis, however, was later readapted by Lucas (2001) into the *Effectively Maintained Inequality* hypothesis to reveal how tracking actually maintains educational inequalities. In contrast to Raftery and Hout, Lucas argues that when a given educational level becomes almost universal, higher social class children will enrol in the most prestigious tracks of this educational level. In other words, when quantitative inequalities in attaining a certain level have declined, class inequalities are primarily expressed through qualitative differences between academically and socially stratified tracks. As a consequence, educational inequalities will persist at the horizontal level as privileged families develop new strategies for their children by replacing the quantitative advantage with qualitative advantage in order to maintain and secure their social rank. Interestingly, as early as the 1970s, Boudon (1985:196–197) anticipated consequences of tracking and streaming on educational hierarchies in his theory on inequality of opportunity.

Much research does indeed bring support to the educational differentiation hypothesis and qualify the observations of equalisation and compositional effects in some countries. For instance, Ichou and Vallet (2011) points out in the case of France that while access to the *Baccalauréat*[13] degree actually increased quite significantly over time, inequality had actually persisted between different tracks within this educational level. In particular, inequality remained strong when the most prestigious tracks of the *Baccalauréat,* such as *general scientific,* were isolated. Thus, the democratisation of the attainment of this educational level is highly debatable, as access to the most prestigious tracks of the *Baccalauréat* did not increase substantially.

Along similar lines in the United States, Torche (2011) reveals evidence of a U-shaped compositional effect pattern when distinguishing between different levels of higher education: while within the bachelor's degree holder she observes a very small effect of social origin on social position attained, among those with an advanced degree, she points out that social origin actually plays a comparable role as it does with those with low levels of education. Furthermore, she also underlines that horizontal stratification within educational tracks is quite pronounced. These new findings thus suggest that different social reproduction strategies exist and inequality should not be treated in a strictly quantitative form.

Nevertheless, other studies did not find evidence of this horizontal differentiation (Jackson et al. 2008; Reimer and Pollak 2010). A reason for this may stem from the operationalisation procedure, rather than the substantial irrelevance of horizontal tracks in the educational inequality process. In

13 French equivalent of British A-level

fact, finer divisions between both measures of field of study and social class would certainly have displayed other outcomes. The recent research from van de Werfhorst and Luijkx (2010) indeed shows that one's educational field of study actually hampers intergenerational social mobility when using disaggregated measures of social origin and education.

Similar interpretation as for educational inequality could certainly be made concerning return to education. Indeed, as educational inequality decreased, return to education also decreased in many European countries (Breen and Goldthorpe 2001; Ganzeboom and Luijkx 2004; Goldthorpe and Mills 2004; Vallet 2004a; Werfhorst 2007). This decreasing return to education is often attributed to educational expansion. As Boudon (1985) highlights, such educational downgrading results from the non-congruence between the new educational structure and the actual social structure. While the shape of the former is free of structural constraints and can be modified by individual will through political action, for instance, the latter is largely determined by economic and technological factors. As a consequence, since the social structure evolved less rapidly than the educational structure did, an incompatibility between educational supply and demand took place and in turn educational attainment has provided a less reliable signal to employers.

Decreasing return to education may furthermore have been fostered by a *compositional effect in the service class*. Some scholars argue that employers attach increasing importance to non-meritocratic traits in the recruitment process (Breen and Goldthorpe 2001). In particular, for some specific positions such as personal services and sales sectors, employers to attach higher importance to social skills and various personal or lifestyle characteristics such as “appearance, self-presentation, savoir faire, manners and accent” (Jackson et al. 2005) than to formal qualification. Yet as the service sector and these occupations expanded significantly over the last decades, it may be the case that decreasing return to education is driven by a change in the composition of the social structure. Some research, in fact, points out that professionals are more significantly recruited on formal qualification bases than the managers (Jackson et al. 2005). A similar explanation was put forward by Klein (2011) in the context of Germany, where he attributes the slight decrease in return to education observed in the country to the development of jobs in administrative and management positions that happen to depend less on education than professional occupation. All these observations thus suggest that the service class has become an increasing heterogeneous group.

2.4.3 . Tertiarisation and increasing heterogeneity in the service class

If one remembers the conclusions of the non-persistent educational inequality finding (Breen et al. 2009, 2010), BLMP underlines that inequality has particularly decreased amongst the children from farming and working-class origins. Yet these two classes shrank significantly within the time-frame considered, whereas in the meantime, with the tertiarisation process, the service class expanded.

Thus, it would seem that while some division lines in the social stratification gradually disappeared, new ones may have emerged.

It is an obvious matter of fact that the social stratification of Western countries has been considerably transformed over the recent decades. It indeed underwent an overall upward shift with the development of the tertiary economy through the emergence of the welfare and service economies, which were fostered by the globalisation process. Such massive changes directly impact employment opportunities. The share of people occupying positions in the service class has considerably increased in all Western countries.

As a consequence, new boundaries in the social stratification, which most research fails to measure, may have emerged. The measurement tool used to measure social class is of central concern here. We could indeed expect that some categories that used to be homogenous and thus discriminating have become big blocks which do not necessarily properly reflect the reality of today's Western societies. We highlighted in the preceding section that horizontal division in the educational structure gains increasing importance in the educational attainment and social position processes. It may also prove to be tangible that new division lines have emerged in some social class categories, as much research suggests.

Collaborative research led by Güveli (Güveli and Graaf 2007; Güveli et al. 2012; Güveli 2006) in the Netherlands shows that heterogenous social mobility and social reproduction logics exist within different fractions of Goldthorpe's service class, namely the “technocrats” and “the social and cultural specialists”, as proposed by Kriesi (1989). In particular, the research she published with Luijkx and Ganzeboom points out that there is more upward mobility towards the technocrats category and more reproduction within the social and cultural specialists. In fact, children from the lower social classes are more likely to attain the class of technocrats than the social and cultural specialists class, whereas the social and cultural specialists are more successful in preventing their children from downward mobility than the technocrats. Furthermore, this research emphasises that the technocrats/social and cultural specialist boundary is a more salient distinction than the high salariat/low salariat boundary. They could not, however, confirm whether immobility within the new class fractions has reinforced over time – one possible explanation for that may stem from the fact that social fluidity increased in overall in the Netherlands. Yet overall, this research clearly suggests that the service class depicts heterogenous social mobility patterns.

These findings echo with previous research from Western and Wright (1994; Western 1994a, 1994b; Wright 1997), who analysed social mobility using Wright's conception of class analysis, which notably isolates the managers, the professionals and the self-employed (1989, 1997). Main

outcomes demonstrated that the authority boundary was the most permeable, while the property boundary was the least permeable and the expertise boundary was somewhere in between[14]. Furthermore, Savage, Barlow, Dickens and Fielding (1992) came to similar conclusions: they found that the professional class was much more cohesively formed than the group of managers, the latter being composed of a wide variety of social backgrounds and offering less secured intergenerational social mobility prospects than the former. More recently, Bühlmann's (2010) analysis of the occupational careers of the different fractions of the service class – the managers, the professionals, and the associate professionals – corroborated this trend in the United Kingdom. He found that "on average the managers enjoy a significantly shorter period of education and traverse a significantly longer period in feeder occupations than both associate professionals and professionals" (2010:203).

Theoretical explanations for such heterogenous mobility chances within these different fractions of the service class draw inspiration from Bourdieu and Passeron's theory of social reproduction (1964, 1970) by referring to the concepts of capital and resources. For instance, Savage, Barlow, Dickens and Fielding (1992) identify three types of assets that are each associated with different fractions of the service class: (1) *Property assets*. They offer the most robust bases for class formation, since they allow other people's labour to be readily exploited, and could also be readily stored as capital; (2) *Organisation assets*. They allow super-ordinates to control and exploit the labour of subordinates but cannot be stored easily, as these accumulate over the career; and (3) *Cultural assets*. They can be stored and transmitted more readily, through the "habitus", but, according to the authors, must be translated into other contexts to actually produce material rewards. Along similar lines, Güveli, Luijkx and Ganzeboom (2012) argue that the new pointed division lines within the middle class can be explained through differences in resources. In particular, they underline two reasons why social reproduction should be higher within the social and cultural specialists: (1) they assert that cultural resources are more easy to store in families than economic resources because of internalised dispositions (habitus); and (2) they maintain that the social and cultural specialists positions tend to require a high level of education. In turn, as social reproduction is often said to be mediated by education, the social and cultural specialists should exhibit higher social reproduction than the technocrats.

All this said, Savage, Barlow, Dickens and Fielding still recognise that being from any service class background remains an advantage to reach any of the service class fractions. In this respect, it echoes to a certain extent with Goldthorpe's claims that mobility between these different fractions of the service class – to which he refers as horizontal "situses" – is quite frequent (1982). This is the

14 In Wright's class schema, the authority boundary reflects the managers, the property boundary the self-employed and in particular employers, and the expertise boundary, the professionals.

reason why, according to Goldthorpe, dividing the service class into horizontal “situses” is not of too much relevance. For him, the original theoretical definition of the service class remains highly valid: the service class forms a single social class as (1) people with this kind of position share overall high and secured incomes that are likely to rise over a lifetime and (2) have the same employment relationship.

To summarise, although the different fractions of service class may still share rather similar life chances, it appears that social mobility dynamics in this group are not as homogenous as one might be tempted to say at first sight. Yet with the continuous development of tertiary economy over the past decades, the heterogeneity within the service class is likely to increase. Additionally, looking into disaggregated fractions of the service class might also provide interesting grounds in the better understanding of women's specific social mobility pattern, since the service sector expansion particularly facilitated women's growth labour participation over the same period.

2.4.4 . Feminisation and the erosion of the male breadwinner model

Since the weakening of the Fordist model of the industrial society and the development of the service economy from the 1970s onwards, women's labour force participation constantly increased. While in the early 1970s women's labour force participation rate averaged around 50% in Western societies, by the 2000s more than two thirds of women were participating actively in the labour market (Oesch 2006b). Such a massive shift has mainly been fostered by the development of employment in the tertiary sector, since more than 80% of women work in services. Thus, the coming of the post-industrial society corresponds with the integration of women into the professional sphere and the reorganisation of gender relations. As a consequence, the traditional *male breadwinner* model has progressively eroded in Western societies and now the *dual-earner* family model is emerging.

While the study of women's social mobility had long been neglected prior to the 1980s, early studies carried out on women's social mobility generated cutting debates about how to measure women's social position. The main issue concerned what would the appropriate unit of women's class analysis be. As in classical class analysis, the family is considered the key unit of class analysis; before the 1980s, a woman's social position was usually inferred from that of her husband and thus their individual social mobility was not at all measured in early social mobility research. However, in the context of feminist movements and women's increasing labour force participation, this practice was increasingly called into question, in particular after Acker's (1973) striking

accusation of social mobility scholars for their so-called “intellectual sexism”.

After these attacks, the early 1980s witnessed intense debates about the measurement of women's social position (Erikson 1984b; see lively debates in the journal “Sociology”: Goldthorpe 1983, 1984; Heath and Britten 1984; Stanworth 1984) These debates can be summarised into three competing theoretical positions.

The *conventional approach* was mainly defended by Goldthorpe (1983; see also: Erikson and Goldthorpe 1992b) and supported the classical class approach, which assesses women's social position according to that of their husband. In other words, under the conventional approach, women's social mobility is defined essentially in terms of *marriage mobility*. This approach sustains that individuals' life chances are not simply determined by their position in the labour market, but primarily by their membership to a family or a household. From this standpoint, families and households constitute the only adequate unit of class analysis as it is within this unit that resources, lifestyles, social networks and values are shared (Breen 2004c:8; Kurz and Müller 1987:428) This measure of women's social mobility is relevant in a context where women hardly participate in the labour force and remain in the personal sphere. However, in a changing context characterised with feminisation, this classical measure becomes more problematic.

Thus, Erikson (1984a, 1984b) proposed an adaptation of the latter approach to account for the feminisation process in social mobility research. The *dominant approach* consists of attributing the class position of the spouse who holds the dominant position in the labour force to the household. In order to arbitrate which spouse holds the dominant position, a set of dominance rules were defined. This includes, in order of importance, (1) who is the partner who works full-time rather than part-time and (2) who is the partner who occupies the more advantaged class position. However, although this approach theoretically takes situations into account where women hold the dominant social position within a family or a household, given the gradual decline of *male primacy* and the persistence of *essentialism*[15] in the occupational structure, in practice this approach often consists of inferring a married women's social position according to that of her husband.

However, given that the two preceding approaches provided too few answers to the changing role of women in Western societies, the *individual approach* came to be preferred after the 1980s, as defended by Heath and Britten (1984). This approach sustains that women's social position, and in turn their social mobility, should be measured according to their own social position, regardless of that of their husband, if any. Vallet (1986) provided some empirical grounds in favour of this approach. He demonstrated that in France between 1962 and 1982, (1) women's labour force

15 We will introduce these two concepts very shortly

participation had increased, (2) women's professional careers had became increasingly continuous, (3) homogamy among dual earner couples had decreased, and (4) male's profession superiority over female had also decreased. As a consequence, since these empirical observations clearly weakened both previous approaches, the *individual approach* became the favoured one to measure women's social mobility.

This decision was important, as women's social mobility findings are heavily dependent on the measurement approach adopted. For instance, in the chapter they dedicated to women in *The Constant Flux*, Erikson and Goldthorpe found "evidence of how little women's experience of class mobility differs from that of men" (1992b:275) when measuring women's social position with the *conventional approach*. However, women displayed greater downward mobility than men when women's own social position was taken to measure their social position, the so-called *individual approach*. The individual approach indeed shows the interdependency of men and women's social stratification opportunities, something that the conventional and dominant approach would not allow us to observe. In fact, to correctly understand men's social mobility opportunities, they must be related to women's. Men's absolute social mobility chances are dependent of women's, since men are more likely to attain higher social positions because women actually predominantly occupy the lowest social positions (Cautrès 1992:478). From that point forward, women's social mobility has been more systematically analysed, and international research has demonstrated that women display more social fluidity than men (Breen and Jonsson 2005:236).

This latter observation, however, must be related to women's persisting specific role in Western societies. While important advances have been achieved, many features of everyday life remind us that gender equality is still far from being completely reached.

Indeed, these advances in social mobility should not overshadow persisting gender inequality. One of the major limits of gender equality can notably be observed in the persistent asymmetrical nature of the division of work between men and women within the personal sphere (Blossfeld and Drobnič 2001; Drobnič and Blossfeld 2004). In fact, within households, women still overwhelmingly hold primary responsibility of unpaid work such as housework and childcare. Blossfeld underlines that "gender role change has been generally asymmetric, with a greater movement of women into the traditional male sphere than vice versa" (Blossfeld 2007:284). Thus, while there has been considerably increased symmetry between men and women in terms of educational and employment opportunities, the persistent asymmetrical nature of gender role division in the personal sphere hampers the complete achievement of gender equality.

Yet such persistent inequality in the personal sphere has concrete consequences on women's

integration in the professional sphere. Firstly, women overwhelmingly hold part-time jobs, which are famously known for constituting a major disadvantage in terms of career progression. Anyone employed in a part-time job is likely to have lower advancement opportunities or simply to hold a job that offers no advancement opportunity at all. Furthermore, service sector and part-time jobs are usually coupled with more precarious and variable work contract terms and conditions. As a consequence, women are often disadvantaged in respect to social security and income (Handl and Steinmetz 2007:246–247). Secondly, the mere fact that women continue to be thought of as the main provider in the personal sphere results in men and women investing different segments of occupations within the labour market following a "gendered-type" criterion. Women tend indeed to be more likely to occupy "female typed" employment such as hairdressers, secretaries or schoolteachers, and men tend to be more likely to occupy "male typed" ones, such as carpenters, engineers or business executives. This phenomenon is usually referred to as occupational sex-segregation (Hakim 1979, 1992). This channeling in gender-typified occupations does not only originate from the structure of the labour market, but also from the educational structure (Charles and Bradley 2002, 2009). In spite of gender convergence in terms of educational levels, men and women still choose sex-specific trainings. Yet educational segregation by gender has a lasting influence on men's and women's chances in the labour market (Gundert and Mayer 2012; Smyth and Steinmetz 2008). In other words, the increased gender symmetry in terms of labour force participation hides persisting gender differences in regard to the different nature of employment held by men and women.

Charles and Grusky (2005:332–333) explain these persisting gender inequalities through two mechanisms that shape sex-segregation. Firstly, at the horizontal level, they argue that *essentialism* shapes gender stereotypes. It implies that women are presumed to excel in personal service, nurturance, and interpersonal interaction (i.e. non-manual sectors), and men in interaction with things (rather than people) and in strenuous or physical labour (i.e. manual sectors). Secondly, *male primacy* at the vertical level. Male primacy stems from the long-standing belief that men are more status-worthy than women and accordingly better suited for positions of high pay or authority. While male primacy declined following the 1970s feminist movements in Western societies (Weeden 1998), this gender revolution did not break down essentialist gender stereotypes.

Such incomplete gender revolution (Esping-Andersen 2009) has consequences on women's social mobility prospects. Overall, research documents that predominantly male occupations offer higher advancement opportunities, thus men have higher upward mobility chances than women do (Reskin and Bielby 2005; Rosenfeld 1992). Additionally, Williams (1992) found that men in predominantly

female jobs advance more quickly than their female co-workers. This phenomenon, which she calls the “glass escalator” as opposed to the “glass ceiling”, stems from the fact that men's supervisors are uncomfortable with men doing customarily female jobs, she explains. However, despite this general male premium in occupational career chances, further research underlines that women involved in full-time jobs are more likely to access “male” and “gender-mixed” occupations (Hakim 1998). Further research demonstrates that “full-time jobs are particularly important in breaking down sex-stereotypes and cultural barriers to women at all occupational levels” (Drobnič and Blossfeld 2004:148). Furthermore, “gender-mixed” occupations – which are likely to be located in the service class positions – increasingly become the best jobs in terms of earnings, status and prestige (Hakim 1998). Thus, all in all, full-time employment and “male” or “gender-mixed” occupations are likely to be the labour market fractions which offer the highest social mobility opportunities for women. In contrast, women who occupy part-time employment are likely to hold a “female” occupation and have very limited career mobility prospects (Blossfeld and Hakim 1997).

Consequently, feminisation has considerably reorganised gender relations in Western societies. Overall, women gained more independence and greater access to resources from which they used to be excluded. The decreased educational gender gap and the increased participation of women in the labour market in turn fostered women's upward social mobility chances.

Altogether, all of the changes we described above have considerably modified the social structure. Old hierarchies have decreased while others seem to be emerging. In light of these macro-structural changes, we shall now introduce the specificities of the Swiss society, a society that has often been depicted as a rigid one.

3 . Social mobility in Switzerland: still a rigid society?

Little is known about social mobility in Switzerland. According to the few studies carried out, the Swiss social mobility regime would be considered particularly rigid. This specific feature of the Swiss society would pertain to the high development of vocational education, as is the case in Germany. This affinity with the German educational system thus makes Switzerland an interesting case to study, since Germany has often been depicted as a special case in comparative research. It might indeed prove interesting to study whether Germany's deviation relates to its idiosyncratic institutional settings or to a set of shared common characteristics with countries from, say, the *Germanic constellation*. We could, in fact, expect both countries to depict similar social mobility dynamics. However, it might also be the case that, given its specific history and socio-economic development, Switzerland's social mobility regime displays its own features. Therefore, we shall introduce Switzerland's specific context here by highlighting the unique socio-economic characteristics of this *European Eldorado*.

3.1 . Stability, prosperity, attractivity: Switzerland, a European Eldorado

From outside its borders, Switzerland is usually depicted as some kind of *Eldorado* in the middle of Europe. While some could argue that this enviable situation stems from Switzerland's resistance to enter the European Union, there is actually another set of reasons. Indeed, if Switzerland should have a motto, as France has the motto *Liberté, Egalité, Fraternité*, a good guess for the Swiss context could certainly be *Stability, Prosperity, Attractivity*.

In fact, Switzerland is first and foremost a very stable country. As a fervent partisan of neutrality, Switzerland was never officially involved in either of the World Wars[16]. However, the country suffered from the instability and restrictions characteristic of these times, as did all other European countries. In fact, despite its neutral orientation, Switzerland was never far from the Nazi invasion during WWII, and Swiss troops spent the duration of the war on the lookout. That said, Switzerland was never invaded or bombed. As a consequence, Switzerland was found to be in a very enviable

16 It must be emphasised that the extent to which Switzerland was actually *unofficially* involved in WWII still remains highly disputed today.

Figure 3.1: Evolution of the share of foreign population permanently established in Switzerland
Source: OFS (2013)

situation after WWII, as all its industries and infrastructures had not been destroyed. In this context, the Helvetic Confederation constituted one of the pillars of Europe's reconstruction, which surely fostered the development of prosperity in this country. Yet with its early industrialisation, the Swiss economy was already quite prosperous at the beginning of the twentieth century. This situation certainly provided solid grounds to enhance post-WWII economic prosperity of this country.

Switzerland is indeed known for its prosperity and high standard of living, and is often classified as one of the wealthiest countries in the world. This prosperous situation was fostered by changes the social structure went through over the twentieth century, with the shift from a rural economy based on the traditional primary farm sector to a service economy now representing 70% of the labour force (Oesch 2006b). In particular, Switzerland's present economic model rests upon three major pillars: (1) the service industry, notably banking and insurance, (2) the welcoming of large multinational corporations, international organisations, but also wealthy celebrities, fostered notably through the promotion of tax-friendly policies, and (3) the manufacturing of high-value products like watches and high-tech goods. One further Swiss specificity pertains to the unemployment rate, which is particularly low in comparison to most European countries. Given that unemployment hardly ever reaches the 4% threshold, Switzerland's situation is qualified as full employment according to OECD standards.

This economic prosperity makes Switzerland a highly attractive country. Many foreign workers move to and settle in the Swiss *Eldorado* to find better employment prospects and life. With more than one-fifth of its population being immigrants, as can be seen in Figure 3.1, Switzerland is the

second European country, after Luxembourg, with the highest share of foreign residents. In addition to that, a sizeable share of Swiss citizens have a foreign background (Haug 2005; Piguet 2013). The impact of immigration is highly beneficial – if not vital – for the Swiss economy. Immigration clearly enables Switzerland to delegate poorly qualified jobs to foreign workers so that the Swiss citizens can enjoy relatively good employment prospects. Additionally, recourse to immigration further enables Switzerland to hire highly qualified individuals that its educational system could not train. The recourse to highly qualified foreign workers is particularly important in some occupational segments, such as in the healthcare industry, but also within high-tech industries.

Over time, the profile of immigration in Switzerland changed considerably. In terms of social position first, during the post-WWII years, immigrants were essentially semi-/unskilled workers, and over the last two decades, the share of highly qualified workers grew significantly (Pecoraro 2005; Piguet 2013). In terms of country origin second, in the 1970s, migrants came mainly from neighbouring countries such as Italy (54%), Germany (11%), France (5%), Austria (4%), but also Spain (11%). More recent immigration waves have displayed a growing diversification of country of origin. In particular, in 2000 Switzerland encompassed migrants from the former Yugoslavia (24%), Portugal (9%), and Turkey (6%), in addition to those from Italy (21%), Germany (8%), Spain (6%), France (4%) and Austria (2%). Moreover, about 20% of migrants come from "other" country origin, as opposed to 10% in the 1970s, indicating that immigration has considerably diversified (Wanner 2004).

As a consequence, Switzerland's foreign population has become increasingly heterogeneous and unequal. Highly qualified migrants come predominantly from Germany and France. In contrast, former Yugoslavs, Turkish and Portuguese migrants are more likely to occupy semi-/unskilled positions (Pecoraro 2005; Wanner 2004). These latter segments of immigration are particularly likely to experience the most precarious situations, particularly in times of economic crisis.

In fact, Switzerland, like any other country, remains vulnerable to economic fluctuations. In order to limit eventual repercussions of economic downturns on its economy, Switzerland can take action by controlling its immigration, thus lowering the effects of economic crisis. This was notably the case in the 1970s, when the labour market repercussions of the first oil shock economic downturn were minimised as unemployment was sent "abroad" (Frick and Lampart 2007; Piguet 2013). This trend is clearly visible in Figure 3.1**.** However, it must be said that the second economic crisis of the early 1990s marked a turning point between economic prosperity and economic recession in Switzerland. Indeed, while the effects of the early 1970s oil shock on the Swiss economy were mainly absorbed by the departure of foreign workers who lost their jobs or whose work permits were not renewed

(Buchmann, Kriesi, and Sacchi 2009:571), the effects of the crisis of the early 1990s were much more marked because of changes in immigration policy and in employers' and workers' behaviour (Flückiger 1998:392). Not only did Switzerland experience an economic recession of exceptional length, but the rate of unemployment also reached unprecedented levels with a significantly higher increase than in any other European countries, though Switzerland's unemployment rate remained one of the lowest among all OECD countries (Flückiger 1998:369).

Thus, even the most stable countries can be significantly affected by external forces such as economic crisis. However, it appears that direct consequences of these fluctuations can be modulated to a certain extent by political action, such as the regulation of immigration. In addition to that, Switzerland's specific educational system certainly constitutes one of the factors of this country's economic success. In fact, the high development of vocational education results in a labour force trained in highly specialised domains that closely align with labour market requirements. Moreover, vocational education has repeatedly been acknowledged to prevent unemployment risk at the crucial moment of the transition from school to work (Müller 2009). From this standpoint, Switzerland's educational system constitutes one of its main specificity compared to other European countries. In this respect, Switzerland's parallels with Germany, one core European country with a similar educational system, might provide interesting insights in regard to the specific influence of vocational educational systems on social mobility dynamics.

3.2 . The German deviation and the Swiss proximity : social mobility and vocational education

Germany is often described as the European country that deviates the most from general trends and patterns in social mobility. In terms of social mobility trends first, Germany substantially differs from other European countries in regard to the trend in return to education. While other European countries share a common decrease in return to education over time, Germany, by contrast, shows little or no change in return to education over time (Klein 2011; Müller and Pollak 2004). In regard to social mobility pattern second, in *The Constant Flux*, Erikson and Goldthorpe (1992b) observed that Germany constituted the country with the highest deviation from the model of core social fluidity. Thus, Erikson and Goldthorpe proposed a German variant of their model of core social fluidity to more adequately adjust to the German specificity. They argued that Germany displayed greater inequality in class mobility chances as they observed that in this country (1) there were high inheritance barriers in all classes but the salariat, and also important hierarchical barriers; (2) mobility was more pronounced between the salariat class and the intermediate classes, such as the routine non-manual and the petty bourgeoisie, implying the existence of a marked distinction

between manual and non-manual employment in terms of mobility chances; and (3) mobility barriers were lower between agriculture and other sectors, as the sector effect was weak.

In order to explain this particularity of Germany in comparison to other European countries, two reasons were invoked. First, some features of the German class structure explain why the divide between manual and non-manual class is so marked in Germany. Without going into detail, since the Bismarckian era, non-manual employees in this country have enjoyed similar employment regulation in terms of pension, health insurance, job security and unemployment benefits, which would explain why mobility is quite common within non-manual classes. In contrast, as working-class employees do not benefit from such generous employment regulation, the social distance between the manual and the non-manual classes remains quite marked in Germany (see Kocka 1981). The second specificity of Germany stems from its educational system, which acts as a reinforcer of class inequality in the social mobility process. Indeed, "the institutionalised character of the class structure in Germany is enhanced by the system of vocational training which makes the boundary between unskilled and skilled work more impermeable than in other countries" (Müller and Pollak 2004:78). Germany's educational system is indeed vocationally oriented, with the so-called "dual system" of vocational education and training (VET). This system, it has been argued, certainly hampers upward social mobility chances of children of non-skilled workers, particularly when compared to those of the skilled workers (Erikson and Goldthorpe 1992b:149–150).

Along similar lines, Germany's specific educational system would explain why return to education did not decrease. According to Allmendinger (1989), in countries where both standardisation and stratification are high, such as in Germany, the association between education and occupation is high. This link was corroborated by Shavit and Müller's (1998) comparative research on school-to-work transitions. By studying how the occupational attainment process varies in different countries according to different education systems, they found that in countries where vocational training is occupationally specific and where there are arrangements between employers and schools, vocational education yields higher returns to education.

Given that the Swiss educational system is also highly vocationally oriented, Germany and Switzerland share important affinities in their educational system. In both countries, educational selection into rigid tracks happens at a relatively early age, and educational expansion at tertiary educational levels has been more moderate than in other European countries. Furthermore, both countries are among those with the lowest amount of intergenerational educational mobility (Pfeffer 2008). Moreover, over the last two decades, both countries established the so-called "Universities of

Applied Sciences[17]" to enhance educational expansion. Because selection into these educational paths is less selective than that of traditional universities, the development of these specific universities is likely to increase access to tertiary education for lower social class children and consequently reduce educational inequality. This trend is likely to be marked in Switzerland since, according to OECD (2013), the Swiss educational system expanded significantly over the last ten years. Most notably, Switzerland would have "reported a growth in tertiary attainment rates of more than 10 percentage points between 2000 and 2011" (OECD 2013:30). However, we express some skepticism regarding the magnitude of this expansion over the last decade. While it is true that the Swiss educational system continues to expand, it would seem that a sizeable share of this expansion accounts for international students (OECD 2013:290). Consequently, it is not very clear whether this expansion benefits the Swiss population. Moreover, the grouping procedure of educational levels may not adequately capture and reflect the specific institutional settings of the Swiss educational system. Therefore, the measurement of the amplitude of educational expansion in Switzerland over the last decade remains highly debatable to us.

Finally, it must be mentioned that Switzerland does not depict one single unified educational system: there are twenty-six educational systems in Switzerland, one in each canton. Cantonal differences in the educational system are not insignificant, significant variations exist between these regional units, such as term of age at tracking, maximum class size threshold, and number of hours taught at school, which in turn create different degrees of educational inequality (Stadelmann-Steffen 2012).

From this standpoint, vocationally oriented educational systems, such as those developed in Germany and Switzerland, seem to actually inhibit the reduction of social inequality and result in specific patterns of social inequality. However, some research tends to demonstrate that this specificity is actually reducing, since the two core and long-lasting features of Germany's social mobility regime seem to be eroding. This suggests that we might arrive at the end of a special case. For instance, it has been underlined that the German deviation from the core model of social fluidity has decreased within younger generations (Müller and Pollak 2004). Along similar lines, return to education might have decreased in Germany in recent years (Pollak and Müller 2013).

In spite of these recent new findings that question the extent to which vocational education reproduces social inequality, one remaining core feature of vocational education is that it hampers gender equalisation by channelling pupils early in their educational career into gender-typified educational tracks. This might be one source of explanation to the persisting high extent of gender

17 Respectively in German and French: Fachhochschule and Haute Ecole Spécialisée (HES)

inequality in Switzerland. In fact, despite the considerable feminisation of the labour market, Switzerland is often depicted as an highly gender-traditional country.

3.3 . Feminisation in Switzerland : the persistence of high gender inequality

Like in all Western societies, feminisation has considerably reorganised gender relations in Switzerland. Women have overall gained more independence and more access to resources from which they used to be excluded. In many respects, gender inequality has indeed decreased, since women in Switzerland today have similar educational chances as men and actively participate in the labour force. However, in spite of these important evolutions, gender inequality in Switzerland remains significant, and is actually more salient than in most other Western countries.

What is first and foremost noteworthy in Switzerland in regard to gender relations is that Swiss women only gained the legal right to vote in 1971, which is relatively late when compared to other Western countries[18]. Of course, this Swiss specificity must be understood in light of its *direct democracy* political system, since it implied that Swiss men had to vote and decide whether Swiss women could gain political rights[19] – which was never the case in any other country in the world. Yet since then, in order to reabsorb this lag behind in regard to women's place in society, the Swiss Federal State has put some efforts forward to promote gender equality over the last thirty years (Coradi Vellacott and Wolter 2005).

We can indeed say that there has been a non-negligible gender equalisation in educational attainment over the last few decades in Switzerland. However, this trend has not been as marked as in other countries. While the gender gap in accessing education reabsorbed significantly, men are still more likely to gain higher education than women. This trend is particularly noteworthy since at the international level, the gender inequality trend reversed in terms of educational attainment, since women now do better in school than men in an increasing share of Western countries (Buchmann, DiPrete, and McDaniel 2008; Buchmann and DiPrete 2006). However, this reversing trend must be understood at the *vertical* level, since it appears that men and women overall remain predominantly oriented into gender-typified educational tracks.

In Switzerland's professional sphere, the labour force feminised significantly, as over recent years about 60% of active women held a job, a percentage averaging increasingly towards the men's rate

18 For instance, in Germany women gained the legal right to vote in 1919, in the United Kingdom in 1928, in France in 1944, and in Italy in 1945.

19 The documentary from Stéphane Goël “De la cuisine au parlement / Kinder, Küche, Politik” released in 2012 in this respect clearly highlights how the Swiss political system hindered women to gain political rights earlier.

(about 75%) (Suter et al. 2009:40). However, important inequalities remain. First, because of the low development of childcare facilities and other infrastructures to enhance the conciliation of work-family balance in Switzerland, many women interrupt their professional career or reduce their working time after giving birth to their first child. The consequences of these decisions on future career prospects are significant, since advancement opportunities are thus considerably hindered. Furthermore, women become more financially dependent on their husband and are rapidly reallocated into the traditional role of female caretaker. Research, in fact, documents that transitioning to parenthood creates increasing gender inequality. While a couple may have egalitarian values, the birth of their first child actually results in unequal practices in the division of labour within couples – and this trend happens to be particularly marked in Switzerland (Bühlmann, Elcheroth, and Tettamanti 2010). Second, even when women are active in the labour market, they suffer from considerable income inequality in comparison to men: on average, women with the same occupation and qualification as men earn about one quarter less (Levy 2010:43). This gap is considerable, since it ranks as one of the greatest in international comparison. Last but not least, in case of the occurrence of a divorce or a separation, women face high poverty-risk (Falter 2009). All this, from an economical and sociological perspective, results in a considerable loss for society, since women's investment in human capital is not rewarded as it should be.

The most straightforward explanation for the persistence of such significant gender differences in Switzerland can be found in gender stereotypes amplified by its specific educational system. In fact, through vocational education, men and women are channelled very early into sex-typified educational tracks which in turn results in them occupying sex-segregated occupational segments. Switzerland, in this respect, is particularly famous for its high level of sex-segregation in the labour market from a comparative perspective (Charles and Buchmann 1994; Charles and Grusky 2005; Flückiger 1998; Kriesi, Buchmann, and Sacchi 2010). Therefore, women's and men's fate in Switzerland is determined very early through its specific institutional settings into highly gendered-traditional roles.

Altogether, the Swiss context provides unusual and unique characteristics that are likely to add new knowledge to the comparative study of social mobility. According to previous social mobility research, Swiss society would be particularly rigid. We will now outline previous research undertaken on social mobility in Switzerland.

3.4 . Previous social mobility studies in Switzerland: a society as rigid as its mountains are high

Besides Girod's pioneering work on social mobility located in Geneva's area (1971, 1977), and research by Weiss (1979, 1986), only three research studies had been carried out on social mobility in Switzerland until fairly recently (Bergman, Joye, and Fux 2002; Joye, Bergman, and Lambert 2003; Levy, Joye, and Kaufmann 1997; Levy, Joye, Guye, et al. 1997). Nonetheless, these last few years have witnessed a revival of interest in the sociological study of social mobility in Switzerland, particularly in a temporal perspective (Falcon 2012a, 2012b; Jacot 2013; Jann and Combet 2012). Overall, these studies underline the strong persistence of social origin on the determination of a person's social position.

Most studies on social mobility in Switzerland indeed reveal that both absolute and relative rates of social mobility have remained stable over time (Bergman et al. 2002; Falcon 2012b; Levy, Joye, and Kaufmann 1997; Levy, Joye, Guye, et al. 1997). However, the study of Joye, Bergman and Lambert (2003) provides slightly more contrasting findings. The authors observe a trend towards increasing social fluidity in Switzerland when measuring social class with the ISCO-88 typology on one digit, whereas when measuring social class with the EGP class schema they find no increasing social fluidity. This finding underlines the central role of indicators in social mobility measurement. As for the recent analysis of Jann and Combet (2012), it shows with an unconventional modelling technique – *proportional reduction of error* – that the effect of social origin on social position has decreased for women, but not for men in Switzerland. Finally, in a recent article Jacot (2013) underlined the considerable role of education in the reproduction of social inequalities in Switzerland. As for the study of women's social mobility in Switzerland, it has hardly ever been studied. The *Tous Egaux?* study was the first to observe women's situation. It found that women are on average more disadvantaged than men in terms of education and social position gained, and that they are more likely to experience downward social mobility (Levy, Joye, and Kaufmann 1997; Levy, Joye, Guye, et al. 1997). This research, however, did not look at trends in women's social fluidity. Aside from this research, only the recent studies undertaken by Jann and Combet (2012) and myself (Falcon 2012b) started to systematically document women's social mobility opportunities in Switzerland.

From a comparative perspective, even though Switzerland seems to be very often excluded from comparative research, the recent research from Pfeffer (2008) on educational inequality constitutes, from our point of view, a notable exception to this unfortunate habit. In this research, Pfeffer shows how educational inequalities in Switzerland are among the greatest in all the nineteen countries

studied. This bad ranking of Switzerland in terms of educational mobility can be related to its educational system specificities, which are notably characterised by early tracking in highly segmented tracks, making Switzerland one of the most selective educational systems in Western societies (Meyer 2009). Much research indeed demonstrates that the importance of social origin is particularly pronounced at the beginning of the educational career rather than later (Maurin 2007; Shavit and Blossfeld 1993). In other words, the earlier the selection happens, the lower the chances of equalisation the educational system would have to harmonise pupils' social origin differences. This observation echoes with research carried out at the national level. The study from Buchmann and Charles (1993) was one of the first to demonstrate, through the analysis of two Swiss-German cohorts born in 1950 and 1960, that despite educational expansion, the effect of social origin on educational attainment had not substantially decreased. In addition to other findings, the authors found that transition to university education was marked by a strong effect of social origin. This observation can also be explained by the relatively small expansion of tertiary education in Switzerland, as compared to other Western countries. Further research also pointed to the persistence of a strong effect of social origin at specific levels. This is the case during the transition from the primary education level to the secondary education level (Meyer 2009), but also at the transition to upper secondary levels (Hupka-Brunner, Sacchi, and Stalder 2010). At tertiary levels, Buchmann, Sacchi, Lamprecht and Stamm (2007) found that the effect of social background at both tertiary-level vocational training and university level remained stable between the 1950 and 1960 cohorts. Additionally, the authors found a tendency towards educational reproduction in the two types of tertiary education: “children from families with educational background in vocational schooling are much more likely to follow vocational tracks, whereas children with parental background in general education are more likely to pursue academic education.” (Buchmann et al. 2007:347). Altogether, the authors speak of an intergenerational transmission of the rigid separation of vocational and academic tracks at the tertiary level. However, while educational equalisation looks rather limited in Switzerland, Jacot's recent research (2013) found some light evidence of compositional effect among men. Yet he further insists on the fact that the importance of education in the social mobility process is often overstated, by observing how social origin has a non-negligible impact on social position when controlling for educational attainment.

In addition to studies on the development of social mobility in Switzerland, two studies have addressed the issue of the pattern of social mobility in this country: the research from Levy, Joye, Guye and Kaufmann (1997) and the recent one from Jacot (2013)

The first study particularly underlines the specific fate of children of the self-employed. They

indeed found that social reproduction had decreased over time among the self-employed and although their social destination was quite diverse, it usually corresponded with a downward move towards low-status occupations involving routine tasks. This downgrading effect was particularly high among women, as family businesses are more often transmitted from fathers to sons. They furthermore pointed to the existence of mobility between skilled white-collar and manual workers first, and skilled white-collar workers and intermediate class workers second[20]. Finally, after having fitted topological log-linear models following Western and Wright's (1994) framework, they were able to demonstrate first the existence of a strong impermeability between the working class and other classes, and second the importance of education as the main resource to reach the highest social positions. Additionally, they highlighted that for women, the property dimension was less important than for men, whereas the expertise one was crucial. In other words, education seems more important for women than for men in the social mobility process.

Jacot's recent publication (2013) also addressed the issue of the pattern of social fluidity in Switzerland. However, his goal did not primarily consist of finding and eventually adapting a pattern of social fluidity in the context of Switzerland, but rather showing the remaining importance of inheritance, sector and affinity effects after controlling for education. Yet Jacot's research remains highly interesting in that he proposes an adaptation to Switzerland of the model of core social fluidity[21] in a theoretically informed way. Specifically, he mostly adapts negative and positive affinity matrices. In his endeavour, he pays particular attention to the social mobility of children of the self-employed petite bourgeoisie, as this category underwent important variations over time in Switzerland (Arvanitis and Marmet 2001; Buchmann et al. 2009; Tillmann and Budowski 2007). Indeed, while it decreased in the 1970s and 1980s, it increased again in the 1990s up until the early 2000s, corresponding to a reversal trend. This U-shaped curve in the development of self-employment in Switzerland seems to lead to heterogenous dynamics in the pattern of social mobility in this social class category. Indeed, it is expected that the decrease in the self-employed category in the 1970s and 1980s resulted in the social downgrading of children of the self-employed into skilled and unskilled manual positions, whereas it is argued that the increase witnessed in the 1990s actually corresponded to a strategy of avoidance of downward mobility among children from the salariat class in the context of the economic crisis and high unemployment rate increase (Flückiger 1998). These consequential changes correspond to a compositional change in the profile of the self-employed category, from farmers and independent artisans in earlier times to more

20 This research uses the Swiss Socio-Professional Categories (CSP-CH) class schema (See Joye and Schuler 1995). Skilled white-collars correspond to “employés qualifiés”, manual workers to “ouvriers” and intermediate class workers to “catégories intermédiares”.

21 He labels this adapted model the « core S », S standing for Suisse/Switzerland.

Table 3.1: Parameters of models of core social fluidity for industrial nations and Germany from Erikson and Goldthorpe (1992b) and Switzerland from Jacot (2013)

	HI1	HI2	IN1	IN2	IN3	SE	AF1	AF2
Core fluidity – all countries	-0.22	-0.42	0.43	0.81	0.96	-1.03	-0.77	0.46
Core fluidity – Germany (FRG)	-0.33	-0.57	0.49	1.17	2.17	-0.43	-0.50	0.39
Core S men (not controlling for education)	-0.14	-0.44	0.32	-	0.79	-	-0.58	0.36
Core S men (controlling for education)	-0.01	-0.24	0.27	-	0.85	-	-0.49	0.25
Core S women (not controlling for education)	-0.18	-0.42	0.18	-	0.67	-	-0.30	0.51
Core S women (controlling for education)	-0.07	-0.23	0.14	-	0.66	-	-0.20	0.40

diversified occupations nowadays such as freelance professionals and service workers. In his research, Jacot furthermore defines different affinity matrices for men and women because of the important occupational sex-segregation in Switzerland (Charles and Buchmann 1994). Details of Jacot's affinity matrices can be found in Table F.5 in Appendix F. After this adaptation, he finds effects that are relatively consistent with Erikson and Goldthorpe's original model of core social fluidity, as can be seen in Table 3.1. Yet the first hierarchical effect is lower in Switzerland (HI1) as well as the first inheritance one (IN1). This is also the case for affinity effects (AF1 & AF2) that reach similar levels to those in Germany – at least for men. Finally, the third inheritance effect (IN3) is also lower in the Swiss study, but this may stem from measurement issues, as Jacot collapsed the petite bourgeoisie with the class of farmers, whereas in the original model this effect only accounts for inheritance in the class of farmers.

However, in spite of the fact that Jacot's research provides new insights regarding the Swiss social mobility pattern, his research, in our view, encompasses important limitations – the main one being that he did not fit the original model of core social fluidity to his data as it was put by Erikson and Goldthorpe. By failing to do so, we get no indication regarding the extent to which the “core S” model that he introduces does or does not provides important improvement over the original model. Failing to do so seriously damages the credibility of his “core S” model. In addition, on the measurement ground, he collapsed the farmer class with the petite bourgeoisie class as well as the routine agricultural worker class with the routine non-agricultural worker class. As a consequence, he could not test for the sector effect in his model. He points out that he did so for reasons of too few cases, but does not mention whether he tried to fit the model with the fully detailed class

schema version. Furthermore, while Jacot argues – *à juste titre*[22] – that we should pay particular attention to the social mobility of children of the self-employed, he does not question the measurement of this heterogenous category. This category indeed displays high heterogeneity, especially between the large employers, the liberal professions and the petite bourgeoisie in terms of economic, cultural and social resources. Of course, Jacot's failure to address the heterogeneity of the self-employed stems essentially from the *instrument de travail* that he uses, namely the EGP class schema, which does not isolate the large employers and the liberal professions from the salariat class.

To summarise, existing research on social mobility in Switzerland underlines that Swiss society seems to be characterised by a strong degree of rigidity. This rigidity is often attributed to its specific vocational educational system, which is characterised by early selection into highly stratified tracks and leaves very little leeway to recover from a poor initial placement. However, most of these studies focus on a limited time frame, which renders it difficult to really capture social change in social mobility dynamics over time. Furthermore, statistical estimates returned are likely to lack robustness, as the studies use small sample sizes in their data. Finally, very little research exists on the issue of gender differences and the influence of immigration in the social mobility process. This present research thus aims to overcome these weaknesses in previous research studies.

3.5 . Which social mobility dynamics should be expected in Switzerland across the twentieth century?

The general research question addressed in this research could be stated as follows: what are the characteristics of social mobility dynamics in twentieth century Switzerland in the light of its specific institutional context? To answer this question, we will divide our research endeavour into three steps: (1) by looking at the evolution of trends in social mobility over time; (2) by investigating whether the mediating effect of education on social mobility changed, and if so, how and why; (3) by looking more thoroughly at the pattern of social mobility. We will more thoroughly discuss here what could be expected, or at least hypothesised, in the Swiss context in light of its particularity.

3.5.1 . Hypotheses on trends in social mobility over time

The main issue that we want to address here concerns to what extent social mobility trends changed over time in Switzerland. Has social mobility increased as it has been the case in other Western countries when measured in relative terms? Or have social mobility trends displayed Swiss-specific

22 Understand: purposefully

characteristics, in particular given the vocational educational system and the large foreign population in Switzerland?

We could hypothesise that social mobility has increased over time in Switzerland. According to the liberal theory of industrialism, at least *absolute social mobility* should have increased over time. The considerable shift from the industry to the service sector in the Swiss social structure during the twentieth century would seem to favour such a change. Furthermore, according to recent empirical findings, *relative social mobility* should also have increased. In fact, in line with RAT statements, with the expansion of the educational system in Switzerland, resources available to different class backgrounds should have changed and consequently, class returns and/or transmissibility of assets may have decreased, generating greater social fluidity in turn. Nevertheless, although a decreasing proportion of young people leave school after compulsory education, and an increasing share attend higher education (Levy 2010:34), educational expansion has remained quite moderate in Switzerland, as compared to other Western countries. Therefore, it is also possible to expect that, following the constant flux thesis but also in line with most research on the inequality of opportunity in Switzerland, social mobility might have remained rather constant in Switzerland when measured in relative terms.

Furthermore, specific variations in social mobility could be expected according to the historical context, notably economic fluctuations. The liberal theory of industrialism predicts that the increase in social mobility should have been more marked in periods of economic growth than in periods of economic recession, at least in absolute terms. Along similar lines, following statements of RAT, the degree of class return to assets is likely to evolve with the economic context. While educational assets might be less important on the labour market during periods of economic growth, it may become more important in periods of economic recession due to differentials in job opportunities. As a consequence, relative social mobility could increase in the former context, and decrease in the latter. Some Swiss studies demonstrate the effects of such contextual variations. In the case of transitions from school to work, when the labour force expands, the occupational prestige of one's first job is significantly higher (Buchmann and Sacchi 1998:434). In the case of job opportunity, opportunities improve during times of economic growth, whereas they deteriorate during recessions (Kriesi et al. 2010:319). As we highlighted previously, the 1990s constitute a turning point between economic prosperity and economic recession in Switzerland, since unemployment was not "sent abroad" as it was in the 1970s. As a consequence, Switzerland's unemployment rate grew significantly – although the unemployment rate rarely reached the 4% threshold.

As a result, we formalise two main hypotheses regarding the development of trends in social

mobility in Switzerland:

- H1a: Social mobility increased in Switzerland in the twentieth century: youngest generations should display higher levels social mobility than oldest generations.
- H1b: Social mobility fluctuated according to economic fluctuations: generations who entered the labour market during the long-boom period enjoyed more upward mobility chances whereas those who started to entered the labour market from the 1970s, and particularly in the 1990s, experienced a reduction in opportunities.

We can now turn to our hypotheses on the mediating effect of education on social mobility trends.

3.5.2 . Hypotheses on the mediating effect of education on social mobility trends

We are here interested to address whether the role of education in the social mobility process changed in Switzerland, and if so, how. Do we observe, as has been shown in other countries, equalisation and/or compositional effects in the Swiss context that could foster social mobility, and if so, what does this imply in terms of intergenerational social mobility? Finally, has the value of education changed in Switzerland over time?

Like in other Western countries, Switzerland expanded its educational system during the second half of the twentieth century. As a consequence, we should reasonably expect that an increasing share of the population should have gained access to educational levels from which they used to be excluded, since resources should have been more equally distributed. This equalisation effect should also have been more marked among generations that entered higher education from the 1990s onwards. In fact, we expect that the recent development of Universities of Applied Sciences[23] should have offered even more opportunities for children from lower social backgrounds to reach higher education. Yet given the moderate expansion of the Swiss educational system as compared to other European countries, and given the persistence of a high share of vocational education, educational equalisation should not have been as important as in other Western countries. Therefore, two hypotheses can be stated:

- H2a: Educational inequalities decreased in Switzerland: younger generations should display more equally distributed chances of access to education than was the case in oldest generations.
- H2b: This decrease was enhanced from the 1990s onwards following the development of

23 Respectively in German and French: Fachhochschule and Haute Ecole Spécialisée (HES)

Universities of Applied Sciences: the reduction of educational inequalities should particularly have been pronounced within younger generations as a consequence of the educational expansion in Switzerland of the late 1990s .

Following this educational expansion, it was found in many European countries that return to education had actually decreased. In other words, the occupational advantage afforded by education decreased, as some educational titles lost value on the labour market. This observation is at odds with expectations of the liberal theory of industrialism, which expects that selection will increasingly be operated according to achieved characteristics such as educational attainment. However, one notable exception to this trend has been put forward: Germany. The German context has proven to depict little, if any, decrease in return to education. Since Switzerland's educational system displays high affinities with the German one, it is very much likely that a similar specific trend could be uncovered in this country. However, the recent development of Universities of Applied Sciences may have affected the stability of return to education in Switzerland. They could in fact have created a certain downgrading of educational titles. As a consequence, we phrase two hypotheses:

– H3a: Return to education remained relatively stable in Switzerland: the value of educational title should have remained at a similar level over time, being for oldest or youngest generations.

– H3b: The development of Universities of Applied Sciences altered the stability of return to education: the stability of return to education should have come at a halt and met a decrease within the youngest generations.

Education also mediates social mobility in the form of a compositional effect. This effect states that the association between social origin and social destination weakens within higher educational levels. Coupled with educational expansion, the compositional effect is likely to increase social mobility. We underline that the recent research from Jacot found evidence of a compositional effect in Switzerland, but only among men. This effect stemmed primarily from those with general education and was particularly pronounced at the tertiary level. However, no such compositional effect was displayed among women, particularly as parameters indicated that among women with tertiary education, the association between social origin and social destination was actually stronger than those with only compulsory education. In spite of these mixed findings, it would be reasonable to expect that those with low social background who attain tertiary education should have similar employment prospects than their counterparts from other social backgrounds. Yet given the relatively limited expansion of tertiary education in Switzerland, this effect is likely to have

moderate impact on the trend of social fluidity. From this standpoint we formalise the following hypothesis:

– H4: The association between social origin and social destination is weaker within higher educational levels: graduate from higher education are likely to be selected on meritocratic assets and those from lower levels of education on non-meritocratic ones.

We have now outlined how we expect education to mediate social mobility trends. We should now focus on the hypotheses regarding the *pattern* of social mobility in Switzerland.

3.5.3 . Hypotheses on the Swiss pattern of social mobility

We are concerned with two issues here: to what extent does the Swiss pattern of social fluidity converge or diverge from Erikson and Goldthorpe's model of core social fluidity? To what extent can subtler social mobility dynamics be uncovered when finer division lines are drawn in the service class?

Regarding the Swiss pattern of social fluidity, we should expect this pattern to be rather convergent with that of other European countries. In fact, Erikson and Goldthorpe's findings of core pattern of social fluidity which support the FJH hypothesis of basic cross-national invariance in social fluidity pattern still remains today the most eminent finding of the RC28 (Hout and DiPrete 2006). We see no reason why Switzerland should display vastly different patterns in its social mobility regime. That said, we could expect Switzerland to display some deviations as compared to the original core model. This intuition is guided by the high deviation of Germany to the core model of social fluidity. Thus, given the high institutional similarities between Germany and Switzerland, the Swiss pattern of social fluidity could deviate quite significantly from the overall pattern and exhibit similarities with the German one. Previous research would seem to lend support to this intuition since it was pointed out that education is the main resource to reach the highest social positions and that high barriers exist between the working class and other classes (Levy, Joye, Guye, et al. 1997). Yet overall, social inheritance is expected to be stronger within the categories at the extremes of the social stratification, namely the salariat and unskilled workers; but also within self-employed categories due to the familial transmission of business.

In addition to that, the category of self-employment is likely to display specific social mobility dynamics. Previous research in Switzerland indeed underlines the particular downward mobility fate of the children of self-employed – at least some categories of it, notably the farmers. Given the notable changes exhibited by the self-employed category over time, we expect to find positive and negative affinities between these occupational segments and the other social classes.

– H5a: Switzerland's pattern of social fluidity deviates from the core model of social fluidity: the Swiss pattern should display higher affinities with the German variant of the core model of social fluidity than with the original core model of social fluidity.

– H5b: Self-employed categories exhibit a specific social mobility pattern: children of the self-employed should be more downwardly mobile in Switzerland than in other industrialised countries (i.e. as compared to the core model).

In parallel to this, we address whether social mobility dynamics in the service class are as homogeneous as the core model of social fluidity expects. When measuring the service class in a more disaggregated fashion, we might indeed uncover subtler social mobility dynamics. In fact, over the recent years, new issues have arisen in social mobility research that may undermine such claims of a common pattern in social fluidity, to a certain extent. New studies have addressed the issue of whether structural changes that Western societies went through over the recent decades may have modified social mobility dynamics. These considerations are indeed important in that the social structure of Western societies shifted from industrial to post-industrial with the development of a large salariat class. Yet as the full title[24] of *The Constant Flux* book reminds us, in addition to the structure of the EGP class schema, Erikson and Goldthorpe's research was designed in the context of industrial societies. While this industrial vision of the societies under study was certainly highly relevant at the time the authors carried out their inquiry, especially as they based their analysis on data that clearly reflected such stratification, this may be less relevant in today's societies.

It may be the case, as international research suggests (Güveli et al. 2012; Güveli 2006), that new boundaries may have emerged in the social stratification that classic measurement tools fail to capture. We could indeed expect that some categories that used to be homogenous and thus discriminating have become big blocks which do not necessarily properly reflect the reality of today's Western societies. This is an important aspect, as social mobility dynamics might differ within different fractions of the service class. For instance, it is argued that these different fractions have access to different resources. Thus, some fractions of the service-class could be expected to depict high social reproduction, while others could be expected to be more mobile, both within and outside the service class. Furthermore, the heterogeneity of the self-employed category within the service class should be addressed. It is expected that this particular segment of the service class should display different social mobility patterns. From this standpoint, structural changes in the social stratification have become a crucial point to be addressed in contemporary social mobility

24 The full title of the book is: “The Constant Flux. A study of class mobility in industrial societies”.

research. We formalise these issues in the two following hypotheses:

– H6a: Social mobility dynamics display heterogeneity within the service class: some fractions of the service class should depict more mobility, whereas others should be less mobile.

– H6b: The self-employed categories within the service class show a specific social mobility pattern: social immobility should be stronger in these categories than in other service class categories.

We have finished phrasing all of our substantive research hypotheses. One remaining set of hypotheses, however, must be addressed: the transversal one, according to gender and citizenship.

3.5.4 . Transversal hypotheses on social mobility dynamics according to gender and citizenship

We expect to find differences in social mobility according to gender and citizenship. In fact, women and non-Swiss citizens should be more disadvantaged in regard to their social mobility chances than men and Swiss citizens, respectively.

Gender differences in social mobility in Switzerland are expected to be relatively marked, particularly given the high degree of occupational sex segregation on the Swiss labour market (Charles and Buchmann 1994; Flückiger 1998; Kriesi et al. 2010). However, we expect to uncover a general decrease in gender inequality. In fact, as women's labour force participation grew considerably over time, "increasing its share from little more than a third in 1980 to almost half of total workforce in 2000" (Oesch 2003:245), gender inequality in regard to labour force participation should have been modified in some respects. In the meantime, Western societies have undergone a considerable gender equalisation in educational attainment over the last few decades (Shavit and Blossfeld 1993). It is particularly noteworthy that gender inequality in this domain has decreased so significantly that it is now actually reversing in some Western countries, at least in terms of *vertical* educational inequalities, since the share of women in higher education exceeds that of men (Buchmann et al. 2008; Buchmann and DiPrete 2006).

As a result, it is reasonable to expect, in accordance with statements of the liberal theory of industrialism, that women's social mobility chances will increasingly converge with those of men, given the rationale of a shift from ascriptive to achievement selection. However, following RAT one can argue that through the promotion of policies of equal opportunity between men and women by the Swiss Federal State over the last thirty years (Coradi Vellacott and Wolter 2005), the transmissibility and the class returns to assets may have increased. Indeed, the reduction of gender inequality in educational attainment and on the labour market may have generated a perverse effect

of a shift from gender inequality to social origin inequality. In this case, women's situation may converge with that of men, but the overall weight of social origin on social opportunities may increase. From this standpoint, our gender-specific hypothesis can be put this way:

– H7: Social mobility opportunities between men and women have converged: gender differences in social mobility chances should have been higher in the oldest generations than in the youngest ones.

Finally, social mobility dynamics should differ according to citizenship and migration background. Little is known about the impact of immigration and the migration status on social mobility, being in Switzerland or in other countries. Consequences of immigration on career development can be quite diverse. As Haug and Wanner underline (2005), migration can have a positive or a negative impact on professional opportunities. For instance, migration can be positive in the sense that it can provide more and better employment opportunities than in the country of origin. Nevertheless, migration can reveal more harmful for career development, especially for women, when it results from a form of "sacrifice" to follow a partner.

However, in Switzerland, long-term settled migrants would seem to enjoy better prospects than natives. Bauer and Riphahn (2007) indeed suggest that second generation immigrants display higher levels of intergenerational mobility than natives. Yet they further underline that, being for migrants or natives, disadvantaged children have very few chances to catch up educationally. Nevertheless, the overall problem we face when focusing on the migrant population to try to predict citizenship-specific social mobility dynamics pertains to the fact that non-Swiss citizens are an extremely heterogeneous group. We can nonetheless hypothesise that on average, Swiss citizens should have access to more resources than non-Swiss citizens and thus enjoy better social mobility opportunities than the population with a foreign background. Therefore, our last hypothesis can be stated:

– H8: Social mobility perspective differs according to citizenship: Swiss citizens enjoy better social mobility chances than non-Swiss citizens.

Altogether, our research on social mobility in Switzerland is likely to bring new insights to the comparative study of social mobility. We shall now present and explain our methodological framework applied for the undertaking of this research.

4 . A unique study design to analyse social mobility dynamics in Switzerland: methodological considerations

In order to assess the extent to which Switzerland's social mobility dynamics converge with those of other European countries, and provide some answers to our research questions and hypotheses, we decided to follow methodological framework similar to current international research on social mobility (Notably: Breen 2004a; Breen et al. 2009). Scholars were able to achieve substantial empirical advances in the field through the use of several data sources, which enabled them in turn to have a rather significant time window and large sample size. With the increasing availability of multiple cross-sectional data, current research is not only able to monitor the development of trends in social mobility, but also to return more robust statistical estimates. Therefore, the current study will follow in the footsteps of current mainstream comparative research in our field to assess the extent of commonality and variation of social mobility dynamics in Switzerland as compared to other Western countries.

However, our approach will slightly deviate from this research framework in that we will use new and different indicators to measure social class. In particular, in addition to the ESeC classification, the use of the Oesch class schema that depicts the social structure of post-industrial societies should enable us to address the issue of social change in the social structure and its potential consequences on social mobility dynamics, since it more adequately reflects the social structure of post-industrial societies. In turn, we will confront outcomes returned with the new measure with the classic measure of social class in social mobility analysis.

The present chapter will be structured as follows: we will first present the data we used, then discuss the indicators we chose and the validity of their operationalisation. Finally, the modelling technique we applied will be presented.

4.1 . Twelve surveys for a birth-cohort analysis : detail of data and population

4.1.1 . Data used : the crucial importance of progress in data collection

As Breen and Jonsson correctly emphasised, “our knowledge about the world is never better than the data on which it is based” (2005:235). With the major progress in data collection, quality and coding, particularly since the 1990s in Western countries, researchers have been increasingly able to document and understand peculiarities of our present-day societies and how they evolve. Switzerland has not been an exception to this trend.

It must be noted, however, that progress in data collection in Switzerland has clearly been favoured by political will, with the implementation of the government-funded Swiss Priority Program “Switzerland: Towards the Future” between 1996 and 2004 to promote research in social sciences. This program has indeed constituted a major turning point in data collection in Switzerland – first, with the creation of the Swiss Household Panel in 1999, and second, with the now regular participation of Switzerland in comparative surveys frameworks such as the European Social Survey (ESS) and the International Social Survey Program (ISSP). We shall here acknowledge our gratitude to these people who have been involved and promoted all these projects, making credible social sciences research in Switzerland no longer just an eventual future, but a reality.

This PhD thesis would have been markedly different without the availability of these data sources. In fact, in order to answer to our research questions regarding the evolution of trends in social mobility in Switzerland, we constructed a uniquely compiled dataset by using a collection of twelve Swiss national population representative sample surveys gathered between 1975 and 2009. As can be seen in Table 4.1, which lists the detail of these surveys, nine out of twelve of them directly result from the collective endeavour taken under the Swiss Priority Program “Switzerland: Towards the Future”. Furthermore, the data sources that were provided by the data archive service of the Swiss Centre of Expertise in the Social Sciences (FORS) have the advantage of containing detailed information on occupation, education and social origin of respondents, information that is of central concern to our present research.

But before discussing operationalisation issues more thoroughly, we must discuss what the use of multiple survey data implies for the quality of our analysis. Indeed, as the data is never free from errors, and does not necessarily use the same sampling methods or collection mode, we must be aware of the potential bias that the use of multiple cross-sections may induce. In Table A.1 in

Table 4.1: List of surveys used in this research

Year	Short name	Survey name	Responsible for survey production
1975	AP75	Attitudes politiques 1975	Kerr Henry, Handley David, Roig Charles, and Sidjanski Dusan, Université de Genève, Département de science politique.
1987	ISSP87	International Social Survey Programme 1987: Social Inequality I (ISSP 1987)	Guido Hischier, and Heinrich Zwicky, Soziologisches Institut der Universitàt Zürich.
1991	CH91	Les Suisses et leur société : positionnements et images	René Levy, Dominique Joye, Michel Bassand, Olivier Guye, and Vincent Kaufmann, Université de Lausanne, Institut d'anthropologie et de sociologie - IAS; EPFL Lausanne, Institut de recherches sur l'environnement construit - IREC.
1999	SHP99	Swiss Household Panel	Robin Tillmann (Resp.), Swiss Centre of Expertise in the Social Sciences (FORS).
2002	ESS02	European Social Survey in Switzerland - 2002	Dominique Joye, Nicole Schöbi, and Nanette Wälti, Swiss Information and Data Archive Service for the Social Sciences (SIDOS).
2004	SHP04	Swiss Household Panel *(second sample)*	Robin Tillmann (Resp.), Swiss Centre of Expertise in the Social Sciences (FORS).
2004	ESS04	European Social Survey in Switzerland - 2004	Dominique Joye, Nicole Schöbi, and Nanette Wälti. Swiss Information and Data Archive Service for the Social Sciences (SIDOS)
2005	MCH05	MOSAiCH 2005	Dominique Joye, Nicole Schöbi, and Céline Kaenel, Swiss Information and Data Archive Service for the Social Sciences (SIDOS).
2006	ESS06	European Social Survey in Switzerland - 2006	Dominique Joye, Nicole Schöbi, Alexandre Pollien, and Céline Kaenel, Swiss Information and Data Archive Service for the Social Sciences (SIDOS)
2007	MCH07	MOSAiCH 2007	Dominique Joye, Nicole Schöbi, Sylvie Leuenberger, and Alexandre Pollien, Swiss Information and Data Archive Service for the Social Sciences (SIDOS)
2008	ESS08	European Social Survey in Switzerland - 2008	Dominique Joye, Sylvie Leuenberger-Zanetta, Alexandre Pollien, Marlène Sapin, and Nicole Schöbi. Swiss Centre of Expertise in the Social Sciences (FORS).
2009	MCH09	MOSAiCH 2009	Dominique Joye, Nicole Schöbi, Sylvie Leuenberger-Zanetta, Alexandre Pollien, and Marlène Sapin. Swiss Centre of Expertise in the Social Sciences (FORS).

Note: MOSAiCH surveys stand for "Measure of Sociological Observation of Attitudes in Switzerland" and include ISSP.

Appendix A, which outlines the detail of data production and quality for each survey we used, we observe differences and similarities between surveys. In terms of targeted population, only one survey out of twelve excludes foreigners (AP75). Regarding sampling procedure, only the sample of the CH91 survey is drawn from quotas. All other surveys are based on stratified random samples, according to municipalities for oldest surveys and according to regions for more recent ones. Data

collection was usually collected face-to-face, with the CAPI procedure for most recent surveys. However, for the ISSP87 survey, data was collected in the form of a paper questionnaire with an incentive of 50 CHF offered for the returned questionnaire, whereas SHP99 and SHP04 data was collected by telephone, using the CATI procedure. Response rates varied quite significantly: AP75 as well as SHP99 and SHP04 surveys display high response rates (between 64% and 82%) while the first wave of the ESS (2002) displays a particularly low response rate (33%). All other surveys depict a relatively normal response rates, located around the 50% threshold. Therefore, in spite of a certain number of similarities between the different data sources we used, it remains indeed possible that differences in their reliability and validity may induce spurious temporal change (Breen and Luijkx 2004b:40–41). In addition, the representation of the most disadvantaged population groups is often badly documented in surveys in Switzerland, mainly because these groups are likely to have a foreign background and thus be difficult to reach. In order to minimise potential survey effect and the weakness in the representation of the total Swiss population, one strategy is to apply weighting[25] in order to ensure that the surveys we use are as representative of the Swiss population as possible. All in all, our assessment of data quality, which we display in Appendix B, demonstrates no substantial survey effect that would distort our substantive conclusions. Therefore, our approach is reliable. In particular, we would like to underline that the use of multiple cross-sections certainly provides better and less biased estimates as compared to the use of one single data source. For instance, for the analysis of trends in educational inequality from a birth-cohort perspective, it has been argued that "given survey-specific sources of error, multiple observations of the same cohorts over several surveys should lead to greater reliability of measurement" (Breen et al. 2009:1515). Thus, we envisage such methodological framework as a strength rather than a weakness. We can now further specify the population on which our study focuses.

4.1.2 . Defining the population

In regard to the population definition of our research, we include in our analysis both Swiss citizens and foreign residents, since the latter account for an important share of the total population of Switzerland: about one-fifth today. Although the inclusion or exclusion of foreign residents in our analysis could give rise to discussions, as this population is likely to have attained a different educational system than in Switzerland, it is important to include them as they are, by definition, part of the social structure. Omitting them would be similar to omitting women in the analysis of social mobility, a practice that is no longer acceptable in societies in which women actively participate in the labour force. Furthermore, as men's and women's social positions are

25 Except for the AP75 and ISSP87 surveys, where no weighting variable was available. Note that if not otherwise specified, all analysis presented includes weightings.

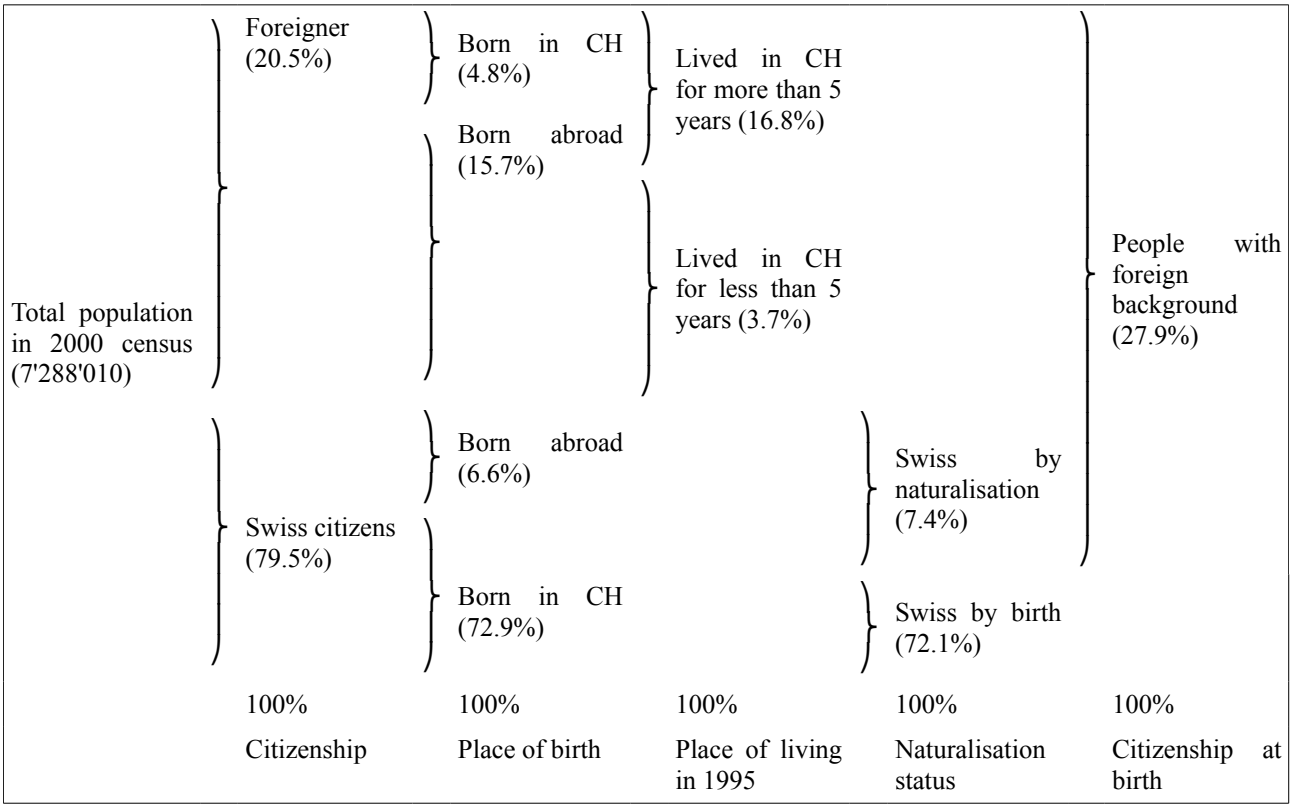

Figure 4.1: Detail of the population in Switzerland with foreign background in the 2000 census data.

Note: Figure replicated and translated from Wanner (2012:25).

interdependent of each other, Swiss national citizens' social position must be understood as a system of mutual dependence with that of foreign residents.

Moreover, it is unclear whether citizenship would actually be correct criteria of exclusion. Indeed, as can be seen in Figure 4.1, which was replicated from Wanner (2012), in the year 2000, more than 6% of Swiss citizens were born abroad and gained Swiss citizenship by naturalisation. In contrast, almost 5% of foreign residents were actually born in Switzerland. Thus, while it may be true that a sizeable share of foreign residents grew up and were socialised in a different environment than Switzerland, this is not systematically the case. There are indeed many foreigners who spent most of their lives, if not all their lives, in Switzerland, but were not naturalised due to the difficulty of attaining Swiss citizenship. Furthermore, for those who were actually born abroad, we have no indication of the timing of migration in their life course since this kind of information is usually poorly documented in surveys. However, migrating to Switzerland during childhood versus migrating during adulthood must have extremely different consequences in terms of life chances. It may also have different implications according to country of origin. Last but not least, it was actually underlined in previous research that the lack of inclusion of foreign residents in social

mobility research constitutes an important limitation. This is the case of research on Germany where data used only includes German citizens, despite the fact that the share of foreign residents grew to nine percent of the total population in the early 2000s (Müller and Pollak 2004:111). For all these reasons, the inclusion of foreign residents is extremely relevant, especially in the Swiss context.

However, as a form of a control for immigration effect and to outline tentatively whether the structure of opportunities and constraints differs among the migrant population, we have tried also to draw general trends separately on the two groups of population that compose the Swiss society, divided according to citizenship criteria: the Swiss citizens versus the foreign residents. Of course, because the group of non-Swiss citizens is extremely heterogeneous and because the citizenship criteria does not say anything about timing of migration, trends we will draw will remain rather crude. However, this attempt is better than nothing and will certainly provide some general and interesting insights on the group of non-Swiss citizens and also how they relate to Swiss citizens.

A further criterion to define our population stems from age boundaries, as we limited our population to people aged between 30 and 64 years old at the time of the survey. These age limits were chosen first to prevent differential mortality between social classes, as people from lower social classes are more likely to die younger than those from upper social classes (Breen et al. 2009:1481). Second, we defined the 30 years old threshold to ensure that everyone had enough time to integrate in the labour market in order to disentangle the potential effects of intragenerational social mobility and career mobility. In fact, social mobility research usually assumes that after a certain age, it is relatively rare that people change in social position (Erikson and Goldthorpe 1992b:72). More precisely, it is expected that after reaching the age of 30, "individuals reach a stage in their careers after which occupational changes conductive to significant upward or downward mobility become relatively uncommon. In other words, it is suggested that there exists an initial stage that is 'critical' for career promotion (or demotion). After this stage, job mobility is still possible but should mostly involve horizontal moves that are not much consequential for individuals' locations in the occupational hierarchy" (Barone and Schizzerotto 2011:336). The stage where no further significant change in occupation occurs is referred to as *occupational maturity* (Goldthorpe 1987:52). Yet it must be said that this remains a strong assumption, as the validity of the threshold gives rise to some debates, in particular in the context of increasing employment uncertainty of our present-day societies. For instance, Bühlmann (2010) documented that occupational maturity happens around the age of 35 in the UK. Along similar lines, a collaborative research project undertaken within the Equalsoc Network of Excellence as part of the 6th Framework Programme of the European Union

found significant variations over time and place in occupational maturity (See contributions of the special issue of European Societies, in particular: Härkönen and Bihagen 2011; Hillmert 2011; Wolbers, Luijkx, and Ultee 2011). Notwithstanding these discussions, we kept the threshold of age 30 for our analysis, it must be said, for statistical reasons, in order to increase the robustness of our models. Nonetheless, earlier analysis restricted to people aged at least 35 did provide comparable outcomes to those presented in this thesis. Furthermore, our data quality assessments displayed in Appendix B indicate that our substantive conclusions do not suffer from age effect. In other words, we do not seem to suffer from potential biases imposed by the rather strong assumption of occupational maturity at the age of 30.

Lastly, our research, like most of today's comparative research, includes women. While this observation seems quite obvious for us today, it was actually not that straightforward in previous times, as social mobility data collected was often confined to men (Breen and Jonsson 2005:235). We envisage the inclusion of women in our research as a major advancement, given that at this time very little research has investigated women's social mobility and systematically addressed gender differences in social mobility in Switzerland.

Having defined our population, we can now turn to considerations regarding how we might best gain insights of the unique dataset we constructed for the analysis of social mobility in Switzerland.

4.1.3 . Sample size, distribution of the population and justification of approach

With the use of these twelve data sources and the definition of the population we chose, we are able to reach a total sample size of 19,186 individuals. However, this sample size drops to 13,216 cases when we consider only valid cases on our three variables of interest, namely social origin, educational attainment and social destination (see Tables A.2 and A.3 in Appendix A). This gap mainly pertains to the vast amount of missing information on social origin and social position in the original sample size (respectively 25% and 20%), whereas missing information on educational attainment is hardly existent (less than 1%). Missing information on social origin and social position stems notably from people who never had an occupation. It is particularly marked among women. However, it also encompasses true missing. As a consequence, because we exclude missing cases and because they are likely to not happen at random, it might be the case that our findings depict some bias. This is a major issue that has not been addressed in social mobility research. However, because the design of an imputation procedure for missing information on social origin and social position would constitute a tremendous amount of work and be somewhat controversial,

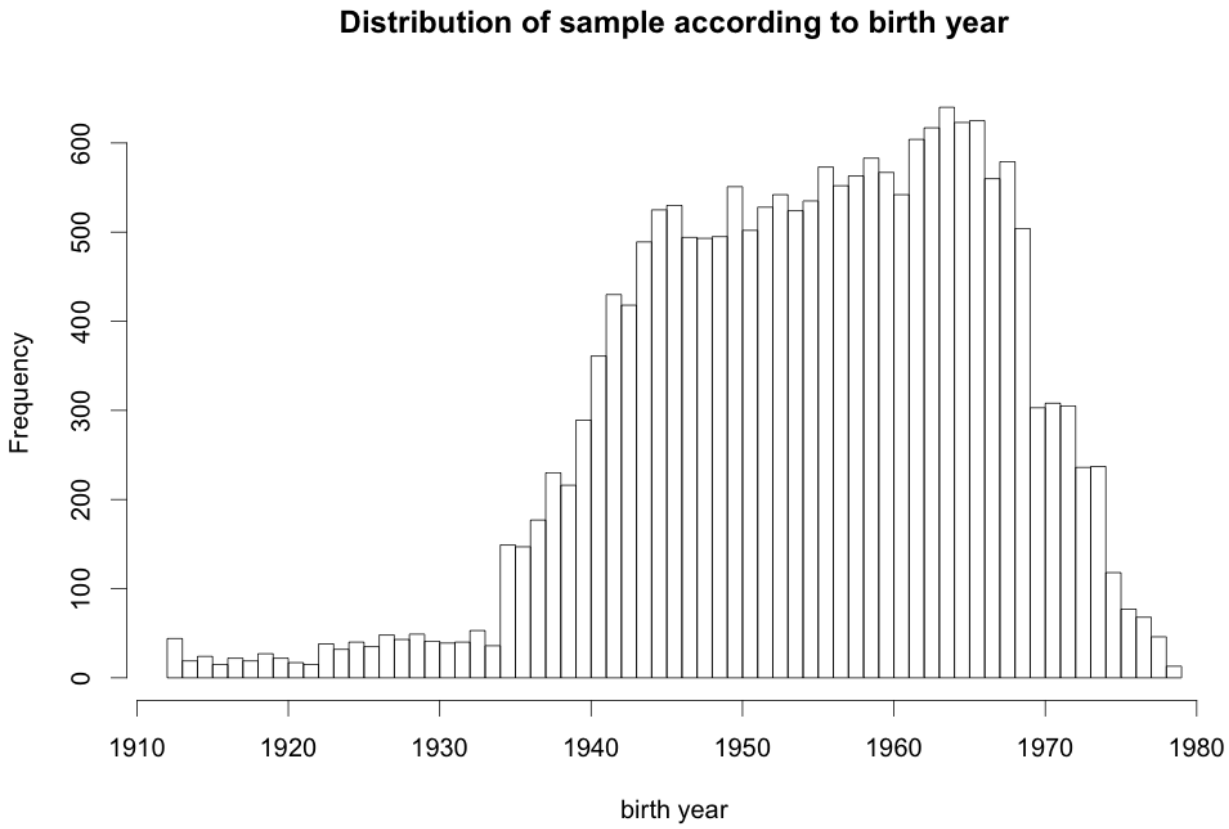

Figure 4.2: Distribution of sample according to birth year

we simply omit missing information.

Having discussed the issue of missing cases, we can now decide which approach is best to capture temporal trends with our data. on the one hand, we could assess temporal dynamics in social mobility in a period perspective – for instance, according to year of survey or decades. On the other hand, we could look at differences in social mobility opportunities from a birth-cohort perspective, by dividing our sample according to the year of birth of respondents.

Two main reasons lead us to suspect that the best approach for the present research should be the latter. First, as some recent research suggests, change is more likely to be driven by a process of cohort replacement rather than through period change (Breen and Jonsson 2007:1805; see also: Müller and Pollak 2004). Second, most of the surveys we use were collected from the late 1990s onwards. Thus, by definition, we have little leeway to truly capture period dynamics with our data, particularly since we have only one survey for the 1970s and one for the 1980s and these surveys both have small sample sizes and demonstrate some weaknesses for the construction of indicators, as we will underline in Point 4.3. Therefore, in the end we decided to opt for the birth-cohort approach.

As can be seen in Figure 4.2, our sample covers people born during the beginning and the later half of the twentieth century, although we have very few people born prior to 1935. We divided this sample into eight distinct birth-cohorts. However, we also constructed a more aggregated birth-cohort variable into five categories, mainly for statistical reasons. In fact, the modelling techniques we use are sensitive to sample size, thus the more individuals we get within each cohort, the more robust and more reliable our statistical estimates are. As a consequence, models were fitted systematically, using the two different combinations of birth-cohorts variables. Interestingly, this second birth-cohort variable very closely compares with that used in other research in Switzerland (Jann and Combet 2012). Here is the detail of our two birth-cohort variables:

Eight categories birth-cohorts	Five categories birth-cohorts
1. 1912–1935, 2. 1936–1940, 3. 1941–1945, 4. 1946–1950, 5. 1951–1955, 6. 1956–1960, 7. 1961–1965, 8. 1966–1979.	1. 1912-1941, 2. 1942-1949, 3. 1950-1957, 4. 1958-1965, 5. 1966-1979.

Yet it must be emphasised that our birth-cohorts are actually *reconstructed birth-cohorts*, as they stem from multiple cross-sections. Therefore, they do not perfectly reflect the birth-cohorts we actually want to analyse, particularly for the oldest one. We should here address to which extent the use of multiple cross-sections might impose problems of disentangling age, period and cohorts effects.

In regard to period effect first, it is true that most of the surveys we used were collected in the 2000s. Thus, it is possible that we might actually underestimate social change to some extent – in particular, since the tertiarisation process that started to develop in the 1970s was actually well established in the late 1990s. Therefore, our data is likely to reflect this specific period rather than the longer historical frame we would wish to capture. Nonetheless, we still have our three oldest surveys, AP75, ISSP87 and CH91, and they should provide us some historical insights, despite their

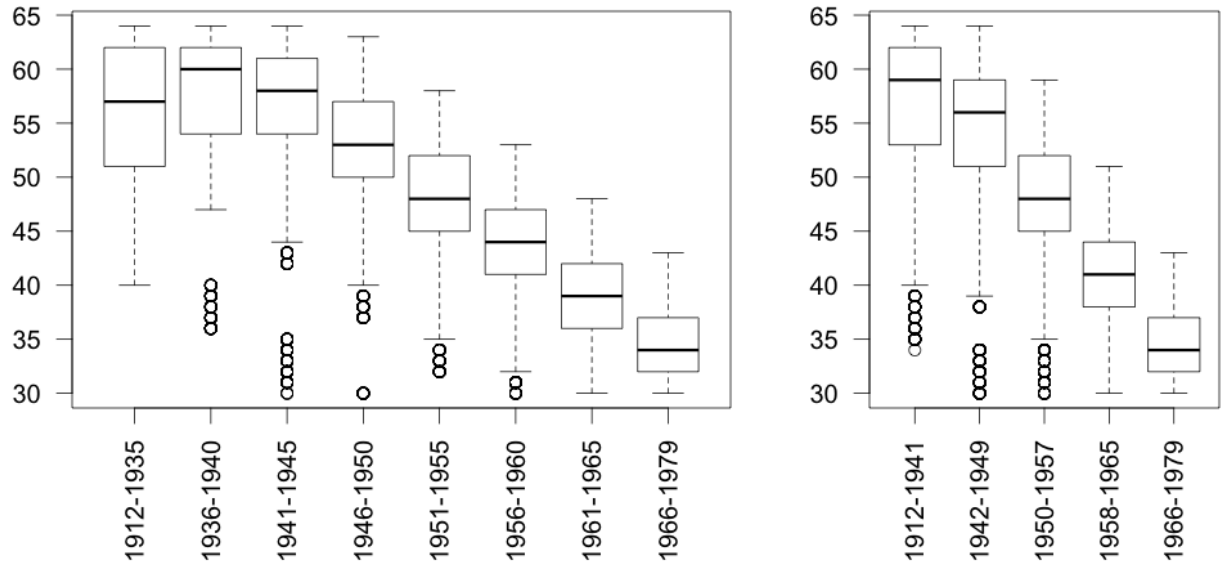

Figure 4.3: Boxplots of age distribution according to birth-cohorts variables

small sample size. However, it must be emphasised that the weight of these three surveys remains relatively weak as they collectively account for about 12% of the total sample size.

It should also be underlined that more serious issues with our data arise from age effect. The birth-cohort perspective imposes that we do not measure all cohorts at all ages, as would be the case under a period perspective. In fact, as Müller and Pollak correctly emphasise, "any cohort analysis must therefore be highly concerned with bias possibly introduced by comparing cohorts at different stages of the life course of their members" (2004:97). Indeed, as can be seen in Figure 4.3, which displays the age distribution into box plots for each of the birth-cohorts we constructed, considerable age effects exist within our data. While the oldest birth-cohorts were likely to be surveyed at a rather advanced age, a good share of people within the youngest one were surveyed before the age of 40. As a consequence, it may be the case that some people within this latter cohort did not yet reach occupational maturity. However, our assessment of data quality in Appendix B indicates that age effect does not account for the specific trends we find in the youngest cohort.

We displayed the distribution detail of our sample according to surveys and birth-cohorts in Tables 4.2 and 4.3. The Swiss Household Panel data amounts for the biggest sample size, followed by the four rounds of the European Social Survey. We clearly see that some surveys do not cover all the birth-cohorts we defined: the youngest cohorts are not represented in oldest surveys, whereas the most recent surveys we use do not contain individuals born before the 1940s due to our previously defined age boundary. We also observe the share of foreign residents – defined as non-Swiss citizens – interviewed in each survey. While a sizeable share of them is indeed represented in each

Table 4.2: Sample detail: surveys by 8 birth-cohort

	1912–1935	1936–1940	1941–1945	1946–1950	1951–1955	1956–1960	1961–1965	1966–1979	Total	- Of which foreigners % (n)
1975. Attitudes politiques	505	102	155	23	-	-	-	-	785	0 % (0)
1987. International social survey	146	85	100	123	104	36	-	-	594	27.4% (163)
1991. Les Suisses et leur société	118	108	156	183	171	150	28	-	914	16.5% (151)
1999. Swiss household panel	98	586	757	932	988	1097	1198	846	6502	14% (908)
2002. European social survey	-	93	172	167	178	197	260	292	1359	12.1% (164)
2004. Swiss household panel	-	57	349	407	479	568	612	853	3325	18.1% (602)
2004. European social survey	-	28	183	183	153	161	225	415	1348	14.9% (201)
2005. MOSAiCH	-	-	91	93	108	95	112	204	703	13.1% (96)
2006. European social survey	-	-	144	135	146	171	187	365	1148	14.4% (165)
2007. MOSAiCH	-	-	52	70	81	96	104	229	632	15.7% (99)
2008. European social survey	-	-	47	149	121	153	178	441	1089	18.5% (202)
2009. MOSAiCH	-	-	17	98	102	114	122	334	787	16.5% (130)
Total (n)	867	1059	2223	2563	2631	2838	3026	3979	19186	
- of which foreigners % (n)	6.2% (54)	11.7% (124)	9.9% (219)	11.9% (305)	12.5% (329)	14.3% (405)	18.1% (548)	22..% (897)		15% (2881)
Mean age	55.8	57.4	55.7	52.7	48.1	43.7	39.4	34.4	45.6	

Note: unweighted data

survey – except for the AP75 survey for which the sample frame was based on voting register – they are systematically under-represented[26], accounting on average for 15% of the sample, and this percentage drops to 13.4% when only valid cases are considered (see Tables A.2 and A.3 in Appendix A). Research documents that the problem of the representation of the foreign population in Switzerland in surveys is quite systematic and holds especially for minority groups from the former Yugoslavia and Turkey, particularly those with lower levels of education (Lipps et al. 2011). Consequently, there is a high risk that our data excludes "large segments of the socially

26 Except for the ISSP87 survey in which foreigners are clearly over-represented: 27.4%. One source of explanation for such over-representation could be found in the incentive of 50CHF that was offered for returned questionnaires. Since no weighting variable is available in this survey, we are unable to redress the sample to make it more representative of the Swiss population of this period.

Table 4.3: Sample detail: surveys by 5 birth-cohort

	1912–1941	1942-1949	1950-1957	1958-1965	1966-1979	Total	- Of which foreigners % (n)
1975. Attitudes politiques	638	147	-	-	-	785	0 % (0)
1987. International social survey	249	180	165	-	-	594	27.4% (163)
1991. Les Suisses et leur société	248	287	267	112	-	914	16.5% (151)
1999. Swiss household panel	825	1344	1625	1862	846	6502	14% (908)
2002. European social survey	128	261	294	384	292	1359	12.1% (164)
2004. Swiss household panel	119	600	789	964	853	3325	18.1% (602)
2004. European social survey	62	296	242	333	415	1348	14.9% (201)
2005. MOSAiCH	18	149	161	171	204	703	13.1% (96)
2006. European social survey	-	248	236	299	365	1148	14.4% (165)
2007. MOSAiCH	-	106	137	160	229	632	15.7% (99)
2008. European social survey	-	160	222	266	441	1089	18.5% (202)
2009. MOSAiCH	-	96	169	188	334	787	16.5% (130)
Total (n)	2287	3874	4307	4739	3979	19186	
- of which foreigners % (n)	9.7% (221)	10.5% (405)	13.2% (567)	16.7% (791)	22.5% (897)		15% (2881)
Mean age	56.7	54.2	47.6	40.7	34.4	45.6	

Note: unweighted data

disadvantaged population of non-western European origin" (Laganà et al. 2013:1289). In other words, our data is not likely reflect the social reality, as it does not capture the most vulnerable groups of the population. One way to deal with this issue is to redress the under-represented groups through the implementation of weightings. This procedure indeed clearly enables us to give more

weight to the foreign population: when we apply weightings, their representation grows to 22.7% and 21.6% respectively for the whole sample, and for valid cases only. Therefore, applying weightings to our sample clearly improves the quality of our data.

Notwithstanding these improvements, it is important to underline that weightings tend to over-represent the most advantaged segments of the foreign population, whereas the most disadvantaged

ones remain largely under-represented. As a result, returned statistical estimates are certainly biased in a conservative way. In the end, the most efficient method to adequately represent foreigners in surveys would seem to be the overcoming of the language barrier (see Laganà et al. 2013).

Yet in spite of these limitations, our data will enable us to gain some interesting insights on the specificities of social mobility in Switzerland. Indeed, the data we use and the birth-cohort approach we chose are quite unique since they clearly enable us to capture as much historical change as possible in social mobility in Switzerland. This approach is even more original since most previous Swiss studies did not systematically assess trends in social mobility with such a wide time-scale. Furthermore, the important sample size we get with the aggregation of multiple surveys might allow us to draw rather serious outcomes in regard to both absolute trends as well as relative trends in social mobility. In fact, this point is crucial, as statistical models we use are sensitive to sample size. Therefore, in addition to providing us with a large time frame, our data, with such a large sample size, "allows for more robustness in the models estimated" (Breen and Jonsson 2005:236). Altogether, our research design provides serious bases for the analysis of social mobility dynamics in Switzerland and should enable us to draw new insights in this respect. We shall now discuss the measurement tools we use for our analysis.

4.2 . Choice of indicators

As we have seen in the introduction of this thesis, any measurement tool imposes a certain vision of the world. We underlined that social positions, when measured in terms of socio-economic index, convey a unidimensional view of hierarchies usually reflected in the form of ladders. However, when considered in terms of social classes, social positions mirror hierarchies in a multidimensional stance, since they more adequately describe relations between different classes. We clearly see the latter representation as the most theoretically correct for the study of social mobility. We will thus take this approach as our starting point. We further suggested that mountains provide an interesting metaphor of social stratification and class structure, since mountains can take different forms and, more importantly, change over time. Therefore, we will implement two different class schema to our data in order to address this social change issue in the social stratification map.

In line with previous research, we understand indicators we use as *instruments de travail*. This implies that we will distinguish as many categories "as it proves empirically useful to distinguish for the analytical purposes in hand" (Erikson and Goldthorpe 1992b:46). We will now detail and justify the indicators we chose with the use of two different class schema and of a specific educational grid.

Table 4.4: The ESeC and EGP class schemas compared

ESEC		EGP		Employment relationship
1	Higher salariat	I	Higher service class	Service relationship
2	Lower salariat	II	Lower service class	
3	Higher-grade white-collar workers	IIIa	Higher-grade routine non-manual employees	Mixed
6	Higher-grade blue-collar workers	V	Lower-grade technicians and manual supervisory	
4	Petite bourgeoisie or independents	IVab	Non-farm petty bourgeoisie	Not applicable
5	Farmers	IVc	Farmers	
7	Lower-grade white-collar workers	IIIb	Lower-grade routine non-manual employees	Labour contract
8	Skilled workers	VI	Skilled manual workers	
9	Semi- and non-skilled workers	VIIa	Semi- / unskilled manual worker not in agriculture	
		VIIb	Semi- / unskilled manual worker in agriculture	

4.2.1 . The ESeC class schema rather than the EGP class schema

The first class schema we chose to implement to our data is the European Socio-economic Class schema (Rose and Harrison 2010b henceforth ESeC). This new class schema was commissioned by Eurostat to serve as a comparative measure of social class in Europe. This classification constitutes a good instrument to measure social stratification in Europe, despite often being criticised for its supposed British bias.

The ESeC class schema indeed takes its roots from the British context, as it was elaborated following the revision of the United Kingdom's social class nomenclature in the early 2000s for this country's Office for National Statistics (Brousse 2008, 2012). This British classification, namely the National Statistics Socio-economic Classification (NS-SEC), stems from the EGP class schema, the class schema that was created by Erikson, Goldthorpe and Portocarero (1979) for the analysis of social mobility.

Therefore, affinities between ESeC and the classic EGP class schema are important, as it can be seen in Table 4.4. Indeed, from this standpoint it seems that ESeC is actually no different from EGP. Yet we will clarify shortly why ESeC is better than EGP and why it should now be preferred to EGP. We should nonetheless first share the particular theoretical rationale that ESeC and EGP share

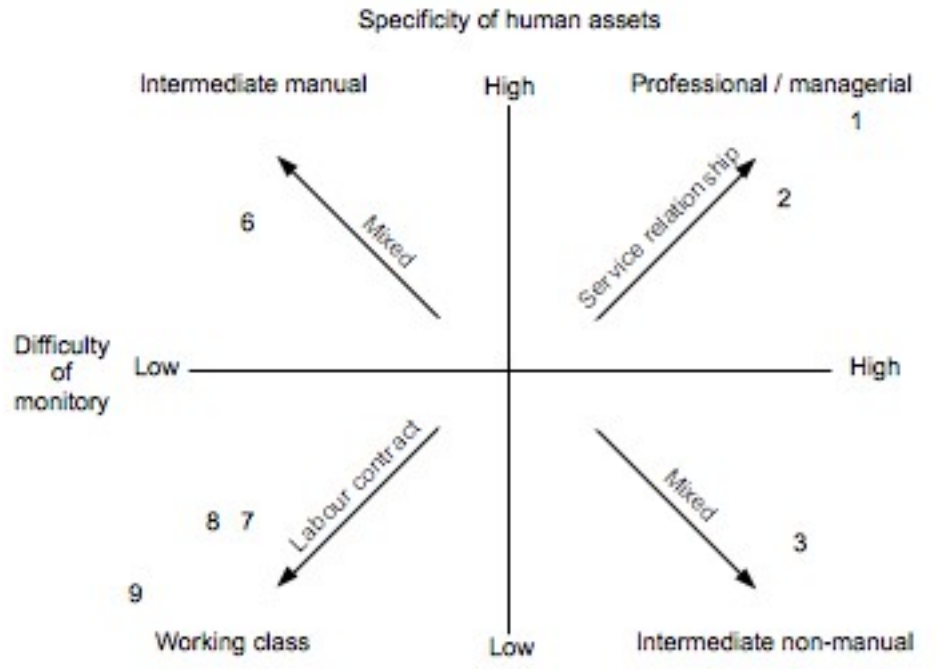

Figure 4.4: Difficulty of monitoring, specificity of human asset and the EseC classes
Note: Figure replicated from Rose, Harrison, and Pevalin (2010:12)

in common. This is indeed a very important point, as most other Socio-economic Classifications were constructed following national representations, such as the French *Professions et Catégories Socioprofessionnelles* (PCS).

As we mentioned earlier (cf. Section 2.2.1), the EGP class schema is based on the twofold conceptual distinction between employment relationships and employment regulation. The former discriminates between (1) the employers, (2) the self-employed without employees, and (3) the employees, whereas the latter denotes divisions between employees that have (1) a service relationship regulation, (2) a labour contract regulation, and (3) an intermediate form of regulation. The concept of employment regulation amongst the employees can easily be summarised in a two-axis map, as can be seen in Figure 4.4, with the horizontal axis displaying the extent of difficulty of monitoring and the vertical axis displaying the extent of specificity of human assets. The corresponding ESeC classes are reported accordingly on the axes of the map.

Thus, for these strong theoretical similarities, ESeC and EGP are expected to be very comparable and we therefore expect that the overall conclusions of the present research carried out with ESeC will be substantially comparable to the conclusions of other international research that was drawn with the EGP schema. Indeed, research comparing the two class schema found that "on average

about 70 per cent are allocated to corresponding classes by the two class schema" (Davis and Elias 2010:97).

Yet differences between the two classifications arise in several respects. As compared to the original EGP class schema, the ESeC classification clearly makes a distinction between *higher-grade white-collar workers* that have a *mixed* employment regulation (ESeC 3) and *lower-grade white-collar workers* that are characterised with a *labour contract* (ESeC 7) (Brousse 2008). In the original version of the EGP classes, both were allocated into the class III of routine non-manual, which has a *mixed* employment regulation. Bihagen, Nermo and Erikson (2010) also highlighted that the share of the higher salariat in ESeC (EseC 1) is smaller than its corresponding EGP class (EGP I). They explain that ESeC discriminates the higher salariat class better and reallocates some occupations originally classified in EGP I into the lower salariat class (ESeC 2). They further underline that the share of higher-grade blue-collar workers (ESeC 6 and EGP V) is considerably larger with ESeC than with EGP. This category seems the most troublesome since in EGP more than 30% of ESeC 6 is allocated into EGP II and 20% into EGP VII. Nevertheless, Bihagen, Nermo and Erikson argue that the ESeC version of higher-grade blue-collar workers is actually more in line with theoretical expectations and thus should be a more reliable measure. Ultimately, ESeC provides a reliably adapted and improved classification in comparison to the original EGP class schema.

Notwithstanding these improvements, the ESeC classification – and logically its EGP ancestor – met a certain amount of criticism. Maloutas (2007) in particular asserted that this European nomenclature would have several weaknesses. According to him, (1) the employment relationship divide (employee – self-employed) should be more significant than the employment regulation one; (2) the concept of employment regulation would not be relevant in national contexts where the public sector is highly developed; (3) the isolation of a class of farmers would be not theoretically grounded; and (4) the schema would be British-biased and would not adequately describe southern European societies where, notably, self-employment is significantly developed.

However, while it might be true that ESeC – as well as EGP – does fail to capture all European societies' specificities, much research indicates that ESeC is not heavily Bristish-biased (see Davis and Elias 2010 for a comparative research; see Wirth et al. 2010 for an application of ESeC in the German context). Interestingly, analysis undertaken by Barone, Schizzerotto and Barone (2010) demonstrates that ESeC actually performs better than EGP for the analysis of educational inequality in Italy. This latter point seems indeed to be the strength of ESeC as compared to EGP, as the former is expected to have a better discriminatory power.

A further strength of ESeC stems from its documentation, and particularly in regard to its

operationalisation, which is not only highly transparent but also makes it possible to impute social class position in cases of missing information on employment relationship or supervisory status (Davis and Elias 2010:104–105). In contrast, the operationalisation of the EGP class schema is not that straightforward; Goldthorpe argues that it should be adapted to each national context by local experts, as the same occupation might be associated with different employment relations in different countries. While we understand Goldthorpe's point, there seems to be no clear-cut harmonised criterion for such an endeavour, which is a major problem – as local experts might have different interpretations of employment regulation. Furthermore, researchers very often use existing algorithms that do not adapt for national peculiarities, such as those proposed by Ganzeboom and Treiman (2003). Yet while it provides a harmonised base for the construction of the EGP class schema, it seems that the proposed operationalisation is not without its problems (for a detailed discussion, see Appendix B in Rose and Harrison 2010a:294).

For all the reasons discussed above, ESeC has the merit to provide a comprehensive and harmonised socio-economic classification to measure social classes in Europe and we expect that it should provide a more reliable measure than EGP, while still remaining highly comparable with it as well as with previous comparative research in our field.

Yet in recent years, it has been increasingly suggested that we should also look at more disaggregated social classes in order to counter the death of class thesis. This is set to be one of the prospects of the ESeC consortium (see Rose and Harrison 2010a). However, Grusky has already set a research agenda for a new class analysis from a decomposed micro-class occupation-based perspective rather than from a big-class-based one, the so-called “decomposition without death” approach (Grusky and Weeden 2001). Other scholars, such as Güveli, have proposed a trade-off perspective by disaggregating EGP's big service classes into two different fractions (see notably Güveli et al. 2012). We shall discuss these new approaches in the next section, in particular in the light of societal changes Western societies have undergone over the last few decades, since as Boeda underlines, “classifications age because reality changes. classifications need to be revised periodically” (2009:3).

4.2.2 . Grusky's, Güveli's and Oesch's class scheme : introducing, discussing and choosing disaggregated measures of social class for the analysis of social mobility

Very recently, two research studies have proposed a new way to look at social mobility. First, the research by Jonsson, Grusky, Di Carlo, Pollak and Brinton (2009) has analysed social mobility in an extremely disaggregated fashion. Second, the research by Güveli, Luijkx and Ganzeboom (2012)

has suggested that new social mobility dynamics were emerging within EGP's service class. While both research studies take very different perspectives, they both share our view to question the long-term validity of the EGP class schema for social mobility analysis. It was indeed argued that the EGP class schema is very well suited to describe industrial societies like those that of Western societies exhibited in the 1970s when it was created, but that it no longer adequately captures social divisions in today's societies (Oesch 2006a, 2006b). This criticism, it must be underlined, was developed in reaction to the development of the supposed death of class thesis which stated that social classes were no longer relevant in our globalised economies (Clark and Lipset 1991; Pakulski and Waters 1996). With the recent findings of non-persistent inequality in educational attainment and increasing social fluidity, some post-modern scholars could be tempted to conclude that social class indeed lost its salience. Yet Weeden and Grusky insisted on the fact that "these results are misleading insofar as they are driven by a weakening of the signal that is captured by the measurement tool. (...) such weakening may simply be an artefact of applying a measurement tool that is conveying ever less information about the inequality space" (2012:1756). In this context, we will introduce and discuss new disaggregated measures of social class, notably Grusky's micro-class approach, Güveli's adaptation of the EGP class schema, and finally Oesch's proposition of redrawing of the class map.

The micro-class theory was developed notably by Grusky and Weeden (2001; see also Weeden and Grusky 2005). According to them, class action takes place at the occupational level rather than at a big-class level. Therefore, they envisage the social structure as decomposing – at a ratcheting-down level within occupations. Recent comparative empirical research (see Jonsson et al. 2009) has in fact proven that when applying the micro-class perspective to social mobility analysis, there is actually a large share of social immobility that is driven at the micro-class level rather than at the big-classes one. In other words, social reproduction is particularly likely to happen not necessarily within big-classes, but within occupational groups: for instance, a son of carpenter is more likely to become a carpenter and a son of a medical doctor, himself a medical doctor.

The micro-class analysis of social mobility, however, received a certain number of critics (see notably Erikson, Goldthorpe, and Hällsten 2012). In particular, criticisms were addressed regarding the theoretical reasons to expect reproduction at the occupational level. Yet Jonsson, Grusky, Di Carlo, Pollak and Brinton actually do provide general theoretical arguments in that respect, based on the distinction of four types of resources: (1) human capital, (2) cultural capital, (3) social network/social capital, and (4) economic resources. According to them, these resources shall be envisaged as occupationally specific resources. They argue that "because the social, cultural and

economic resources conveyed to children depend so fundamentally on the occupations of their parents, one might expect occupations to play a featured role in intergenerational reproduction." (Jonsson et al. 2009:978). A further point of criticism stems from the extremely deterministic vision of society that this analysis imposes to us. These authors are indeed very much concerned with explaining social immobility and they say nothing regarding eventual social mobility affinities that might exist between different occupations.

As far as we are concerned, we think that while it may be true that for some occupational segments – especially those at the extremes of the social structure, those that require higher education and those that are characterised by a self-employment employment relationship – social reproduction might be more marked and even eventually increasing, the micro-class approach still poses the issue of how our Western societies have evolved since Middle Ages, a time when occupations were clearly passed down from father to son. In fact, in a context where educational and occupational supply are increasingly large and diversified, this finding initially seems counterintuitive to us. Yet this approach has merit to be provocative enough to question the extent of openness in today's so-called free societies since "intergenerational choice remains very circumscribed and that residues of caste-like reproduction persist to a greater extent than most of us had probably imagined." (Jonsson et al. 2007:37). However, it still remains unclear to us as to how the micro-class approach envisages social change. For instance, we could wonder to which extent we could expect occupational reproduction to be more important today than yesterday, and why. Similarly, we could wonder how compositional changes in the social structure could be accounted for, since with the development of technology, new occupations emerge and others disappear.

Therefore, since we are very much concerned with the issue of social change, the approach proposed by Güveli (see Güveli and Graaf 2007; Güveli et al. 2012; Güveli, Need, and Graaf 2007) seems quite interesting to us. Clearly, the starting point of Güveli's approach is to question the extent to which change in the social structure modifies social mobility dynamics. In the research she published with Luijkx and Ganzeboom (2012), she shows in the context of the Netherlands that heterogenous social mobility and social reproduction dynamics exist within different fractions of Goldthorpe's service class. Addressing the heterogeneity issue is particularly relevant in this particular country, since the service class accounts for about 50% of the total labour force. To demonstrate so, she outlines new division lines within the service class by distinguishing "the technocrats" on the one hand and "the social and cultural specialists" on the other, a typology inspired from Kriesi (1989), within EGP's classes I and II (higher and lower salariat). Allocation to one of the service class fractions was defined as follows: "occupations are to be classified as social

and cultural specialists if the tasks are relatively difficult to monitor by employers and if the basic tasks consist of social services and/or are based on specialized knowledge in social and cultural issues; occupations are to be allocated into the fraction of technocrats, if their tasks are relatively easy to monitor by their employer or if the basic tasks in these occupations consist of controlling employees." (Güveli et al. 2012:228). In the end, the new disaggregated service class is detailed as follows:

- Ia. the old class of high-grade technocrats (Managers of large firms, governmental and non-governmental administrators, physical scientists, etc.)
- Ib. the new class of high-grade social and cultural specialists (Medical doctors, dentists, university teachers, social scientists, high church officers etc.)
- IIa. the old class of low-grade technocrats (Managers of small firms, engineers, computer programmers, accountants, etc.)
- IIb. the new class of low-grade social and cultural specialists (Medical assistants, professional nurses, teachers, journalists, artists, etc.)

This research pointed out that there is more upward mobility towards the technocrats category and more reproduction within the social and cultural specialists. In other words, heterogeneous social mobility dynamics were found when disaggregating EGP's big service class. Authors explain that the new pointed division lines stem from differences in available resources within these two fractions of the service class. In line with Bourdieu and Passeron's (1964, 1970) cultural reproduction theory, they argue that social immobility is higher within the social and cultural specialists than in the technocrats, since the former are often more educated and have more cultural resources, which are easier to store in families than economic resources. In other research, Güveli had already demonstrated that this new class conception makes sense with respect to political preference, lifestyle, and life course developments (Güveli and Graaf 2007; Güveli et al. 2007). Yet it must be said that they were not able to demonstrate that inheritance within these class fractions had increased over time. One reason for that might pertain to the general increasing social fluidity pattern that characterises the Netherlands (see Ganzeboom and Luijkx 2004).

Notwithstanding the lack of support for increasing differentiation over time into the service class fractions in the Netherlands, we consider Güveli, Luijkx and Ganzeboom's analysis as a serious and constructive attempt to address issues of the changing social structure from an industrial to a post-industrial one. We consider it critical to test whether when looking at more disaggregated measures of social class, alternative social (im-)mobility dynamics could be uncovered. Yet rather than using

Güveli's adaptation of the EGP class schema, we propose the present analysis to use the Oesch class schema (2006a, 2006b). While this class schema has similar theoretical roots as Güveli's (Erikson et al. 1979; Kriesi 1989), it actually has the advantage of offering finer distinctions of different fractions within the service class. Furthermore, this class schema was operationalised in a comparative context, in which Switzerland was included.

The Oesch class schema was clearly created to provide some answers to the changing social structure. This class schema should arguably reflect macro-structural changes that characterise our present-day post-industrial societies and that can be summarised under these three interdependent general phenomenons: educational expansion, feminisation, and tertiarisation. As a consequence of these macro-structural changes, Oesch sustains that (1) the manual – non-manual worker divide is no longer relevant and (2) the service class has become too big a class. Therefore, he proposes a new conceptual map of social classes.

Oesch constructed his class schema on the twofold distinction between *marketable skills* and *work logics*. While the former describes the vertical level which constitutes, according to him, "a concept that is more easily operationalised than the somewhat blurry concept of employment relationship" (Oesch 2006b:67), the latter defines differences at the horizontal level. We see the horizontal level as the major strength of the Oesch class schema. Indeed, such explicit horizontal divisions aligned at similar hierarchical levels provide a largely different vision of the social structure. Not only does this horizontal distinction enable researchers to view the service class as composed of different fractions, but also to envisage the distance between manual and non-manual worker classes at a similar horizontal level, rather than a vertical one. These horizontal divides, conceptualised as work logics, are inspired from Wright's (1989, 1997) class schema. Yet in contrast to Wright, who relies on assets to define these horizontal differences, Oesch insists "instead on the differences in the *daily work experience* as determining different interests and loyalties with the middle class" (2006b:61). Four work logics are identified:

- *The independent work logic*. It is specific of employers and the self-employed.
- *The organisational work logic*. It defines work involving coordination, authority and control where orientation is towards the organisation. It is usually characterised of manager-type occupation and should be associated with a clear command structure that corresponds to a career sequence.
- *The technical work logic*. It consists of the development and use of technical expertise and the orientation is towards a scientific community or trade rather than towards the employing

organisation.

- *The interpersonal service work logic*. These occupations involve face-to-face services and depend primarily on social skills. Unlike the organisational work logic, which involves a direct line of command and loyalty towards the organisation, the interpersonal service work logic is primarily oriented towards clients, patients or petitioners and relies mainly on education, thus offering less occupational mobility perspectives.

Interestingly, Güveli also built on a similar idea of Oesch's concept of work logic to distinguish between the service class fraction she identifies, since she mentioned that "managers seek to prevent the interest and the viability of the organisation they work for while specialists try to prevent the interest of their clients, patients or students and/or their field of specialisation."(Güveli and Graaf 2007:187).

In the end, Oesch distinguishes 17 social classes within his class schema, as can be seen in Figure 4.5. In our view, the Oesch class schema not only has the ability to capture peculiarities of post-industrial societies, including the phenomenon of occupational gender segregation and the clustering of employment in the welfare state, it also further encompasses all fractions of "old" and "new" middle classes, which is not the case of Güveli's adaptation of the EGP class schema. Indeed, Güveli's approach distinguishes only what she calls the old middle class, the technocrats, and the new middle class, the social and cultural specialists. Yet she totally ignores the "genuine" old middle class, which is composed of large employers and self-employed professionals. Of course, it would be unfair to criticise Güveli's approach without mentioning the "EGP bias". In fact, her class schema proposition is more of an adaptation of EGP's class schema than a truly new class schema, and the failure to isolate a category of large employers and self-employed professionals does actually constitute a long-lasting criticism to the EGP class schema. Breen in particular underlines that "placing them in class I (rather than, say, in a new sub-class in class IV) does lead to an inconsistency between the theoretical postulates of the schema and its implementation" (2005:42). Goldthorpe himself recognises this problem, since he underlines that "this procedure is faute *de mieux* and means introducing some, though in all probability only a quite small, degree of error" (1995:314).

For all these reasons, the Oesch class schema is better suited than both Grusky's micro-class and Güveli's disaggregated service classes to assess the extent of possible finer division lines within different fractions of the Swiss social structure. We see this choice of indicator even more exciting since, as far as we know, the Oesch class schema has not yet been applied to other social mobility

Self-employed		*Employees*			
Independent work logic		*Technical work logic*	*Organisational work logic*	*Interpersonal service work logic*	*Marketable skills:*
1. Large employers (>9) Firm owners Hotel owners Salesmen	**2. Self-employed professionals** Lawyers Accountants Medical doctors	**5. Technical experts** Mechanical engineers Computing professionals Architects	**10. Higher-grade managers** Business administrators Financial managers Public administrators	**14. Socio-cultural professionals** University teachers Medical doctors Journalists	*Professional / Managerial*
3. Small proprietors, artisans, with employees (<9) Restaurant owners Farmers Garage owners		**6. Technicians** Electrical technicians Computer equipment operators Safety inspectors	**11. Associate managers** Managers in small firms Tax officials Bookkeepers	**15. Socio-cultural semi-professionals** Primary school teachers Physiotherapists Social workers	*Associate professional / managerial*
4. Small proprietors, artisans, without employees Shopkeepers Hairdressers Lorry drivers		**7. Skilled crafts** Machinery mechanics Carpenters Electricians	**12. Skilled office** Secretaries Bank tellers Stock clerks	**16. Skilled service** Children's nurses Cooks Beauticians	*Generally / vocationally skilled*
		8. Routine operatives Assemblers Machinists Freight handlers	**9. Routine agriculture** Farm hands Loggers Gardeners	**13. Routine office** Mail sorting clerks Call centre employees Messengers	**17. Routine service** Shop assistants Home helpers Waiters	*Low / un-skilled*

Figure 4.5: The Oesch class schema
Note: Figure replicated from Oesch (2006b:68)

analysis.

We have so far detailed and justified the choice of our two measures of social class. We can now turn to our choice of an education grid.

4.2.3 . The BHJM educational grid as a simplified Swiss CASMIN version

In contrast to the choice of social class indicators, we will be more concise in justifying the choice of our educational grid. It must be said that the reason why we chose to code our educational variable following the grid proposed by Bergman, Hupka, Joye and Meyer (2009 henceforth BHJM) was a very practical one: this grid actually proposed a harmonised codification procedure for all the surveys we use.

When elaborating this grid, the authors were concerned with taking into account both the specificities of the Swiss educational system and the evolution it went through, especially during the last two decades with the introduction of the professional maturity degree and the development of Universities of Applied Sciences. Therefore, this grid was clearly developed to fit with the Swiss context – though it actually does closely compare with the actual CASMIN classification (Müller et

Table 4.5: Comparison of the BHJM and the CASMIN educational grids

The Bergman, Hupka, Joye and Meyer grid		The CASMIN grid	
1	Compulsory education	1a	Inadequately completed elementary education
		1b	Completed (compulsory) elementary education
		1c	(Compulsory) elementary education *and* basic vocational qualification
4	Secondary professional education (including elementary vocational training)	2a	Secondary intermediate vocational qualification or intermediate general qualification *and* vocational qualification
2	Secondary general education without maturity	2b	Secondary intermediate general qualification
3	Secondary general education with maturity (including vocational maturity and "école normales" for oldest surveys)	2c_gen	Full *general* maturity certificates
		2c_voc	Full vocational maturity certificate or general maturity certificate *and* vocational qualification
5	Post-secondary and lower tertiary vocational education (including Universities of Applied Sciences HES / HEP)	3a	Lower tertiary education
6	University education (without distinction between short and long training)	3b	Higher tertiary education

al. 1989), the educational grid that is usually used in comparative social mobility research.

Indeed, as can be seen in Table 4.5, both grids share a lot of affinities and the same general structure. However, some differences arise. First, it can be seen that the BHJM grid insists more on the categorical nature of the Swiss educational system, whereas the CASMIN grid, while acknowledging some horizontal divisions, is clearly more structured in a hierarchical way. This specificity of the Swiss grid can be found in the numbering of educational levels it uses, since the secondary professional educational level is actually numbered in fourth position, while its CASMIN equivalent would be second. While this numbering from the outside can look anecdotic, it clearly acknowledges the importance of the development of vocational education through the apprenticeship system in the context of Switzerland. Second, the BHJM grid does not provide the detail of the different categories corresponding to different extents of compulsory education. Similarly, the BHJM grid does not distinguish within the secondary general educational level

between the general maturity and the vocational maturity.

Differences between both grids could further be discussed. In the same vein, we could also have discussed the extent to which this grid relates to the International Standard Classification of Education (ISCED-7) (see Schneider 2008). However, while it is true that a thorough discussion of these issues is required for the Swiss case, it goes beyond the scope of this PhD thesis, especially since there are 26 educational systems in Switzerland, one within each canton.

Since we have now presented all the measures we wish to use for our research, we can now discuss their operationalisation.

4.3 . Operationalisation of indicators

The twelve datasets we use contain the best available data in Switzerland that is representative of the national population and contains social origin indicators. These should thus enable us to correctly measure the three main variables of interest for the present research: social origin (measured through the respondent's father's occupation around the age of 15), social position, and educational attainment. In order to render these datasets comparable and thus ensure the coherence of our finding, a long re-codification process was undertaken. We will detail this recoding process and its limitations in this section, for each classification we use: the ESeC class schema, the Oesch class schema, and the BHJM educational grid.

4.3.1 . Coding the ESeC classification

To code the ESeC class schema, the following informations are required (see Davis and Elias 2010):

- A variable reporting respondent's occupation, measured – ideally – in ISCO-88 codes.
- A variable distinguishing between (1) employers, (2) the self-employed, and (3) employees, referring to the theoretical rationale of the concept of employment relationship of this classification.
- For employers, the number of employees they employ: "the distinction here is between employers who delegate at least some managerial tasks ("large") and those who tend to undertake such tasks themselves ("small")." (Davis and Elias 2010:62). The threshold between the two is having 10 or more employees versus less than 10.
- For employees, a variable measuring whether they exercise some authority and supervision tasks.

Most of the surveys we use contain this information. We reported in Tables A.4 and A.5 in

Appendix A how in each survey they were coded for the father's social position and the respondent's. Yet in some cases, the coding of the ESeC variable could not be operationalised in its full version[27], but only with some approximations or even sometimes using the simplified syntax[28], which allows to code ESeC when only the ISCO-88 variable is available in the data.

We used the simplified syntax notably to code the father's social position for both AP75 and ISSP87 surveys, since no employment status information was available for them. Additionally, in some surveys we were only able to derive employment status with some approximation. In the ISSP87 survey, there was no information available on the number of employees for the employers. By default, we allocated them into the category of small employers. We suffered from similar missing information in the three MOSAiCH surveys for father's social position. We thus followed the same procedure as mentioned above. Furthermore, in the latter surveys, no information was provided on the father's supervisory tasks. As a consequence, all employees were classified by default in the no supervisory category. Finally and interestingly, again for father's social position, the ESS surveys only distinguish for the employers between those who have more or less than 25 employees. This threshold is different from the one that the ESeC codification requires, which is 10. Last but not least, for the 1975 and 1987 surveys, we had to recode ISCO codes originally coded following the ISCO-68 grid on three digits into its equivalent in the ISCO-88 version. It must be noted that as no simple correspondence table between ISCO-68 and ISCO-88 exists, there might be some approximations in the recoding of classifications. It must furthermore be stated that while for some surveys we had ISCO-88 codes coded on four digits, thus more detailed information on occupation, we truncated these variables on three digits to suit the actually proposed ESeC syntax and comparability standard between surveys. Still, some research underlined that there is a “clear loss of validity when moving from the four-digit to the three-digit level” (Wirth et al. 2010:136).

Other research further highlighted some coding issues on supervisory status. Since we got only missing information for father's supervisory status in MOSAiCH surveys in addition to the two oldest surveys, we thus expect relatively little bias in this respect. However, it was pointed out that measurement of supervisory tasks in surveys is not as accurate as it should be. Research from Pollak, Bauer, Müller, Weiss and Wirth found “that different procedures to assess supervisory status may lead to quite substantial variation in class distributions within the ESeC schema” (2010:138). In particular, they concluded that the way supervisory responsibility in ESS surveys is defined is too broad and may lead to allocate many employees as supervisors. As a consequence, we might gain

27 The full ESeC syntax can be found here : https://www.iser.essex.ac.uk/files/esec/guide/docs/Appendix6.sps

28 The simplified ESeC syntaxe can be found here : https://www.iser.essex.ac.uk/files/esec/nsi/matrices/Euroesec%20Simple.SPS

Table 4.6: Collapsability of the EseC class schema.

9 levels	7 levels	3 levels
1. Higher salariat	1. Higher salariat	1. Service class
2. Lower salariat	2. Lower salariat	
3. Higher-grade white collar	3. Intermediate employees	2. Intermediate class
6. Higher-grade blue collar		
4. Petite bourgeois	4. Small employers and self-employed	
5. Small farmers		
7. Lower white-collar	5. Lower white-collar	3. Working class
8. Skilled manual	6. Skilled manual	
9. Semi-/un skilled	7. Semi-/un skilled	

some measurement inconsistencies from the ESS surveys we use too.

However, this does not seem to be the case too often, since we do not observe a systematic pattern into this direction, as can be seen in Tables A.6 and A.7 in Appendix A, which depict the distribution of the ESeC variable according to surveys respectively for the father's and respondent's social position. While we do observe some variations, they do not appear to stem from the same core of surveys (being ESS, MCH or SHP data). In contrast, we systematically observe some variations for the two oldest surveys we use. For the measurement of father's social position first, both AP75 and ISSP87 depict a lower share of higher salariat, petite bourgeois and higher-grade blue collar than should be expected. Similarly, amongst respondent's social position, the ISSP87 survey reports a lower share of petit bourgeois and lower-grade white-collar, and an extremely important share of lower-grade salariat. Thus, while it seems that we have some inconsistencies within our data, they do not seem to be of any systematic kind. The recoding procedure of the ESeC variable we applied looks rather robust to us.

In the end, we use the ESeC schema collapsed on seven and three levels for the purpose of our analysis, as indicated in Table 4.6. Furthermore, we use a second collapsed version of ESeC on six levels to fit the analysis of core social fluidity as undertaken in our last empirical chapter. The collapse is as follows (corresponding class number are indicated between brackets):

1. Salariat (1 and 2)
2. Intermediate employees (3, 6 and 7)

3. Petite bourgeois (4)
4. Farmers (5)
5. Skilled manual (8)
6. Semi-/ un skilled (9)

We will now detail the coding procedure of the Oesch class schema.

4.3.2 . Coding the Oesch classification

The operationalisation of the Oesch class schema is quite straightforward since it only requires information on the employment relationship (whether self-employed or not) and for employers, the number of employees they employ with the same number threshold as for ESeC (i.e. 10 employees), in addition to the ISCO-88 code[29]. Therefore, the coding of the Oesch class schema is actually simpler than that for ESeC. Yet unlike for ESeC, the coding of the Oesch classification is based on ISCO-88 codes on four digits. We have this detailed information in all but two surveys, notably our two oldest ones, AP75 and ISSP87, so we do not expect too much bias from this side.

One problem of the Oesch classification as compared to ESeC is that the coding procedure does not propose adjustments in case of missing information. As a consequence, as can be seen in Tables A.8 and A.9, which display the distribution of the Oesch class schema for each survey for the father's and respondent's class position, within a certain number of surveys we were unable to code social positions with an independent work logic (for social origin with AP75 and MOSAiCH surveys and for both social origin and respondent's social position with ISSP87 data). Yet we were able in some cases to allocate some people into the class of “small proprietors, artisans, without employees”, since we defined, when no employment relation information was available, to classify by default all ISCO-88 codes corresponding to 6210 – subsistence agricultural and fishery workers, namely farmers – into this class, while the original procedure allocates them into routine agriculture positions if employed and into the class of small proprietors, artisans, without employees when self-employed. The adjustment renders the classification more reliable, especially for our oldest surveys. One further problem that arises from the coding of the Oesch class schema is that we get very few, if any, people in the categories of routine agriculture and routine office. While it might be true that few people occupy a routine agriculture position in Switzerland, we may have gained slightly more observations within the routine office class if we would have adjusted the classification with

29 Oesch further proposes to adjust the coding according to educational level (see Oesch 2006b:79). We do not follow this adjustment procedure since we are also interested here to see how educational levels are distributed within the Oesch class schema.

Table 4.7: Collapsability of the Oesch class schema.

17 levels	9 levels
1. Large employers (>9) 2. Self-employed professionals	1. Traditional bourgeoisie
3. Small proprietors, artisans, with employees (<9) 4. Small proprietors, artisans, without employees	7. Petite bourgeoisie
5. Technical experts 6. Technicians	2. Technical specialists
7. Skilled crafts	8. Skilled crafts
8. Routine operatives 9. Routine agriculture	9. Routine technical
10. Higher-grade managers 11. Associate managers	3. Managers
12. Skilled office 13. Routine office	4. Office clerks
14. Socio-cultural professionals 15. Socio-cultural semi-professionals	5. Socio-cultural specialists
16. Skilled service 17. Routine service	6. service workers

educational titles. Yet as we underlined in note 29, we did not follow this procedure, since we are also interested in analysing the distribution of Oesch classes according to education. Adjusting the coding of the class schema according to education and then analysing the educational distribution according to this class schema would be tautological. In the end, the final codification process displays some variations, as we observed earlier with ESeC, but we cannot find any systematic survey effect besides those mentioned above.

Analysis using the Oesch classification will only be undertaken on a collapsed version of the schema, notably on nine levels, as can be seen in Table 4.7. We followed Oesch's suggestion to collapse the classes into eight categories, but further isolated the classes of routine operative and routine agriculture from the skilled crafts, in order to find some common correspondence with ESeC and EGP classifications.

Table 4.8: Conversion between the MOSAiCH 2007 and the BHJM educational grids

MOSAiCH 2007 educational grid	BHJM educational grid
1. Incomplete primary school 2. Primary school 3. Secondary education, first stage	1. Compulsory education
6. General training school (3 years)	2. Secondary general education without maturity
7. School preparing for university, vocational baccalaureate 9. School for university for adults and baccalaureate after vocational training	3. Secondary general education with maturity (including vocational maturity and "école normales" for oldest surveys)
4. Initial vocational training (1-2 years) 5. Apprenticeship (vocational training, dual system)	4. Secondary professional education (including elementary vocational training)
8. Vocational training (second) 10. Higher vocational training 11. Pedagogical and applied university	5. Post-secondary and lower tertiary vocational education (including Universities of Applied Sciences HES / HEP)
12. University diploma and post-graduate (including technical) 13. University doctorate	6. University education (without distinction between short and long training)
14. Other	7. Other

4.3.3 . Coding the BHJM educational grid

To code education variables in surveys using a common educational grid, Bergman, Hupka, Joye and Meyer (2009) proceeded in two steps. First, they coded all educational titles into a detailed educational grid with thirteen modalities, following those available in the MOSAiCH 2007 survey. Next, they allocated all educational levels into an aggregated educational variable coded into six categories, as can be observed in Table 4.8.

Details of the coding process and the final distribution of the variable can be found in Tables A.10 and A.11 in Appendix A. Overall, we can say that biggest sources of bias arise from the oldest surveys, namely AP75, ISSP87 but also CH91, since it seems that the number of individuals with secondary vocational education is largely underestimated. Even worse, in the ISSP87 survey, no such category is actually available. Besides these, we do not observe significant variations in the distribution of education in each survey.

Yet since very few people in Switzerland leave school with a secondary educational level without

maturity (on average 2.4%), for our analysis we merged this category with its corresponding category with maturity. Therefore, in the end, our education variable is distributed into the following five levels:

1. Compulsory education
2. Secondary general education with *or* without maturity
3. Secondary professional education (vocational training)
4. Lower tertiary education / professional training after secondary education
5. Higher tertiary education (university & polytechnic school)

Furthermore, to measure trends in educational expansion more generally, we also constructed two dichotomous variables distinguishing between the following:

1. Having attained at least secondary education (1 versus 2,3,4,5)
2. Having attained at least tertiary education (1,2,3 versus 4,5).

We have now presented thoroughly how we operationalise our main indicators. In the following point, we would like to shortly present how much the two class schema we use are comparable with each other.

4.3.4 . Comparing the ESeC and the Oesch class schemas

As stated in our last empirical analysis (see Chapter 7), we are interested in assessing to which extent we can observe finer social (im-)mobility dynamics when using a more disaggregated measure of social class than ESeC, namely with the Oesch class schema. Since we start with the core model of social fluidity as introduced by Erikson and Goldthorpe (1992b), we use the ESeC class schema into six levels, as defined above.

To check whether the two class schemas are comparable, we report the cross-tabulation of both class schema in Table A.12 in Appendix A. We observe that both class schema display important affinities. In most cases, more than 70% of individuals are allocated to the corresponding class. However, some categories of the Oesch class schema depict some important comparability weaknesses. This is notably the case of routine service occupations, which are classified at 85% in the ESeC classification in the semi-/unskilled class. There is also an inadequacy between the Oesch skilled service and routine service classes and the ESeC classes of white-collar class, since a significant share of these Oesch classes is classified as ESeC skilled manual and semi-/unskilled classes. Important divergence can also be found in the Oesch class of associate managers, of which

Table 4.9: EGP, ESeC and Oesch class schemas correspondence grid applied to fit the core model of social fluidity

EGP « core model » version	Corresponding ESeC classes	Corresponding Oesch classes
I+II. Service class	1+2. Salariat	1. Large employers 2. Self-employed professionals 5. Technical experts 6. Technicians 10. Higher-grade managers 11. Associate managers 14. Socio-cultural professionals 15. Socio-cultural semi-professionals
III. Routine non-manual workers	3+7. White collar	12. Skilled office 13. Routine office 16. Skilled service 17. Routine service
IVab. Petty bourgeoisie : small proprietors and artisans etc. With or without employees	4. Petite bourgeoisie	3+4. Small proprietors, artisans with or without employees
IVc. Farmers	5. Small farmers	
V + VI. Skilled workers	6+8. Skilled manual	7. Skilled crafts
VIIa. Non-skilled workers	9. Semi-/ unskilled	8. Routine operatives
VIIb. Agricultural labourers		9. Routine agriculture

more than 40% are to be allocated into ESeC white collar classes, while they should be in the salariat under Oesch's class schema. Finally, some of Oesch's large employers class are actually allocated into white-collar, skilled manual and – even more surprisingly – in the semi-/unskilled class within the ESeC classification.

We thus find some inconsistencies and as a consequence, we cannot say that both class schema are strictly comparable. Yet since we use a collapsed version of the Oesch class schema into nine levels for our analysis, these comparability limits should still remain relatively weak. At last, in Table 4.9, we display the correspondence grid we apply to compare EGP, ESeC and Oesch class schema.

We can now turn to the measurement of social mobility *per se*, notably in the form of mobility tables and log-linear models.

4.4 . The measurement of social mobility: introducing mobility tables and log-linear models

As we underlined in Section 2.2.1, the introduction of two important methodological innovations in the 1970s constituted, as we put it, "one small step for sociologists, one giant leap for social mobility research". One of these innovations was the shift in the measurement of social position: from a unidimensional measure in the form of socio-economic index, we moved to a multidimensional measure taking the form of social class. The other innovation was the implementation of new statistical models: log-linear models (Goodman 1965). The introduction of log-linear models for the analysis of social mobility has indeed been a major methodological advancement, since this statistical technique allows the association between categorical variables in a contingency table to be modelled in a flexible way. The consequence of such a *découverte*[30] resulted in a re-orientation in social mobility measurement, formalising the distinction between absolute and relative social mobility.

4.4.1 . Absolute and relative social mobility: distinguishing the two fundamental measures of social mobility

The study of intergenerational social mobility consists of the comparison of a person's social position with that of his or her family background, usually measured through his or her father's social position. In order to assess how much social mobility takes place in a given society, sociologists usually create a table that cross-classifies a person's social background with his or her social position, the so-called *mobility table*. From this single mobility table, two types of measures of social mobility can be returned: an absolute measure and a relative measure.

Absolute social mobility is a measure of observed mobility, as it refers to mobility that can be calculated directly from a mobility table. Mobility tables are indeed extremely straightforward tools to analyse social mobility. They consist of the cross-tabulation of a person's social origin with his or her social position attainment during adulthood. As both variables are usually distributed with the same number of categories, the diagonal cells of the mobility table indicate the extent of social reproduction, whereas cells outside the main diagonal report the extent of social mobility. Elementary social mobility analysis usually consists of the inspection of inflow and outflow percentages, corresponding respectively to column and row percentages. Outflow percentages indicate the distribution of social *destiny* within each category of origin; in other words, they provide information on the social position reached by children of a given class origin. Inflow percentages, in contrast, report for each type of social destination from which social origin they

30 Understand: discovery

were *recruited*. It tells us, for instance, the extent to which a certain class position auto-recruits from the same class origin.

Yet this way of analysing social mobility poses some problems, as Hout illustrates: “While they [inflow and outflow percentages] provide some information about the process of social stratification, other processes related to the relative supply and demand of labor power from different strata also influence the inflow and outflow patterns. For example, the high fertility of farmers coupled with a decrease in the proportion of the U.S. labor force in farming contributes to the unbalanced inflow/outflow pattern for farm occupations. While only 39.4 percent of farmers' sons follow their fathers into farming, 80.9 percent of farmers in 1973 have farm origins” (1983:12). This illustration clearly summarises the main challenge social mobility scholars faced in the 1970s, since we are unable to say to how much social reproduction was exhibited in the class of farmers in this example.

This problem stems from the different marginal distribution of each social class within a mobility table: in Hout's example, in the father's generation, 23% of fathers were farmers, whereas in the son's generation, this rate had dropped to 11%. In other words, as the social structure is not fixed, it is very difficult to assess how much social reproduction exists. So the measurement of *absolute* social mobility is highly dependent on the available structure of opportunity. For instance, if a given society is composed of 40% manual workers and only 10% higher salariat positions, then the likelihood of reaching a manual worker position rather than a higher salariat position will be higher for everyone, simply because the structure of opportunities available in this society imposes so. Yet we would not be able to assess the extent to which the likelihood of social reproduction within these two classes is the same or not. It might indeed be the case that the propensity of social reproduction is actually stronger within the higher salariat class, even though we would not be able to observe so, strictly from the observed percentages distribution in the mobility table.

This issue can be extended to cross-national and cross-temporal comparison: since the distribution of social classes varies over time and place, comparing social mobility cross-nationally and cross-temporally is basically impossible. The analysis of inflow and outflow percentages of social mobility thus must be understood in a strictly descriptive manner, but cannot in any case clearly capture the extent of rigidity or fluidity that a given society displays and how it situates over time and place insofar as it does not measure the direct association between categories of the mobility table. The *relative* measure of social mobility overcomes this issue.

In fact, *relative* social mobility, in contrast to absolute social mobility, provides a measure of a given society’s degree of openness. Often also called *social fluidity*, relative social mobility

measures one person's chances of access to a given social position in comparison to people from different social positions. In other words, "it tells us something about the advantages and disadvantages associated with being born into one class rather than another" (Breen 2004b:20). To measure relative social mobility, sociologists use tailor-made modelling techniques called log-linear models.

Breen provides a clear-cut illustration to understand the distinction between absolute and relative measures of social mobility and the importance of making such a distinction:

> "Suppose that my father was a clerk and that I am a manager: then, in absolute terms I have been upwardly mobile. But suppose that, in my father's generation, being a clerk gave him a class position that was better than half of the population, whereas, in my generation, being a manager puts me in a position which is better than, say, 40 per cent of the population. Then, in relative terms I have been downwardly mobile because my rank is worse than my father's: half of the population were in a better position than him whereas 60 per cent are in a better class position than me, and this is so even though I have an objectively better class position than he had. This discrepancy between absolute and relative mobility might seem far-fetched, but it is actually quite the opposite. When there has been a large upward shift in the distribution of class positions such a discrepancy will be common" (2010b:417–418).

From this standpoint, it appears that the distinction between absolute and relative measures of social mobility is indeed central to the analysis of social mobility. This is even more crucial in the context of the considerable changes in the composition of social structure that our Western societies have undergone since the last century. Since we have defined the two fundamental measures of social mobility, we can now more thoroughly explain how relative social mobility is exactly measured, by introducing log-linear models.

4.4.2 . Log-linear models: the tailor-made statistical method to model mobility tables

The basic idea of log-linear models is to measure the *association* between different categorical variables that are in a contingency table (for a thorough introduction to log-linear models, see Hout 1983; Knoke and Burke 1980; Sloane and Morgan 1996; Vallet 2004b, 2005). In this sense, this special case of generalised linear models does not consist of explaining one phenomenon (with a dependent variable, like in our case social position attained) according to a set of factors (with independent variables, such as social origin and educational attainment), as is the case with logistic

regression models. The great advantage of log-linear models is that they enable researchers to go beyond the traditional chi-square test of independence in two-way contingency tables. In fact, log-linear models allow us to perform in-depth analysis of the strength and the pattern of the association between categorical variables in multiway contingency tables, not only two-way ones. Furthermore, since they only rely on the odds-ratio statistic (see Vallet 2007 for a thorough introduction of the odds-ratio statistic), estimates returned by log-linear models are independent of marginal distributions. In other words, these models overcome the problem of cross-national and cross-temporal social class distributions comparability in mobility tables. In our case, this is of crucial importance since we compare the evolution of the association between social origin and social destination cross-temporally. Thus, what log-linear models enable us to measure is how the association between these two variables evolved, regardless of changes in the share of, say, farmers, manual workers and the salariat in the distribution of these variables.

As a brief reminder, the odds-ratio statistic measures the association between two dichotomous variables (or two categories of variables with multiple categories) and has the unique property to be margin-insensitive. It can be easily calculated from any contingency table. For instance, let's consider the following simple mobility table,

	$Dest_1$	$Dest_2$
$Orig_1$	$f_{i,j}$	$f_{i,j+1}$
$Orig_2$	$f_{i+1,j}$	$f_{i+1,j+1}$

where $Orig_1$ corresponds to an upper class social origin and $Dest_1$ the same class destination, $Orig_2$ to a lower class social origin and $Dest_2$ the corresponding class destination. The odds-ratio of being found in the upper class destination rather than in the lower class destination for children from an upper-class origin rather than for those from a lower-class origin can be obtained from the following equation:

$$\alpha_{ij} = \frac{f_{i,j} f_{i+1,j+1}}{f_{i+1,j} f_{i,j+1}}$$

The returned value of this odds-ratio will be located between 0 and +∞, where 1 would correspond to the statistical independence – implying, for instance, that the chances of being found in the upper-class destination rather than in the lower-class destination are identical for both social backgrounds. In contrast, an odds-ratio of 5 would mean that children coming from the upper class are 5 times more likely to remain in the same class rather than to reach the lower class, as compared

to children of the lower class. In this sense, the odds-ratio statistic "measures the association at the *heart* of the contingency table[31]" (Vallet 2007:61 own translation, emphasis in original).

The log-linear modelling technique does nothing else than generalise this procedure by systematically computing odds-ratios within contingency tables: in the case of a simple two-way mobility table with dichotomous variables, only one single odds-ratio needs to be computed to describe the association, but in bigger tables, multiple odds-ratios are computed.

Formally, multiple ways exists to model contingency tables with log-linear models. As an example, let us take the case of a two-way contingency table to introduce basic log-linear models and the logic behind them.

- The saturated model (the model which reproduces the data):

$$\log(m_{ij}) = \lambda + \lambda_i^A + \lambda_j^B + \lambda_{ij}^{AB} \text{ , which could also be written as } \{AB\} \quad (1)$$

where $\log(m_{ij})$ is the log of the expected cell frequency of the cases for cell ij in the contingency table, λ is the overall mean of the natural log of the expected frequencies, λ_i^A the main effect for variable A, λ_j^B the main effect for variable B, and λ_{ij}^{AB} the interaction effect for variables A and B, for instance between social origin and social destination. By definition, this model is called the saturated model since it reproduces the exact observed frequencies. In other words, this model is not of any relevance as it does not tell us anything about our data. Therefore, a simpler model can be specified, assuming that A and B, for instance social origin and social destination, are independent.

- The independence model (the model with no association between variables A and B):

$$\log(m_{ij}) = \lambda + \lambda_i^A + \lambda_j^B \text{ , which could also be written as } \{A,B\} \quad (2)$$

In this model, since we have removed the interaction effect between variables A and B – corresponding to the λ_{ij}^{AB} term – these variables are assumed to be independent. In this sense, this model is similar to the chi-square test of independence. This model is usually taken as a baseline model.

Typically, log-linear models consist of testing a combination of models situated between the independence model and the saturated model. This is a very important feature of log-linear model, which is referred to as the *hierarchical approach*. This means that models are hierarchically ordered, from the simplest to the most sophisticated model.

A more sophisticated model, as compared to the independence model, could be a model which

31 Original quote "mesure l'association au *cœur* du tableau croisé".

assumes that all the association between variables A and B is captured by the cells on the main diagonal.

- The diagonal model (the model with only an association between A and B on the main diagonal):

$$\log(m_{ij}) = \lambda + \lambda_i^A + \lambda_j^B + \lambda_{a(ij)}^{Diag} \text{ , which could also be written as } \{AB^{Diag}\} \quad (3)$$

where $\lambda_{a(ij)}^{Diag}$ would define that one specific effect should to be fitted only on the diagonal cells of the table – i.e. that the association between A and B is essentially captured on the main diagonal. Concretely, this diagonal effect would be defined in the form of a matrix, for example where two variables are distributed on three modalities:

$$\begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$$

In other words, this model assumes that the association between A and B is essentially captured by the diagonal cells, corresponding in the case of social mobility to social reproduction – formally this model is also called the "quasi-independence" model. It is a form of a *topological* model and enables us to model the *pattern* of the association between variables within the table.

In the end, this statistical technique enables us to assess the form of the association between categorical variables. Of course, because the previous models only take a two-way contingency table as an example, the number of combinations of models looks rather limited. However, as can be seen in Table 4.10, the introduction of a third variable allows for many more possibilities of effects and associations to be tested – up to 18 models without topological specifications.

Ultimately, for the analysis of social mobility, log-linear models allow us to model the *strength* of the association and the *pattern* of the association between variables of social origin, educational attainment and social destination, so that we can get an idea about the extent of proximity and distance between the categories of these variables, all of this intrinsically of structural differences over time and place in the variables distribution. In fact, these models are clearly well suited for the analysis of social mobility, since they allow us to disentangle structural effects from net effects.

Concretely, to assess the strength and/or the pattern of the association within mobility tables, researchers observe (1) how a given model adjusts to the data so that the deviance between expected frequencies tested under a certain hypothesis and observed frequencies is not statistically significant (Hout 1983:14), and (2) how a given model improves our understanding of the association as compared to a simpler nested model, starting from the baseline independence model. We will detail

Table 4.10: Example of possible combinations of log-linear models on a three-way contingency table

Models	**Effects captured by models**
18. $\log(m_{ijk}) = \lambda + \lambda_i^A + \lambda_j^B + \lambda_k^C + \lambda_{ij}^{AB} + \lambda_{ik}^{AC} + \lambda_{jk}^{BC} + \lambda_{ijk}^{ABC}$	{ABC} – saturated
17. $\log(m_{ijk}) = \lambda + \lambda_i^A + \lambda_j^B + \lambda_k^C + \lambda_{ij}^{AB} + \lambda_{ik}^{AC} + \lambda_{jk}^{BC}$	{AB,AC,BC}
16. $\log(m_{ijk}) = \lambda + \lambda_i^A + \lambda_j^B + \lambda_k^C + \lambda_{ij}^{AB} + \lambda_{ik}^{AC}$	{AB,AC}
15. $\log(m_{ijk}) = \lambda + \lambda_i^A + \lambda_j^B + \lambda_k^C + \lambda_{ij}^{AB} + \lambda_{jk}^{BC}$	{AB,BC}
14. $\log(m_{ijk}) = \lambda + \lambda_i^A + \lambda_j^B + \lambda_k^C + \lambda_{ik}^{AC} + \lambda_{jk}^{BC}$	{AC,BC}
13. $\log(m_{ijk}) = \lambda + \lambda_i^A + \lambda_j^B + \lambda_k^C + \lambda_{ij}^{AB}$	{AB,C}
12. $\log(m_{ijk}) = \lambda + \lambda_i^A + \lambda_j^B + \lambda_k^C + \lambda_{ik}^{AC}$	{AC,B}
11. $\log(m_{ijk}) = \lambda + \lambda_i^A + \lambda_j^B + \lambda_k^C + \lambda_{jk}^{BC}$	{BC,A}
10. $\log(m_{ijk}) = \lambda + \lambda_i^A + \lambda_j^B + \lambda_k^C$	{A,B,C} – independence
9. $\log(m_{ijk}) = \lambda + \lambda_i^A + \lambda_j^B + \lambda_{ij}^{AB}$	{AB}
8. $\log(m_{ijk}) = \lambda + \lambda_i^A + \lambda_k^C + \lambda_{ik}^{AC}$	{AC}
7. $\log(m_{ijk}) = \lambda + \lambda_j^B + \lambda_k^C + \lambda_{jk}^{BC}$	{BC}
6. $\log(m_{ijk}) = \lambda + \lambda_i^A + \lambda_j^B$	{A,B}
5. $\log(m_{ijk}) = \lambda + \lambda_j^B + \lambda_k^C$	{B,C}
4. $\log(m_{ijk}) = \lambda + \lambda_i^A$	{A}
3. $\log(m_{ijk}) = \lambda + \lambda_j^B$	{B}
2. $\log(m_{ijk}) = \lambda + \lambda_k^C$	{C}
1. $\log(m_{ijk}) = \lambda$	No effect – empty model

now the models we tested for our research.

4.4.3 . Details of log-linear models used

The models we tested systematically involve – at least – the cross-tabulation of three variables, including birth-cohort and the combination of either origin-destination, origin-education or education-destination variables. We use six log-linear models to test our research hypotheses. They can be decomposed formally as follows, where O, for instance, stands for social origin, with E for education and C for birth-cohort:

- The conditional independence model (the baseline model):

$$\log(m_{ijk}) = \lambda + \lambda_i^O + \lambda_j^E + \lambda_k^C + \lambda_{ik}^{OC} + \lambda_{jk}^{EC}, \quad (1)$$

which could also be written as {OC, EC}

This first model, as shown in equation 1, is called the conditional independence model and constitutes the baseline model. It makes the assumption that social origin and education are independent – in other words, that educational equality over birth-cohorts stands in Swiss society.

- The constant association model (the model that assumes a given association to be constant):

$$\log(m_{ijk}) = \lambda + \lambda_i^O + \lambda_j^E + \lambda_k^G + \lambda_{ik}^{OG} + \lambda_{jk}^{EG} + \lambda_{ij}^{OE}, \quad (2)$$

which could also be written as {OC, EC, OE}

Conversely, the second model applied (equation 2) is called the constant association model (CnSF) and assumes that the association between social origin and education has remained constant across birth-cohorts. This model assumes that educational inequality did not change substantially. If, as we hypothesised, return to education remained relatively stable, this is the model that best reflects the reality.

- The Uniform Difference model (the model assuming that a given association changed):

$$\log(m_{ijk}) = \lambda + \lambda_i^O + \lambda_j^E + \lambda_k^C + \lambda_{ik}^{OC} + \lambda_{jk}^{EC} + \beta_k \psi_{ij}, \quad (3)$$

which could also be written as {OC, EC, βcOE}

This third model, known as either the Uniform Difference model (Unidiff) or the log-multiplicative layer effect model (Erikson and Goldthorpe 1992b; Xie 1992), assumes that the origin-education association takes the same pattern over birth-cohorts, but that the strength of the OE association varies log-multiplicatively, in a uniform manner, over birth-cohorts (indicated by the term $\beta_k \psi_{ij}$). In other words, this model tests for substantial change in the strength of the association between origin and education over cohorts, and is very powerful to detect a dominant trend in the data. If this model fits, it accounts for a change over birth-cohorts. The sense of this change is displayed in Unidiff parameters, which are returned on a scale of log odds-ratio. The first parameter is always set to 1, to serve as the reference category, then if parameters are bigger than 1, this implies that the association between the two-variables increased – for instance, that educational inequalities increased – whereas a parameter below 1 indicates that the association decreased – in other words, that educational inequality decreased. In other words, should the model prove to better describe our data than the preceding constant association model, then this will support our research hypotheses

which states that social fluidity and educational equality increased.

In addition to these three models, two further models were fitted at some occasion in order to check the robustness of trends displayed.

- The Uniform Difference model with a linear trend (the model assuming that the change in a given association has been linear):

$$\log(m_{ijk}) = \lambda + \lambda_i^O + \lambda_j^E + \lambda_k^C + \lambda_{ik}^{OC} + \lambda_{jk}^{EC} + (1 + \beta_{lin}\, year)\psi_{ij}\,, \qquad (4)$$

  which could also be written as {OC, EC, βc(lin)OE}

The Unidiff linear trend model, as displayed in equation 4, is very useful to arbitrate between a linear and a non-linear change over time in the OE association, for instance. It assumes that the Unidiff trend is linear. For instance, this model could prove useful in outlining the extent to which the hypothesised increasing social fluidity and educational equality trend would have developed at the same pace across birth-cohorts. As this model is parsimonious with only a loss of one degree of freedom as compared to the constant association model, it provides a serious alternative to the "classic" Unidiff model.

- The Constrained Uniform Difference model (the model assuming that the change in a given association has reached similar level in some categories):

$$\log(m_{ijk}) = \lambda + \lambda_i^O + \lambda_j^E + \lambda_k^C + \lambda_{ik}^{OC} + \lambda_{jk}^{EC} + \beta_k\, constrained\, \psi_{ij}\,, \qquad (5)$$

  which could also be written as {OC, EC, βc(constrained)OE}

The constrained Unidiff model (equation 5) constitutes a simpler version of the Unidiff model and specifies equality constraints to be imposed on the β parameters. Stated differently, this model assumes that the origin-education association is the same between different categories of the birth-cohort variable (the β parameters). For instance, we could expect that social fluidity increased only within the oldest birth-cohorts and then slowed down, as we hypothesised. By testing equality constraint in the Unidiff parameters of the youngest birth-cohorts, we could test whether the degree of social fluidity has reached similar levels for these birth-cohorts. This model is not only useful to test whether a difference in the origin-education association observed between, say, two birth-cohorts is significant, but also because it is by definition more parsimonious than the classic Unidiff model. Equality constraints are defined according to the β Unidiff parameters returned by the Unidiff model. Combinations of constrained Unidiff were usually tested in cases where the Unidiff model did not provide significant improvement over the constant association model in order to validate (or invalidate) the robustness of the constant association trend.

Finally, in our last empirical chapter, we fitted and adapted Erikson and Goldthorpe's (1992b) model of core social fluidity.

- The core model of social fluidity (the model that specifies the pattern of the association between social origin and social destination).

$$\log(m_{ij}) = \lambda + \lambda_i^O + \lambda_j^D + \lambda_{a(ij)}^{HI1} + \lambda_{b(ij)}^{HI2} + \lambda_{c(ij)}^{IN1} + \lambda_{d(ij)}^{IN2} + \lambda_{e(ij)}^{IN3} + \lambda_{f(ij)}^{SE} + \lambda_{g(ij)}^{AF1} + \lambda_{h(ij)}^{AF2}, \quad (6)$$

which could also be written as $\{OD^{HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 + AF2}\}$

This model, which is a sophisticated specification of topological log-linear models, proposes to decompose the structure of the mobility table into different sets of (net) associations. To do so, matrices defining the association that should be captured are fitted to the data. In their model, Erikson and Goldthorpe constructed up to eight matrices, each measuring a special effect relating to hierarchy, inheritance, sector and affinity[32]. Each of these matrices can in turn be modified to test whether a further effect provides additional information as regard to the pattern of social mobility.

Having presented the models we will fit to our data, we can now turn to final practical considerations.

4.4.4 . Final practical statistical considerations : discussing model selection criteria and robustness assessment

For model selection, we primarily rely on the classic frequentist approach, consisting of model comparison based on the conventional deviance statistic (G2).This method simply consists in comparing how the gain in G2 of a given model, as compared to a simpler model, more adequately describes the data in light of the number of degree of freedom lost. This choice can look rather unusual in the context where the Bayesian approach has gained increasing importance with the diffusion of the BIC statistic as the device for model selection (Raftery 1986, 1995). However, BIC has often been criticised for rejecting more complicated models. Furthermore, one must keep in mind that our sample size, while not inconsiderable, still remains relatively small as compared to other social mobility research, especially when we consider only complete cases. Yet as can be seen from the BIC equation reported here:

$$BIC = G2 - df \times \log(N_{i,j})$$

by subtracting to the G2 statistic the number of degrees of freedom multiplied by the log of the sample size, BIC by definition imposes greater penalty on models fitted with a smaller sample size.

32 These effects are presented in more detail in Appendix E and corresponding matrices are displayed in Table F.5 in Appendix F

Thus, while the BIC statistic will be systematically reported in tables presented in our analysis, as BIC quasi-systematically favours the constant association model, we will not use it nor underline it for model selection. The more negative the BIC value, the more it is said the model should be preferred.

Furthermore, models were systematically fitted using two different combinations of birth-cohorts variables. Indeed, models were first fitted using the following eight birth-cohort distinction: 1912–1935, 1936–1940, 1941–1945, 1946–1950, 1951–1955, 1956–1960, 1961–1965, 1966–1979; secondly, using a more aggregated construction of birth cohorts distributed as follow in five categories: 1912–1941, 1942–1949, 1950–1957, 1958–1965 and 1966–1979. Not only does this second version of birth-cohort division closely compare with that used in other research in Switzerland (Jann and Combet 2012), it further provides more reliable model estimation as log-linear models are famously acknowledged for being sensitive to sample size. Thus, while estimations using the eight birth-cohort version may provide a more detailed picture of trends in relative social mobility, those using the five birth-cohort version will prove more robust. For this reason, final outcomes will be drawn from this latter version, although systematically they will be confronted with the more detailed version – with which they do coincide.

Last but not least, analyses presented below were computed using the R (R Development Core Team 2010) and LEM (Vermunt 1997) softwares.

We have now thoroughly presented all the methodological design that we used to construct our analysis. Since this methodological framework is quite complex, we discussed in detail the quality and validity of our data and indicators. While it is clear that our final data is not perfect and displays some weaknesses in many respects, it still has the advantage of providing serious grounds for the assessment of social mobility trends in Switzerland. Our endeavour has particularly been concerned with rendering the different indicators we use as comparable as possible between surveys.

In the end, the construction of a unique dataset clearly ensures to return robust estimations. The log-linear modelling technique will prove particularly efficient in assessing the extent to which the association between intergenerational social mobility, educational inequality and return to education changed, net of structural changes in the social structure. From this standpoint, we are now ready to start our substantial analysis.

Part II:

Empirical analysis

5 . From origin to destination: analysing trends in social mobility in Switzerland[33]

5.1 . Introduction

Previous research on social mobility in Switzerland concludes that Switzerland is characterised by a strong degree of rigidity. In particular, Joye, Bergman and Lambert underline that the "intergenerational inheritance of advantage remains powerfully intact in Switzerland" (Joye et al. 2003:287). However, these conclusions display some limitations, notably since they were drawn only on men and on a relatively limited time scale. In this context, our goal in this first chapter is to reassess to which extent these conclusions still hold when a robust research process is undertaken, such as is the case in the present inquiry. We are particularly concerned with determining how social mobility trends evolved across birth-cohorts, in absolute and in relative terms. In accordance with our research hypotheses, we expect that:

- social mobility increased in Switzerland in the twentieth century (H1a),
- social mobility fluctuated according to economic fluctuations (H1b).
- men and women's social mobility opportunities have converged (H7) and,
- Swiss-citizens and foreign residents display different social mobility opportunities (H8).

We test this by exploring the degree to which social origin influences the social position achieved in Switzerland. In particular, by focusing on analysing whether the influence of social origin on life chances has changed over time in Switzerland or if it has remained constant, our analysis shall provide an interesting contribution to the comparative study of intergenerational social mobility. In light of particular institutional settings that exist in Switzerland, we wonder whether Switzerland converges with the recent empirical studies that concluded to non-persistent inequality, or whether it remains a special case.

Our analysis will consist of the description of changes in the composition of the Swiss class structure, and in the inspection of absolute and relative social mobility.

33 An earlier version of this chapter was published in the Swiss Journal of Sociology in 2012 under the title: *Temporal Trends in Intergenerational Social Mobility in Switzerland: A Cohort Study of Men and Women Born between 1912 and 1974*

5.2 . How has the Swiss class structure evolved over time according to gender?

To understand to which extent changes in the economic context transformed the structure of opportunities in Switzerland, we begin our analysis with a depiction of changes in the class structure across birth-cohorts, first by gender and then by social origin.

First of all, from Figure 5.1 we observe that the Swiss social structure displays changes that are characteristic of twentieth-century Western countries: mainly a decline in the small employers and the self-employed, skilled manual and semi-/unskilled occupations, and a rise in the higher salariat, lower salariat, and intermediate employee occupations. The higher salariat is certainly the class that exhibited the highest increase (more than 10%) as well as major changes in regard to gender differences. The gender gap indeed weakened over cohorts, with the stagnation of the number of men in this class from the 1941–45 to the 1961–65 birth-cohorts, and a shift from less than 5% to more than 10% across birth-cohorts among women. This demonstrates that most of the global increase in the higher salariat class can be explained by women's higher opportunities in this class. Yet this class is still the most sex-segregated of all, with a difference of more than 10% between men and women within each cohort. Therefore, the highest social class still remains profoundly male-dominated. Furthermore, the percentage of men in the higher salariat increases 3% among those born after 1965 while it only increases 1.6% among women. So it remains to be seen whether the weakening gender difference trend will continue, or whether this difference is an age effect. One further noticeable fact within the higher salariat class pertains to the significant difference between the pre-1936 birth-cohort and that of 1936–40 for men (with an increase from 12% to 24%). Although it is possible to suspect that this particularly marked increase accounts for measurement effect, as the reliability of the oldest cohort is slightly lower than others,[34] it is nevertheless also possible that this trend accounts for higher opportunities in this class for the 1936–40 birth-cohort. The latter indeed entered the labour market at the beginning of the *long boom* period following WWII. Furthermore, this change was not as sudden as it appears on the graph. When looking more deeply into the data, one will find that 6% of men born between 1912 and 1920 held a higher salariat position, around 10% for those born in the 1920s, and 18% for those born between 1931 and 1935. In contrast to the higher salariat, the sex-segregation within the lower salariat is at its lowest level, since rates for both men and women are similar. It should nevertheless be pointed out that while men were on average more numerous in this class than women until the 1940–45 birth-cohort,

34 As we mentioned in Chapter **4,** the oldest birth-cohort was indeed constructed mainly from the two oldest surveys which exhibit several measurement issues, such as approximations in the recoding from ISCO-68 to ISCO-88 and the computation of the ESeC class schema in its simple version for reasons of lack of information (except for respondents in the 1975 survey).

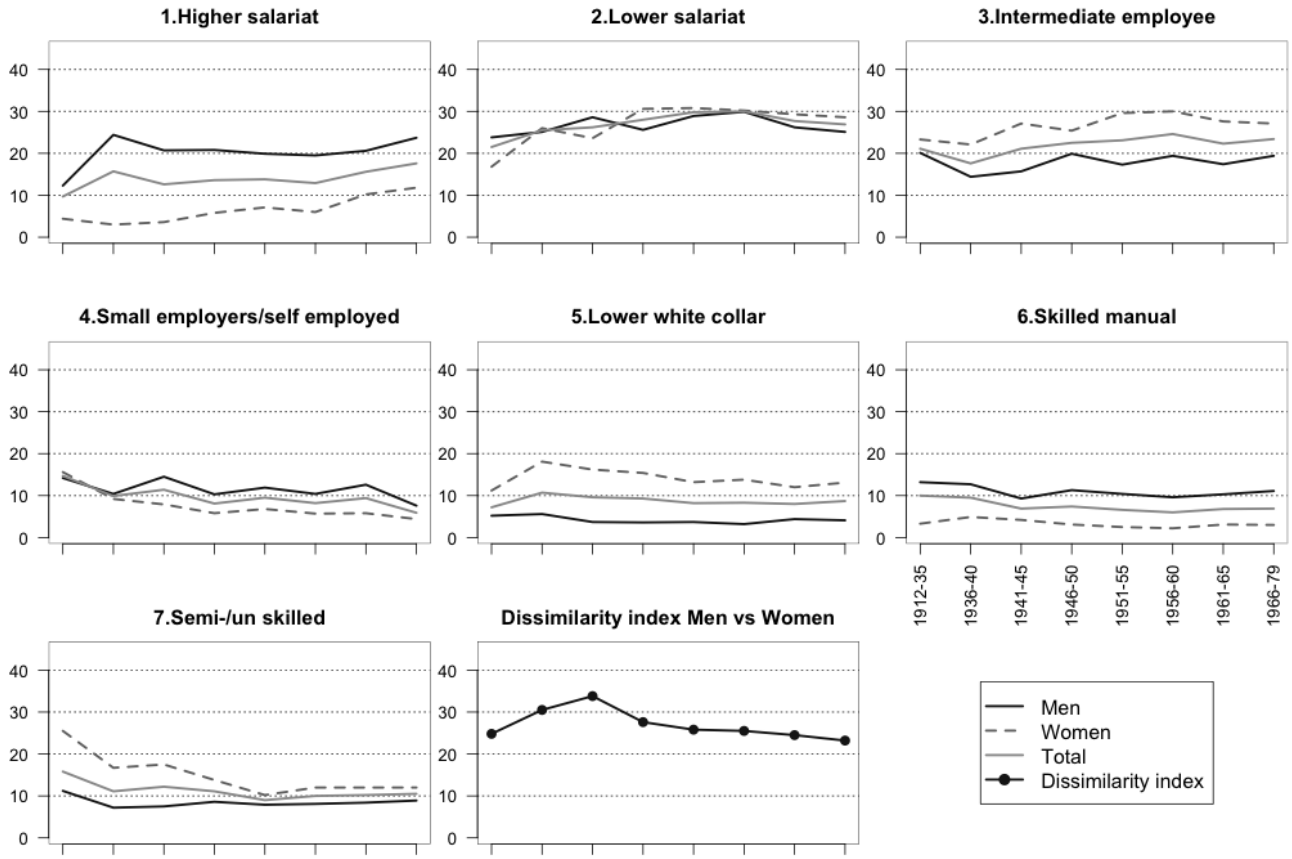

Figure 5.1: Marginal distributions of class destination by gender over birth-cohorts in percentages

this trend reversed by the 1946–50 birth-cohort, with the noticeable exception of the 1955–60 birth-cohort, which exhibits comparable percentages. The female-dominated intermediate employee class increased moderately across cohorts (2%), whereas the small employers and self-employed class decreased almost 10%. This important change in the small employers and self-employed class has been more marked for women than for men: they were respectively 15% and 14% in this class in the oldest cohort and only 8% of men and 4% of women were in this class in the post-1965 birth-cohort. Changes also occurred in the lower white collar and skilled manual classes, which are female- and male-dominated, respectively. In the former, the percentage of women steadily decreased (except for the oldest birth-cohort) and men's number remained relatively constant at a very low level (around 4%), whereas in the latter, the percentage of men declined moderately and the percentage of women stayed at the same level, around 3%. Women in the semi-/unskilled class likely exhibit the most significant change with a collapse from 26% to 12% across birth-cohorts. As a consequence, the gender gap clearly declined in the semi-/unskilled class, demonstrating that women were no longer more likely than men to have a job in the semi-/unskilled class.

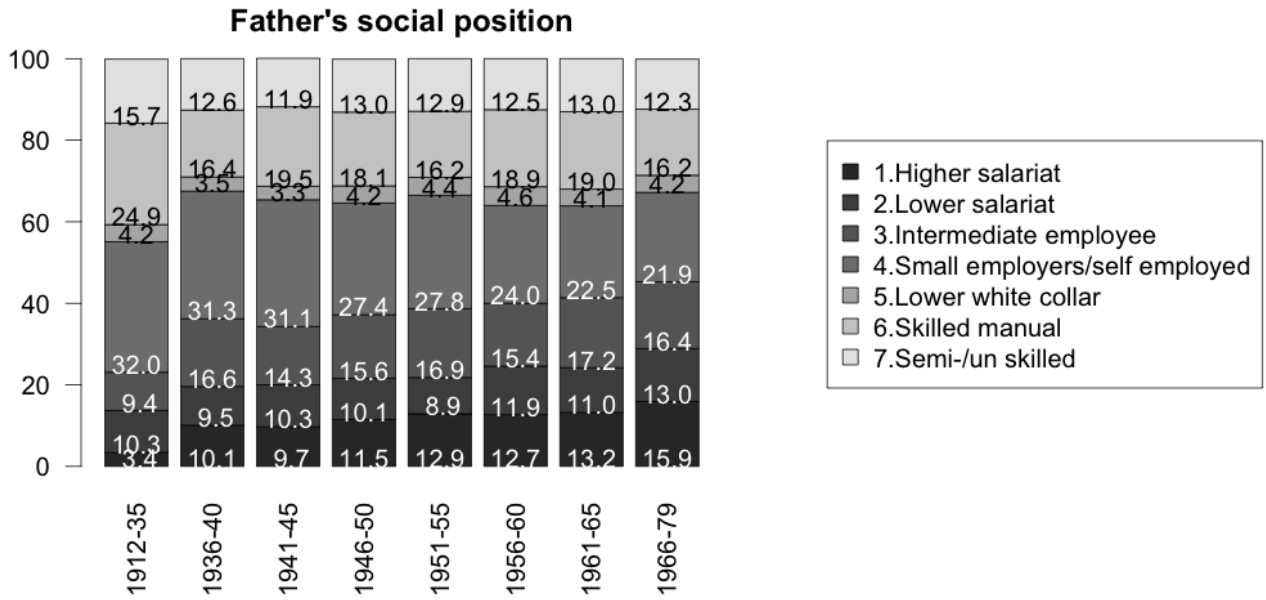

Figure 5.2: Marginal distributions of father's social position over birth-cohorts in percentages

When we look more into detail in the distribution of social positions according to citizenship (see Figures C.1 and C.2 in Appendix C), we observe the specific structure of opportunity among foreign residents in Switzerland, as compared to Swiss citizens. Notably, we see that overall foreigners are less likely to attain higher salariat positions than Swiss citizens. However, this trend reversed among those born after the 1960s, for both men and women. In fact, in the youngest cohort, foreigners surpass Swiss citizens in this category of about 5% for women and 10% for men. This suggests that the profile of immigration changed over recent years and that the demand for highly qualified labour force has increased over recent years in Switzerland. Foreigners are overall less likely to access the lower salariat and the intermediate employee class positions than Swiss citizens, although this trend in the latter class seems less pronounced within oldest birth-cohorts. Foreigners are also less likely to be found in small employers and self-employed positions, however we observe fewer gender differences in this class than among the Swiss citizens. It is within the lower white collar class that we observe the biggest similarity between the Swiss and the foreign population. Foreigners are significantly more numerous in the skilled manual position than Swiss citizens. This trend is particularly pronounced among oldest birth-cohorts, while their share decreases significantly within the youngest cohorts. Finally, an important share of the foreign population concentrates in semi-/unskilled occupations, with women representing more than 25% of this category. Interestingly, while we observe in the Swiss citizen population that the share of people in these occupations decreased, we do not observe this trend among foreigners. Thus,

foreigners congregate at the extremes of the Swiss social stratification, since they are more numerous in the lowest social classes than the Swiss population, and also in top occupations, although this phenomenon seems to be extremely recent.

We now shift our attention to changes in the class structure by social origin. For reasons of simplicity, social origin was recoded into three main classes: salariat origin (higher salariat and lower salariat); intermediate origin (intermediate employees, small employers and self-employed); and working-class origin (lower white collar, skilled manual and semi-/unskilled). But before depicting changes in the class structure according to social background, we can observe how the composition of the father's social position changed over birth-cohorts (see Figure 5.2, and also Figure C.3 and Figure C.4 in Appendix C for the difference between Swiss citizens and foreign residents). The main trend is consistent with changes depicted earlier: the small employers and self-employed category decreased 10%, while the higher and lower salariat as well as intermediate employees increased quite significantly. As for the lower white collar, skilled manual and semi-/unskilled classes, they remained relatively stables. As compared to the Swiss citizen population, foreign residents depict two major trends in the composition of their social background, which most likely reflect different immigration waves: of those born between the early 1940s and mid-1950s, about one-third were to come from a small employers/self-employed class; these are certainly people whose father was a farmer. In the subsequent cohorts, the social background composition of foreigners changed in favour of skilled manual and semi/-unskilled classes. Knowing these overall evolutions in the composition of social backgrounds, we can now analyse whether the attainment of any given social class is differently conditioned according to the father's class position.

The first look at outcomes (see Figure 5.3 and Figures C.5 and C.6 in Appendix C for differences between Swiss citizens and foreign residents) suggests that social origin is an important determinant of social position and social reproduction. For instance, the social origin of the higher salariat and the lower salariat is predominantly salariat, while that of the skilled manual and semi/-unskilled is predominantly intermediate and working-class origins. Within the higher salariat class, the share of those from salariat origin has remained constant among Swiss citizens (about 25%) while it has increased continuously over time for foreign residents, and surpassed the level of their Swiss citizen counterparts, particularly since it increased significantly in the youngest cohort to the point of reaching the 50% threshold. As a consequence, the recent new waves of immigration in Switzerland could actually reinforce social inequality in some ways. It is nevertheless important to notice that, regardless of citizenship, the proportion of those from an intermediate and working-class origin who

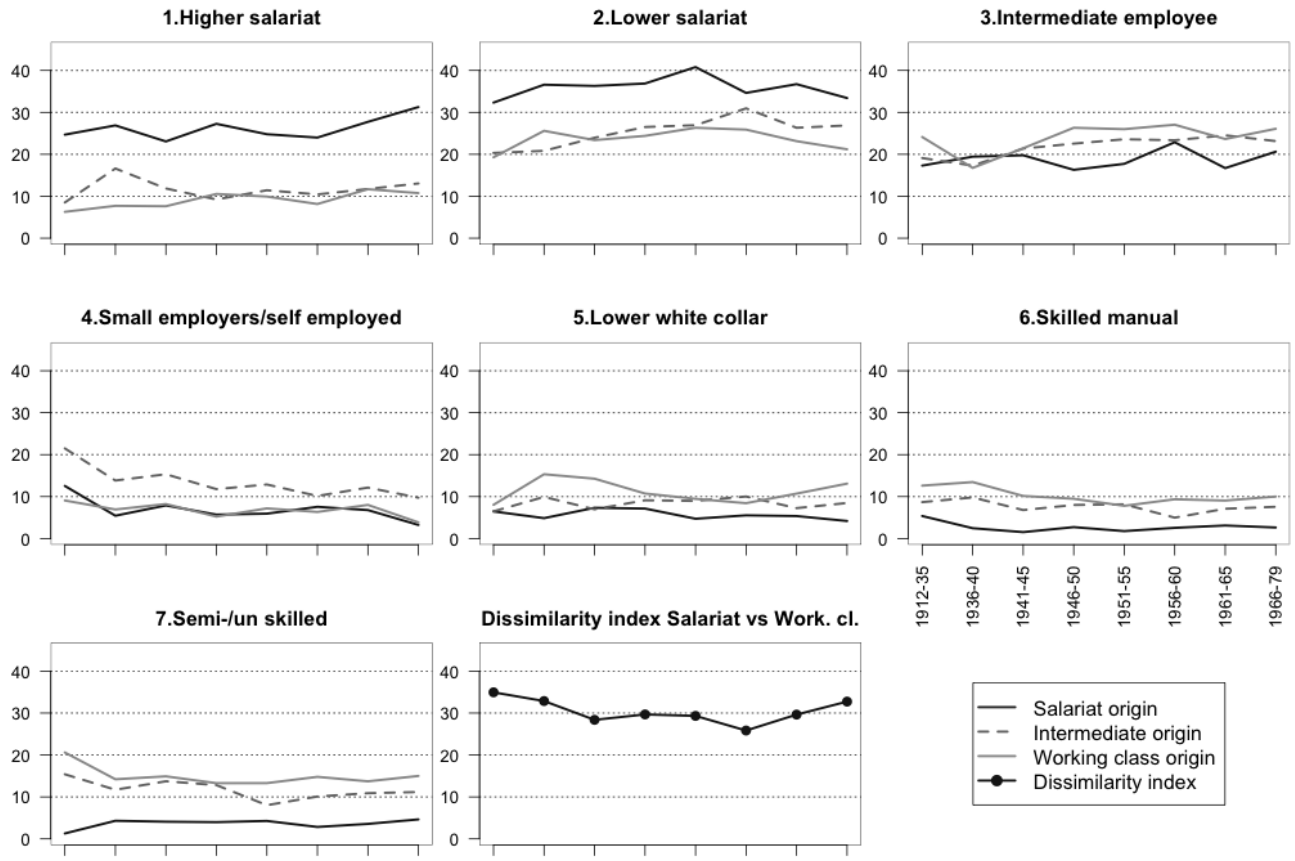

Figure 5.3: Marginal distributions of class destination by social origin over birth-cohorts in percentages

attain the higher and lower salariat has also increased across cohorts. Yet the gap between the salariat origin and the rest of the population remains very high. One exception is nonetheless displayed in the 1936–40 birth-cohort (particularly for Swiss citizens), in which people of intermediate origin have had more opportunities in the higher salariat than people of other origins. As already observed for men from the same birth-cohort, this observation may be a direct effect of the post-WWII economic boom. Among other social classes, the share of the salariat origin is most of the time less important than the share of the intermediate and working-class origins, suggesting that there is indeed a marked barrier between salariat social classes and others. This trend looks sharper in the foreign population group: those in skilled manual positions are themselves more likely to come from a working-class and intermediate class background than those in the Swiss population. We further observe that foreigners located in semi-/unskilled positions are highly likely to come from a intermediate and working-class background. And since the importance of the former decreased while that of the latter increased over birth-cohorts, social class inequalities are more marked within the foreign population than within the Swiss population.

To summarise the broad changes that occurred in the Swiss social structure over cohorts, we computed indexes of dissimilarity between men and women and between salariat and working-class origins. This measure reveals how many women (or working-class origin) would have to change their social position in order for women and men (or working-class and salariat origin) to have the same social position distribution. From the oldest birth-cohorts to the 1941–45 birth-cohort, differences in the class distribution between men and women were reinforced 10%, mainly because men of these birth-cohorts enjoyed better opportunities in the higher salariat. In contrast, the trend reversed in the subsequent cohorts. Constantly decreasing across the cohorts, the index of dissimilarity shows that women's situation globally improved over time. Despite this converging trend, there still remains more than 20% dissimilarity between men's and women's social position distribution, which they would have to bridge before reaching gender equality in social positions. It is worth noting that social class gender segregation is slightly higher within the foreign population. It is particularly notable that while the dissimilarity had decreased significantly between those born before and after 1940, and again among those born after 1955, it has increased again in the youngest cohort. This trend counters the Swiss citizen population, in which the dissimilarity index has kept on decreasing continuously following the cohorts born after 1940.

The picture grows even less encouraging when it comes to differences between the salariat and the working-class origin. While there seems to have been a diminution of differences between the 1936–40 and 1941–45 birth-cohorts, no real change happened in the following birth-cohorts, with an index of dissimilarity stabilising at around 28%.

Two points, however, must be underlined:

- The dissimilarity index is less than 26% in the 1956-1960 birth-cohort, suggesting that this cohort witnesses the lowest level of social background inequality,
- The index increases to 33% in the 1966-1979 birth-cohort, reaching a similar level to the 1936-1940 birth-cohort. Thus, inequalities based on social background seem to have reinforced in the youngest birth-cohort.

While the former observation holds only for Swiss citizens, as among foreign residents, it is in the 1941-1945 birth-cohorts that social background inequality have been the lowest; the latter observation holds particularly true for non-Swiss citizens. Moreover, the dissimilarity index confirms the idea that social background inequality is more polarised in the group of foreigners than in the Swiss population. Yet, in the two cases, these inequalities remain substantial. From this standpoint, we can wonder to which extent these changes observed in the class structure have

influenced social mobility chances.

5.3 . Did social mobility increase over time in Switzerland?

As mentioned earlier in this thesis, two measures of social mobility exist: first, a measure of absolute social mobility, and second, a measure of relative social mobility. Both measures enable researchers to provide a complementary vision regarding trends in social mobility. Therefore, the following section is dedicated to the analysis of both absolute and relative social mobility in Switzerland.

5.3.1 . Absolute trends in social mobility

Figure 5.4 shows how mobility rates have changed across birth-cohorts for men and women aged 30–64 (in Appendix C this analysis is replicated in Figures C.7 and C.8 separately for Swiss and non-Swiss citizens). These rates were calculated following Erikson and Goldthorpe's (1992b:195) framework to ensure as much comparability as possible with international research. The total mobility rate is the percentage of cases that do not fall on the main diagonal of the mobility table. This rate is the proportion of people located in a class different than that of their father. Of course, this measure is sensitive to the number of classes identified, but with a seven-class schema like CASMIN, this rate usually ranges between 60 and 70 percent of individuals (Breen 2004b:17) in industrialised countries. This rate can be decomposed into further rates.[35] The vertical mobility rate is a measure of long-range mobility, whereas non-vertical mobility is a measure of short-range mobility. Upward and downward rates are themselves a deconstruction of vertical mobility; they respectively designate mobility movements up and down the main diagonal, corresponding to ascending and descending mobility.

First of all, Figure 5.4 shows the noteworthy trend that most rates prove to be quite stable over cohorts, suggesting that the level of social mobility in Switzerland remained quite constant over time, at least in absolute terms. Gender differences in total mobility are small, although women demonstrate a slightly higher level of mobility than men, a difference that can primarily be attributed to gender differentials in the social structure between fathers and daughters. Further gender contrasts exist between vertical and non-vertical rates. The latter exhibit a higher gender gap than the former, indicating that the higher level of total mobility rate observed for women results

35 Following Erikson and Goldthorpe's framework (Erikson and Goldthorpe 1992b:45; see also Breen 2004b:17–18), these rates were computed using a collapsed version of the ESeC class schema. This grouping into three-levels is as follows. For comparison with the authors' original frameworks that use the CASMIN class schema, we show its equivalent between brackets: 1. Classes 1 and 2 (I + II); 2. Classes 3, 4, 5 and 6 (III, IVab, IVc and V+VI); 3. Class 7 (VIIa and VIIb). Vertical mobility designates cases that do not fall on the main diagonal of the collapsed class schema version, whereas non-vertical mobility accounts for the difference between total mobility and vertical mobility.

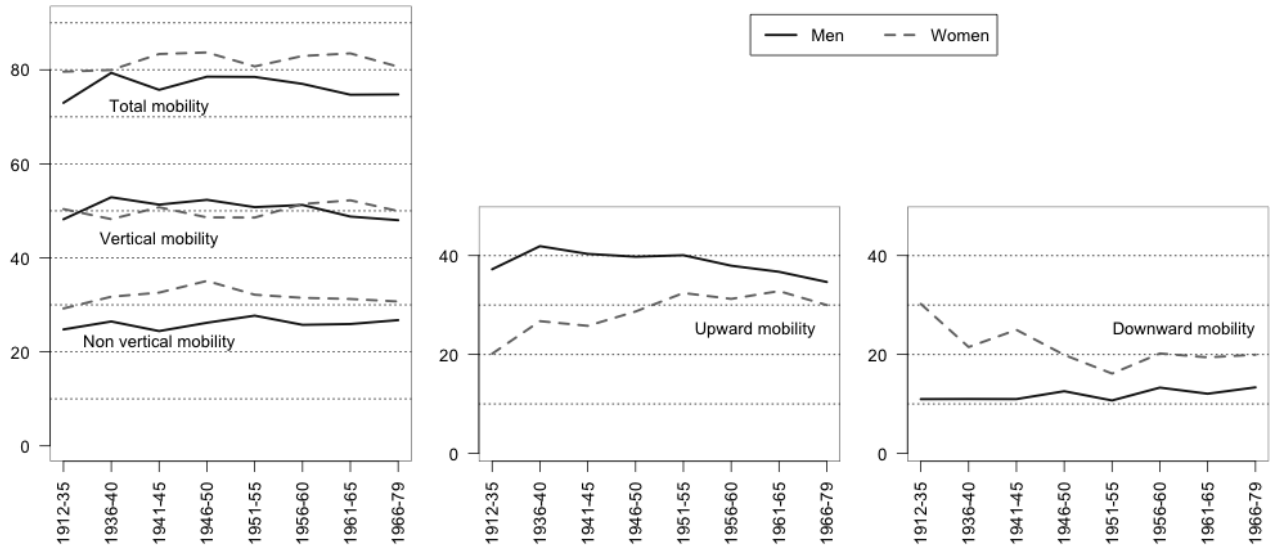

Figure 5.4: Absolute social mobility for men and women aged 30–64 by birth-cohort in percentages

only in higher short-range mobility. The inspection of Figures C.7 and C.8 indicates that short-range mobility (i.e. non-vertical mobility) has constantly increased over cohorts among Swiss men. Regarding foreigners, total mobility seems to have decreased for men born after the mid-1950s. This decrease stems essentially from short-range mobility, as long-range mobility keeps on levelling above the 50% threshold within this population. In other words, while more than 50% of foreign men seem to keep on enjoying long-range mobility, in the youngest cohort strict social immobility averages almost 30%. This observation suggests once more that the profile of the foreign population has changed in recent years. However, it could also be the case that recent surveys only reach specific segments of the foreign population, particularly the most privileged, and thus bias these trends.

The rates of upward and downward mobility show that the highest variations occur among women. Their rate of upward mobility and downward mobility respectively increases and decreases more than 10% over cohorts. Specifically, variations in upward rates stabilised during the 1951–55 birth-cohort, whereas downward rates increased slightly among subsequent cohorts. This suggests that in comparison to the 1951–1955 birth-cohort, women of the following cohorts have suffered slightly higher downward social mobility. With respect to men, younger cohorts have had fewer social opportunities than those of older cohorts, as upward mobility decreased about 5% and downward mobility increased slightly for younger men. However, men overall depict a significant amount of upward mobility. This observation holds for both Swiss and non-Swiss men, although this has not always been the case for the latter, who remain not as upwardly mobile as the former in the

Table 5.1: Comparison between Switzerland and Europe of average absolute mobility for men and women, controlling for classification effects with the Swiss Household Panel 1999 data.

	Men						Women					
	Switzerland					Europe	Switzerland					Europe
		ESEC 12DS		ESEC shp99	EGP shp99	EGP		ESEC 12DS		ESEC shp99	EGP shp99	EGP
	all	CH	Fgn	all	all		all	CH	Fgn	all	all	
Total mobility	76.4	76.4	80.9	76.2	81.1	67.0	81.8	81.8	79.1	79.3	87.6	74.3
Vertical mobility	50.5	50.3	47.8	52.4	53.7	48.4	50.0	49.4	54.2	46.5	54.3	50.5
Non-vertical mobility	26.0	26.1	33.2	23.7	27.4	18.5	31.8	32.4	25.0	32.8	33.4	23.8
Upward mobility	38.6	39.8	29.2	40.1	41.5	31.3	28.5	29.1	23.9	24.4	31.8	31.3
Downward mobility	11.8	10.5	18.6	12.4	12.2	17.1	21.5	20.3	30.3	22.2	22.5	19.2

Note: 12DS=all 12 datasets; Shp99=Swiss Household Panel 1999 data; all=total population of Switzerland; CH=Swiss citizens population; Fgn=Foreign resident population in Switzerland; Rates for Europe were computed from tables 3.6 and 3.17 shown in Breen and Luijkx (2004b:48, 66) and correspond to average rates for the period between 1970s and 1990s. Countries covered are Britain, France, Germany (West-), Hungary, Ireland, Israel, Italy, the Netherlands, Norway, Poland and Sweden.

youngest cohorts. In regard to foreign women, while they used to be much less upwardly mobile than Swiss women, they almost catch up in the youngest cohorts. But in spite of the increasing convergence of upward mobility opportunities between Swiss and non-Swiss citizens, the latter still remain more downwardly mobility than the former. In particular, foreign men born between 1936 and 1950 seem to have suffered significantly from social downgrading. Nevertheless, irrespective of citizenship, it is noticeable that men's and women's opportunities in terms of upward and downward social mobility tend to converge from the 1951–55 birth-cohort onward, although men are still more upwardly mobile than women and women more downwardly mobile than men.

One striking fact regarding absolute rates of social mobility presented in Figure 5.4 is that total mobility rates are on average higher than those traditionally found in social mobility research for both men and women. Indeed, they range here from around 76% to 82%, whereas they usually lie between 60% and 70% within the CASMIN schema, as mentioned above. In order to assess to which extent this difference is significant, rather than merely a class schema measurement effect, we compared the mean for each rate of the present outcomes with that of the data of the Swiss Household Panel 1999 (the biggest sample size dataset) that we computed with the ESeC schema and with the CASMIN schema. Furthermore, we calculated the mean rates for Europe in order to outline a comparative dimension of Switzerland's absolute social mobility.

The outcomes displayed in Table 5.1 indeed reveal some classification effects. Rates computed with the ESeC class schema actually tend to *underestimate* the degree of total mobility for both men and

women: about 76% and 80% with the ESeC schema respectively for men and women versus 81% and 88% with the CASMIN schema (EGP) on SHP99 data. For men, this difference mostly stems from non-vertical mobility, whereas for women this is accounted for by upward mobility within vertical mobility, at least for Swiss women. In fact, Swiss women are not on average less upwardly mobile than European women. Additionally, they do not seem much more downwardly mobile than their European counterparts when we isolate foreign women. Finally, the considerable difference in total mobility rates between Swiss women and European women stems from the enormous amount of non-vertical mobility in the former group: women in Switzerland are about 10% more likely to exhibit short-range mobility than European women. The same can be said in regard to men. In addition to that, men experience more vertical mobility in Switzerland than in the rest of Europe: interestingly, this trend transposes in more upward mobility (about 10% more) and less downward mobility (about 5% less) among men living in Switzerland than other European countries. Thus, in absolute terms, men in Switzerland have many more chances to climb the social ladder than in the rest of Europe – at least on average. Ultimately, Switzerland seems to depict quite idiosyncratic absolute mobility rates, although it must be underlined that these observations are based on means that are nowhere near adequate enough to describe real trends. Furthermore, we could wonder to which extent the comparative tools we use satisfactorily capture the reality and specificity of the Swiss social structure. In fact, both ESeC and EGP class schema were constructed using standard algorithms that may not be best to describe Swiss society. Therefore, more research is needed on the construction and the operationalisation of comparative tools measuring class schema in the Swiss context. Yet, in spite of these measurement questions, outcomes depicted point towards interesting insights.

What is furthermore interesting is to look more thoroughly at differences in average absolute mobility between Swiss and non-Swiss citizens. Foreign men display higher non-vertical mobility than Swiss men and Swiss men display higher vertical mobility than foreign men. These higher vertical mobility chances for Swiss men translate into higher upward mobility and lower downward mobility chances in comparison to foreign men. In contrast, while foreign women also display even higher vertical mobility than both Swiss men and women, they are significantly likely to exhibit downward mobility (on average 30%). This observation shows that the experience of migration for women tends to come at the price of lost social position.

Finally, in Figure 5.5, we computed ratios between vertical and non-vertical mobility and between upward and downward mobility over birth-cohorts to assess the extent of change or stability in the distribution of absolute mobility. While we observe that overall, there is always more long-range

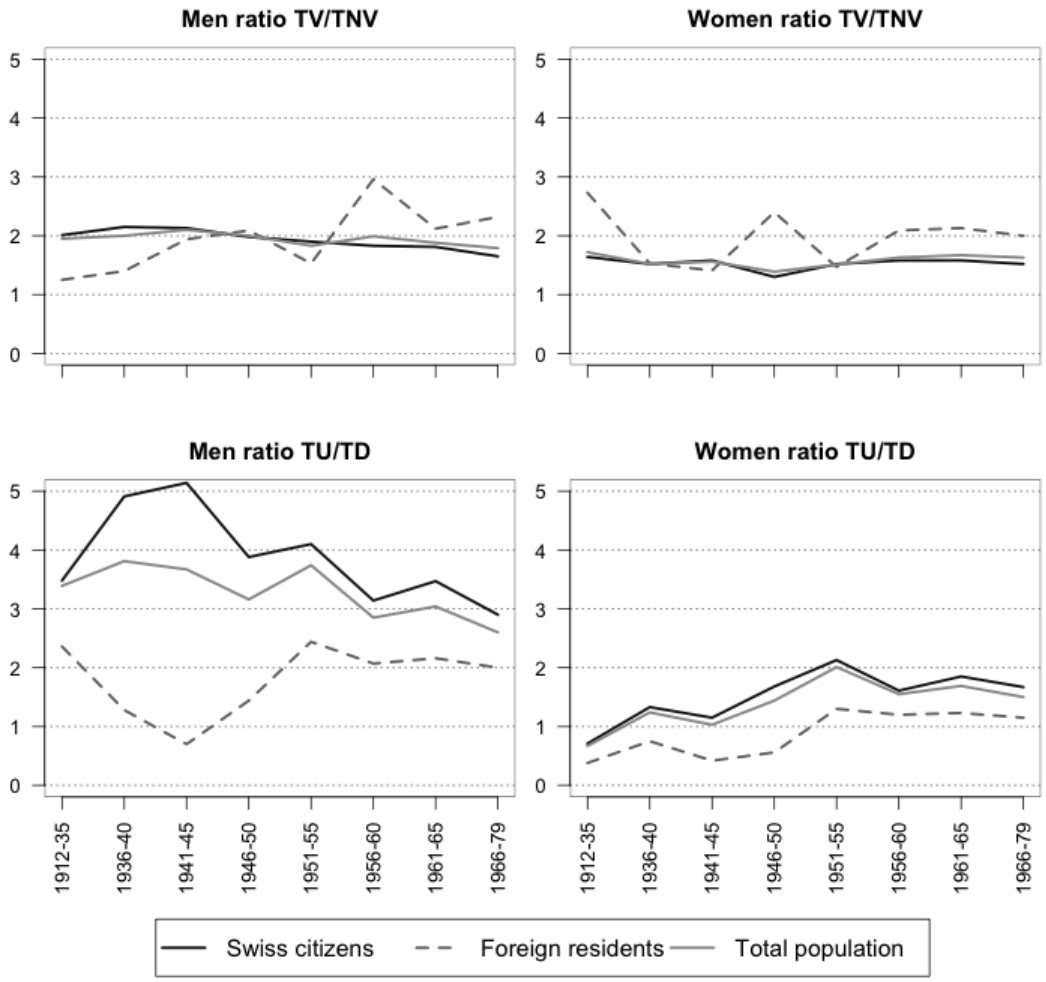

Figure 5.5: Ratio between (1) Vertical mobility (TV) and Non-Vertical mobility (TNV) and (2) Upward mobility (TU) and Downward mobility (TD) for men and women according to citizenship over birth-cohorts.

mobility than short-range mobility as well as more upward than downward mobility in Switzerland – with the exception of foreign women on this latter point – Swiss men's upward mobility advantage is decreasing over time, whereas foreign women's upward mobility disadvantage has almost disappeared in youngest cohorts. Yet in spite of these trends, the ratio still privileges Swiss men, whereas the ratio for foreign women still remains extremely close to 1, which implies they have only a few more upward mobility chances than downward mobility ones. In other words, in simplistic terms we could say that the winners of the social mobility "lottery" are Swiss men, whereas the losers are foreign women.

But these observations only hold in absolute terms. We can now wonder how much these variations

result from intrinsic change rather than pure structural change. The analysis of relative rates of mobility will help us to disentangle the structural effects from the net effects.

5.3.2 . Relative trends in social mobility

In contrast to absolute social mobility, relative social mobility shows a given society's degree of openness. Relative social mobility measures one person's chances of access to a given social position in comparison to people from different social positions. In other words, "it tells us something about the advantages and disadvantages associated with being born into one class rather than another" (Breen 2004b:20). Concretely, through the use of the odds ratio, a statistic that has the property of being independent of the marginal distribution, the measure of relative social mobility has the ambition of capturing intrinsic changes in social mobility, supposedly net of structural changes.

We measured relative social mobility by applying the classical log-linear models approach to the men's and women's mobility table. More specifically, the three basic log-linear models that were presented in the methodological chapter were fitted to the data in order to find whether or not we could observe a trend towards increasing social fluidity in Switzerland. Additionally, when the Unidiff model did not prove significant enough as compared to the CnSF model, more parsimonious models were run to check on which ground we had accepted (or rejected) the CnSF model. To assess the robustness of trends depicted, models were furthermore fitted on two different birth-cohorts versions: one with detailed birth-cohorts in eight categories and one with synthesised birth-cohorts in five categories. However, trends will be mainly interpreted from the latter birth-cohort version, as it proves to provide the most robust estimates because it encompasses greater sample size for each cohort. The results of models fitted are displayed in Tables 5.2 and 5.3 respectively for men and women.

For men, with the detailed birth-cohort version, the Unidiff model does not provide significant improvement and thus must be rejected. However, more parsimonious models were tested. The Unidiff model with a linear trend does not pass the significance threshold with a gain in the G2 of only 1.4 with a loss of one degree of freedom (*df*). Unidiff models run with a constraint on Unidiff parameters prove yet to be more successful. A first model (M4) constraining Unidiff parameters of birth-cohorts 1936-1940 to 1966-1974 to be equal provides a significant improvement over the CnSF model. Similarly, a second model (M5), imposing Unidiff parameters to be equal between 1936-1940 and 1951-1960 birth-cohorts, as compared to the previous model, also does. However, as can be seen from Unidiff parameters plotted in Figure 5.6, these two constrained models indicate

Table 5.2: Results of fitting the log-linear models to men's mobility tables according to their father's social position, divided into eight cohorts and five cohorts

Models F / D	G2	Df	P	DI	%G2	BIC
* Men, 8 cohorts mobility table N=6984						
M0. Cond. Ind.	1350.1	288	0.000	16.9	-	-1199.1
M1. CnSF	304.4	252	0.013	7.11	77.45	-1926.1
M2. Unidiff	294.8	245	0.016	6.96	78.16	-1873.8
Parameters M2	*c1 = 1; c2 = 0.61; c3 = 0.74; c4 = 0.71; c5 = 0.64; c6 = 0.66; c7 = 0.70; c8 = 0.72*					
M3. Unidiff Linear trend	303.0	251	0.014	7.12	77.56	-1918.7
Parameters M3	*-0.0029*					
M4. Unidiff constrained	**297.1**	**251**	**0.024**	**7.01**	**77.99**	**-1924.6**
Parameters M4	***c1 = 1; c2, c3, c4, c5, c6, c7 & c8 = 0.69***					
M5. Unidiff constrained	295.2	250	0.026	6.95	78.14	-1917.6
Parameters M5	*c1 = 1; c2, c5 & c6 = 0.65; c3, c4, c7 & c8 =0.71*					
Model comparison						
M0 - M1	1045.7	36	0.000			
M1 - M2	9.6	7	0.212			
M1 - M3	1.4	1	0.237			
M1 - M4	**7.3**	**1**	**0.007**			
M1 - M5	9.2	2	0.010			
M4 - M5	1.9	1	0.168			
* Men, 5 cohorts mobility table N=6984						
M0. Cond. Ind.	1235.5	180	0.000	16.33	-	-357.7
M1. CnSF	**179.4**	**144**	**0.024**	**5.46**	**85.48**	**-1095.2**
M2. Unidiff	172.6	140	0.032	5.29	86.03	-1066.6
Parameters M2	*c1 = 1; c2 = 0.96; c3 = 0.77; c4 = 0.86; c5 = 0.89*					
M3. Unidiff Linear trend	178.0	143	0.025	5.47	85.59	-1087.8
Parameters M3	*-0.0027*					
M4. Unidiff constrained	177.3	143	0.027	5.47	85.65	-1088.7
Parameters M4	*c1 = 1; c2, c3, c4 & c5 = 0.8658*					
M5. Unidiff constrained	174.0	142	0.035	5.32	85.92	-1082.9
Parameters M5	*c1 = 1; c2, c4 & c5 = 0.8991; c3 = 0.7716*					
M6. Unidiff constrained	172.8	141	0.036	5.29	86.02	-1075.3
Parameters M6	*c1 = 1; c2 = 0.9587; c3 = 0.7697; c4 & c5 = 0.8718*					
Model comparison						
M0 - M1	**1056.1**	**36**	**0.000**			
M1 - M2	6.8	4	0.147			
M1 - M3	1.4	1	0.237			
M1 - M4	2.1	1	0.147			
M1 - M5	5.4	2	0.067			
M1 - M6	6.6	3	0.086			

Notes: Cond Ind=conditional independence model; CnSF=constant social fluidity model (the model which assumes the OD association to be constant); Unidiff=uniform difference model (the model which assumes the OD association changed). G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index, %G2=proportion of reduction of deviance, BIC=Bayesian information criterion. On the parameters lines, c1 to c5/c8 refer to corresponding birth-cohorts. *To be significant, each new effect added into a model is compared to previous nested model and should exhibit a p-value below 0.05 (see models comparison panels)*

Table 5.3: Results of fitting the log-linear models to women mobility tables according to their father's social position, divided into eight cohorts and five cohorts

Models F / D	G2	Df	P	DI	%G2	BIC
* Women, 8 cohorts mobility table N=6381						
M0. Cond. Ind.	904.6	288	0.000	13.42	-	-1618.6
M1. CnSF	**329.9**	**252**	**0.001**	**6.93**	**63.53**	**-1877.9**
M2. Unidiff	324.5	245	0.000	6.9	64.13	-1822
Parameters M2	*c1 = 1; c2 = 1.08; c3 = 0.95; c4 = 0.91; c5 = 0.90; c6 = 0.79; c7 = 0.74; c8 = 0.97*					
M3. Unidiff Linear trend	329.8	251	0.001	6.92	63.54	-1870
Parameters M3	*-0.0013*					
M4. Unidiff constrained	325.0	250	0.001	6.87	64.07	-1865.3
Parameters M4	*c1 & c2 = 1; c3, c4, c5 & c8 = 0.90; c6 & c7 = 0.73*					
M5. Unidiff constrained	324.9	249	0.001	6.87	64.08	-1856.6
Parameters M5	*c1 = 1; c2: 1.08; c3, c4, c5 & c8 = 0.94; c6 & c7 = 0.76*					
Model comparison						
M0 - M1	**574.7**	**36**	**0.000**			
M1 - M2	5.4	7	0.611			
M1 - M3	0.1	1	0.752			
M1 - M4	4.9	2	0.086			
M1 - M5	5	3	0.172			
* Women, 5 cohorts mobility table N=6381						
M0. Cond. Ind.	748.9	180	0.000	12.39	-	-828.1
M1. CnSF	170.6	144	0.065	5.14	77.22	-1091
M2. Unidiff	163.8	140	0.082	5.05	78.12	-1062.7
Parameters M2	*c1 = 1; c2 = 0.83; c3 = 0.79; c4 = 0.67; c5 = 0.87*					
M3. Unidiff Linear trend	170.0	143	0.061	5.1	77.3	-1082.8
Parameters M3	*-0.0024*					
M4. Unidiff constrained	168.3	143	0.073	5.1	77.53	-1084.6
Parameters M4	*c1 = 1; c2, c3, c4 & c5 = 0.78*					
M5. Unidiff constrained	**164.5**	**142**	**0.096**	**5.03**	**78.04**	**-1079.6**
Parameters M5	***c1 = 1; c2, c3 & c5 = 0.83; c4 = 0.67***					
M6. Unidiff constrained	163.9	141	0.091	5.06	78.11	-1071.4
Parameters M6	*c1 = 1; c2, c3 = 0.80; c4 = 0.67; c5 = 0.87*					
Model comparison						
M0 - M1	578.3	36	0.000			
M1 - M2	6.8	4	0.147			
M1 - M3	0.6	1	0.439			
M1 - M4	2.3	1	0.129			
M1 - M5	**6.1**	**2**	**0.047**			
M1 - M6	6.7	3	0.082			
M5 - M2	0.7	2	0.705			

Notes: Cond Ind=conditional independence model; CnSF=constant social fluidity model (the model which assumes the OD association to be constant); Unidiff=uniform difference model (the model which assumes the OD association changed). G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index, %G2=proportion of reduction of deviance, BIC=Bayesian information criterion. On the parameters lines, c1 to c5/c8 refer to corresponding birth-cohorts. *To be significant, each new effect added into a model is compared to previous nested model and should exhibit a p-value below 0.05 (see models comparison panels)*

some rather limited variations in social fluidity rather than a clear increasing trend over time. Overall, Unidiff parameters point to some unexpected variation between the oldest cohort and other cohorts. While parameters indicate that social fluidity remained relatively stable from the 1941–45 birth-cohort to the 1966–74 cohort, between the 1912–35 and the 1936–40 cohorts, the parameters display a very strong increase in social fluidity, with a fall from 1 to 0.61. Although this increase in social fluidity is consistent with the trend of increasing opportunities within the higher salariat from the pre-1936 birth-cohort to the 1936–40 one, this impressive difference may account for measurement effect to some extent. We have indeed already noted in the analysis of changes in the class structure that the measurement quality of the oldest birth-cohort should be slightly less reliable than others. More than 70% of it was indeed constructed from the two oldest datasets (AP75 and ISSP87) for which the recoding from ISCO-68 to ISCO-88 was approximated and the ESeC class schema was computed in its simple version for reasons of lack of information (except for respondents in the AP75 survey). The ISCO recodification should not be the main issue, as this effect has never been underlined in comparative research. The simple computation of ESeC probably accounts for this difference to some extent. But one must also bear in mind that the oldest birth-cohort is very heterogeneous and includes people born between 1912 and 1935, so this change may have been eventually substantial, but not as sudden as it looks. Unfortunately, the too-small sample size within the oldest cohort does not allow us to test this hypothesis any further with log-linear models. Thus, this first set of analysis suggests that we do not observe in Switzerland a general increasing social fluidity trend for men. Does a similar picture arise when the synthesised and more robust birth-cohort version is used?

The answer is yes. Not only does the Unidiff model not provide significantly more information than the CnSF model, neither do any of the four simpler models tested. Only the second Unidiff model with constrained parameters (M5) seems to come nearer the significance threshold of 5%. Yet with a p-value of 0.067, this model remains unacceptable and must be rejected. Thus, while there must have been variations in social fluidity in Switzerland for men, these variations do not seem to have been substantial but rather sparse and do not point in the direction of a general trend towards increasing social fluidity. In fact, as can be seen in plots in Figure 5.6, the 1950-1957 birth-cohort may have experienced slightly more social fluidity that other cohorts. However, among the subsequent birth-cohort, the Unidiff parameters clearly indicate that this trend reversed in the sense of decreasing social fluidity. In other words, these fluctuations provide an overall constant picture of social fluidity in Switzerland, at least for men. Can the same be said in regard to women?

Indeed, results for women paint a similar picture. Whether the detailed birth-cohort version or the

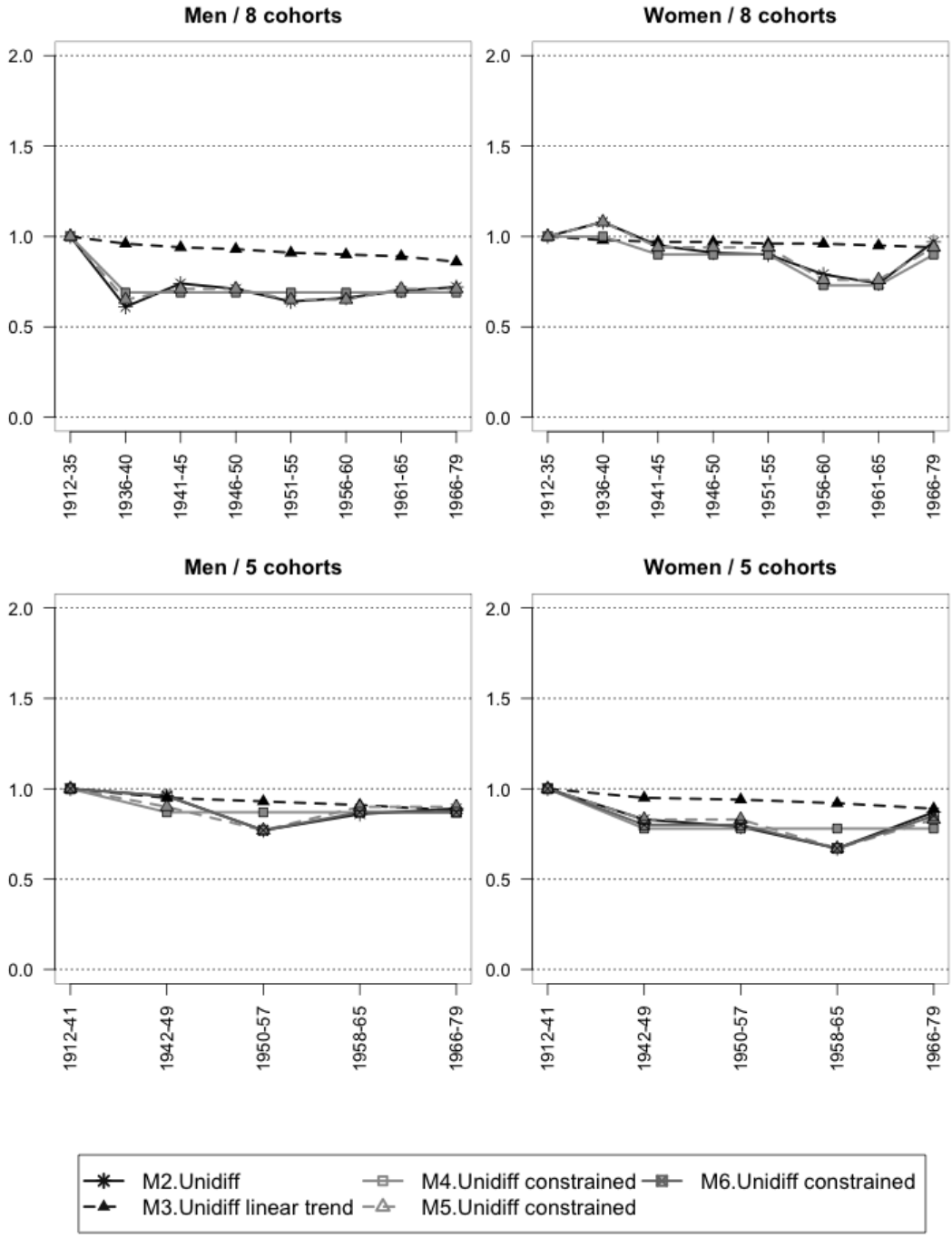

Figure 5.6: Plots of parameters of the different Unidiff models fitted on men and women mobility tables, divided into eight cohorts and five cohorts

synthesised birth-cohort version, the full Unidiff model must be rejected. Furthermore, no simpler model proves to fit the data significantly enough to discern any trend with the detailed birth-cohort version. Yet one simpler model (M5) fitted with the synthesised birth-cohort version provides a slight but significant improvement over the basic CnSF model. However, this model scarcely reaches the significance threshold of 5% with a p-value of 0.047. Furthermore, by constraining Unidiff parameters to be equal between 1942-1957 and 1966-1979 birth-cohorts, the model implies that variations have been rather limited as can be seen in plots displayed in Figure 5.6. It seems, however, that women born between 1958 and 1965 may have enjoyed higher levels of social fluidity than any other cohort.

In other words, among the cohorts considered, the strength of the association between social origin and social destination has remained rather constant; while some variations in social fluidity may have occurred, they do not seem to have been important enough to substantially modify the structure of opportunities of individuals' chance of successfully achieving a given social position relative to another, for both men and women. Furthermore, no general trend pointing in the direction of increasing social fluidity can be observed in any case, not even a non-significant one. Finally, it is important to stress that these conclusions still hold when we control for citizenship and age, being for men or women (see Figure C.9).

Ultimately, in order to show how much life chances are conditioned by social origin, we report in Table C.1 in appendix C the parameter details of best log-linear models fitted for both men and women. Parameters indicate, for instance, that the chances of accessing a social position in the higher salariat rather than one in the semi-/unskilled class are 26.4 times higher for men and 91.4 higher for women who have a father from the higher salariat rather than from the semi-/unskilled class. In other words, barriers in class position attainment are particularly strong in Switzerland.

5.4 . Discussion and conclusion

To sum it up, the present findings do not lend support to the liberal theory of industrialism, which predicts an increase in social mobility over birth-cohorts, as hypothesised (H1a). Although the Swiss social structure underwent an upward shift with a decrease of the proportion of people in the lowest social classes and an increase of those in higher rank positions, both measures of absolute and relative social mobility support the trend of no significant change, in line with the constant flux thesis. In fact, not only do the rates of absolute social mobility remain steady over time, but the log-linear model estimates also clearly favour the model of constant social fluidity. Therefore, in Switzerland, both upward directed changes in the social structure and the overall expansion of the

educational system did not result in a substantial increase in social mobility opportunities.

Additionally, only little evidence was found regarding the impact of economic variations on social mobility, lending little support to our hypothesis (cf. H1b). It is likely that, the most noticeable findings in this respect pertain to men's upward mobility advantage, which eroded in youngest cohorts. In addition to that, the period of the *long boom* indeed offered greater opportunities in the higher salariat class for men and for the intermediate class born between 1936 and 1945. Besides this, no further important contextual effect was observed in subsequent cohorts, particularly in relative terms. In fact, the parameters of the Unidiff model corroborate the idea of overall stability of inequality of opportunity over time for men.

Globally, the greatest changes occurred among women, corroborating our hypothesis of a gender convergence amongst youngest cohorts (H7). In spite of the fact that the Swiss social structure is still highly sex-segregated, women's situation has improved over time. Women from recent birth-cohorts indeed enjoyed greater upward social mobility and lower downward social mobility than women of older birth-cohorts, resulting in an increasing convergence with men's situation in terms of absolute social mobility chances. Yet in relative terms, changes we observe have not been substantial enough to reveal a decreasing trend in inequality of opportunity in Switzerland, in spite of some variations pointing in the direction of increasing social fluidity, especially for women born between 1958 and 1965. Of course, these observations apply only to working women. In this respect, there are good reasons to suspect some selection bias in the social composition of the oldest birth-cohorts of women, as for these women, being a housewife was the social norm. As a consequence, working women were more likely to be found in low-qualified occupations, while men held highest social positions. We should also emphasise that outcomes for women would certainly have been different if we could have distinguished between full-time and part-time employment. It is, in fact, probable that women in full-time employment would have enjoyed greater upward social mobility whereas those in part-time employment would have been more likely to experience downward mobility as some research suggests (see Blossfeld and Drobnič 2001).

This first analysis also tentatively highlights differences in social mobility (1) between Swiss citizens and the foreign population, and (2) between Switzerland and other European countries. Globally, trends drawn on the foreign population demonstrate primarily the heterogeneity of this group: they are over-represented at the extremes of the social structure and depict marked social class inequality. We furthermore observe a trend towards the polarisation of social mobility opportunities within the foreign population, particularly within the youngest cohorts. This trend

would seem to reflect the diversification of the foreign population witnessed in recent immigration waves, in particular with the growing share of highly qualified migrants who have arrived in Switzerland (Pecoraro 2005; Piguet 2013). Secondly, we observe that the profile of the foreign population in Switzerland has changed over time: for instance, in the youngest cohort, the share of immigrants in the higher salariat grew substantially. We also outlined that overall, women who immigrated to Switzerland tend to have experienced much more downward mobility than Swiss women. Therefore, for women, the experience of migrating to Switzerland seems to come at the price of a loss of social position. In contrast, Swiss men enjoy substantially more upward social mobility than any other segments of the population. This observation is also true from a comparative perspective. In fact, Swiss men are on average 10% more upwardly mobile than European men. Yet, this advantage for Swiss men seems to decrease – at least slightly – in the youngest cohorts. From this standpoint, although we clearly find some support for our hypothesis on social mobility differences according to citizenship (H8), the Swiss premium over foreigners seem to be less marked today than it was in oldest cohorts. This trend is furthermore weakened by the increasing share of highly qualified migrants in the youngest cohorts, who enjoy higher opportunities in the salariat class than the Swiss citizens. Yet in spite of this huge share of absolute upward social mobility, in relative terms men's structure of opportunity did not change significantly. Therefore, this huge amount of absolute mobility accounts essentially for structural mobility, driven by the changing social structure.

From this standpoint, the non-changing trend observed in social fluidity in Switzerland is inconsistent with the argument stating that research using longer observation time periods, larger sample size, and adopting a cohort perspective is more likely to detect change. Indeed, the present research demonstrates the clear-cut result of non-substantial change in social fluidity in Switzerland, despite a robust research design.

Finally, the results of the present research are consistent with previous studies on social mobility in Switzerland that focused on a smaller time frame. They coincide particularly with those of Levy, Joye, Guye and Kaufmann (1997) and Bergman, Joye and Fux (2002), who had found no effects of contextual changes on social mobility. In this respect, we can now maintain on the basis of the present research that substantive change was not overshadowed by the limited time frame that the authors used. Instead, there seems to be no significant substantial change in social mobility in Switzerland. Furthermore, the present outcomes also converge partially with those from the analysis of Joye, Bergman and Lambert (2003) on Swiss men's social fluidity, at least with the findings they have drawn with the CASMIN class schema.

That being said, the constant flux thesis provides a good description of the evolution of social mobility in Switzerland. Yet it remains to be seen to which extent this particularly strong persistence of inequality of opportunity in Switzerland stems from institutional settings characteristic of this country. In this respect, the dual nature of the Swiss educational system might be one source of explanation. Therefore, in the next chapter we will investigate the mediating effect of education on intergenerational social mobility.

6 . When education reproduces social inequalities: explaining how education mediates constant social mobility in Switzerland

6.1 . Introduction

Analysis undertaken in the previous chapter demonstrates the clear-cut findings of the persistent importance of social origin on social position opportunities in Switzerland over time. While it seems that there have been some weak variations in social fluidity, and even probably increasing social fluidity for some birth-cohorts, overall Swiss society seems to be characterised by a rather strong degree of rigidity. To explain this peculiar finding, as compared to other Western countries, in this second chapter we investigate the mediating effect of educational attainment in the social mobility process. We can indeed wonder what role education plays in light of the constant social fluidity trend we outlined, particularly when given the educational expansion that took place in Switzerland over the last century. It could be the case that educational expansion in the Swiss context did not actually generate more social mobility, in contrast to other empirical research in the field.

Indeed, education has traditionally been considered the main driver of meritocracy in the social mobility literature, a feature that should characterise democratic and industrial societies. Since the 1960s, intergenerational social mobility scholars have addressed this meritocratic issue through the investigation of the mediating effect of education under the conceptual framework of the so-called OED triangle – which proposes to model the association between social origin, education and social destination. While changes in the OED association have been analysed in many countries, so far no research has analysed systematically temporal trends in the three-way OED interaction in Switzerland. This analysis may thus help us to understand the effect of the specific Swiss educational system on social mobility dynamics.

The analysis will consist of assessing (1) the extent of change in educational inequality (equalisation effect), (2) the extent of change in the occupational advantage afforded by education (return to education), and (3) the extent of variation in the origin-destination association according to educational levels (compositional effect).

In line with our hypotheses:

- educational inequalities should have decreased overall (H2a),
- and more markedly within the youngest birth-cohorts given Switzerland's late educational expansion (H2b).
- returns to education should have remained relatively stable (H3a),
- although it should have decreased within youngest cohorts (H3b).
- the association between social origin and social destination should be weaker within higher educational levels – compositional effect (H4).
- these outcomes should display differences according to gender (H7),
- and to citizenship (H8).

In order to assess the extent of validity of these hypotheses, both absolute and relative trends will be described. We will start this endeavour by observing how the Swiss educational system expanded over time.

6.2 . How has the Swiss educational system expanded over time?

Figure 6.1 depicts trends over birth-cohorts in educational expansion in Switzerland by gender, measured according to (1) having attained at least secondary education and to (2) having attained at least tertiary education.

As for having attained at least secondary education, while within the oldest cohort, only 50% had attained at least secondary education, about 90% attained this educational level in the youngest cohort. Thus, the structure of the Swiss educational system underwent a massive upward shift. What is furthermore noteworthy is the fact that gender differences decreased considerably up to the 1951-1955 birth-cohort. Indeed, while women used to be much less likely than men to attain at least secondary education in the oldest birth-cohorts, this gender gap considerably weakened and actually almost disappeared within the youngest birth-cohorts. Yet men are still slightly more likely than women to reach at least secondary education, suggesting that gender equality has not completely been achieved in Switzerland in spite of the general gender equalisation trend observed.

This persistent gender inequality picture is much more obvious when we turn to the second graph of Figure 6.1, which shows the share of the Swiss population that attained at least tertiary education.

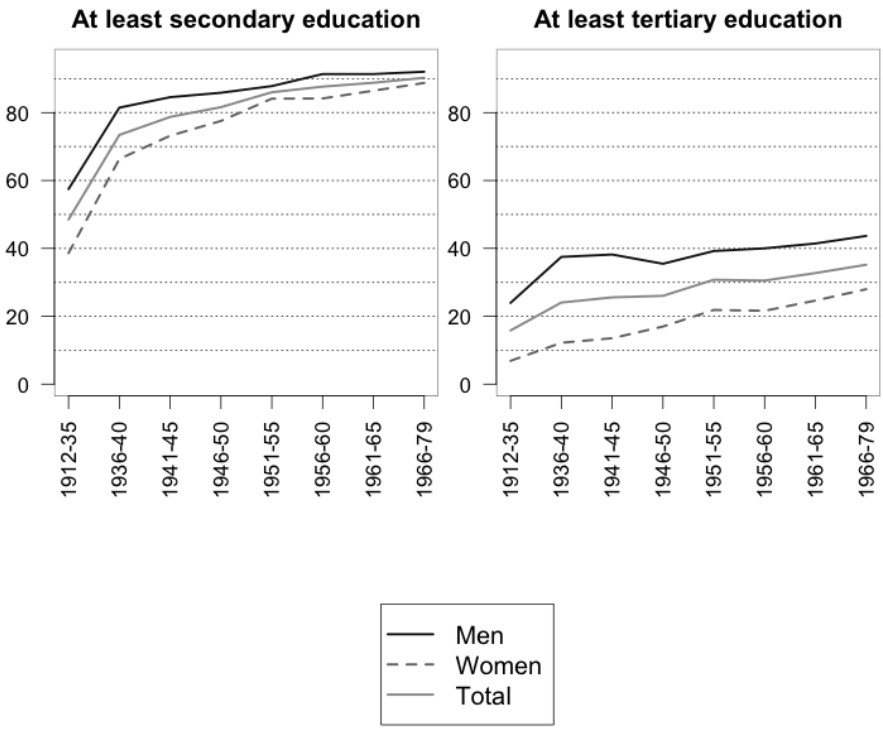

Figure 6.1: Trends over birth-cohorts in educational expansion by gender

Indeed, while we can confirm that the Swiss educational system also expended significantly at the tertiary level with an increase from 15% to almost 40% over birth-cohorts, the gender gap remains significant at this level. It particularly looks persistent as it remained stable over time, levelling at around a 20% difference in favour of men, despite the constant and important increasing share of women in this education level. Thus, still in the youngest birth-cohort, almost half of Swiss men attained this level of education, whereas less than one-third of Swiss women did. In other words, educational expansion at tertiary levels of education has not significantly reduced gender differences in Switzerland.

From graphs shown in Figure 6.2, we can look more thoroughly at the evolution of the educational stratification according to each type of education. We observe, for instance, that at the secondary educational level, vocational education was already quite significantly developed in the oldest birth-cohorts, since 40% of people born between 1936 and 1940 had attained this educational level. Yet the proportion of people with this type of education developed further in the following years, encompassing almost 50% of all the Swiss population in the 1956-1960 birth-cohort, its highest peak. However, in the subsequent birth-cohorts, the proportion of those attaining vocational secondary education slightly decreased. Still, this educational level remains the most important

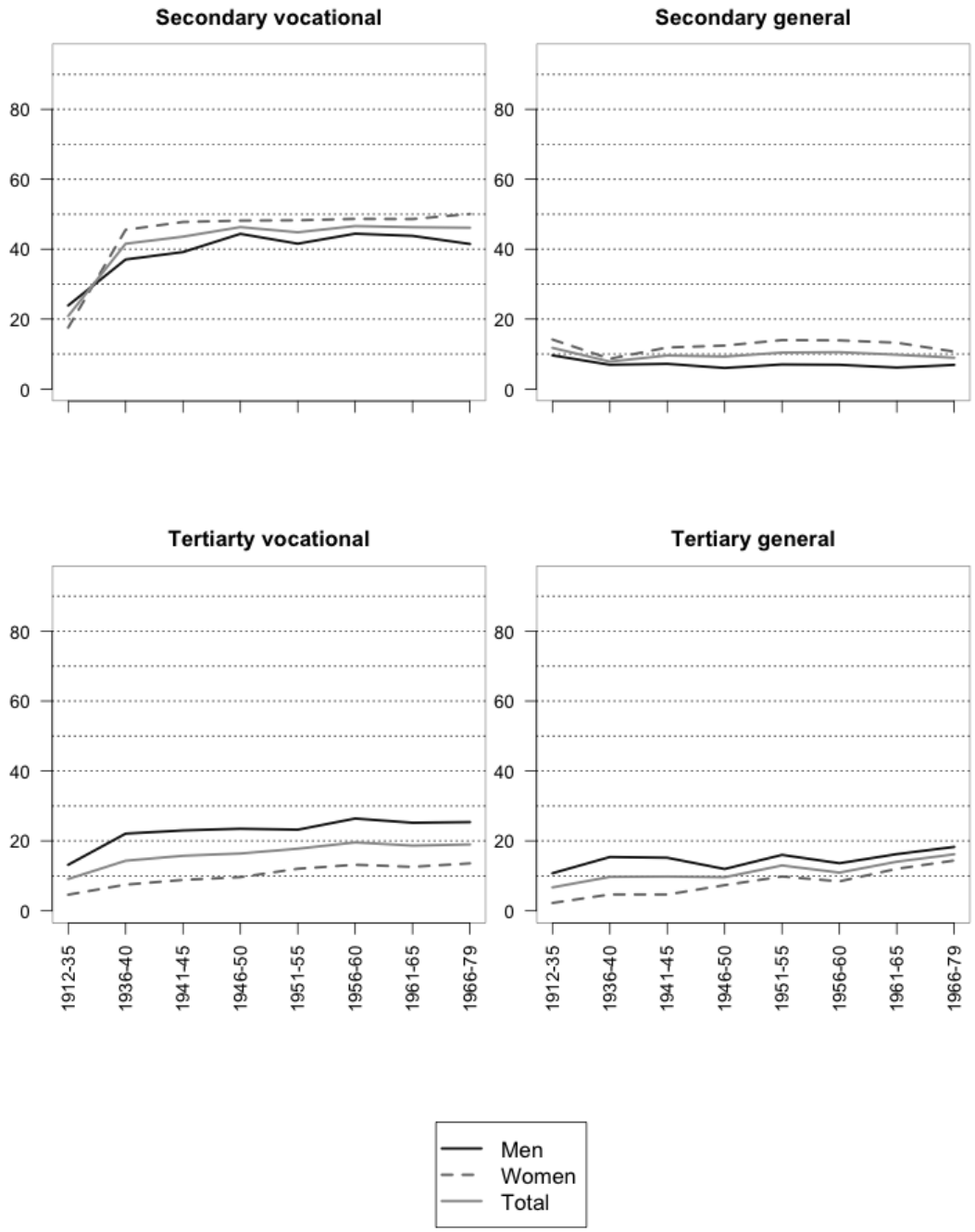

Figure 6.2: Trends over birth-cohorts in educational distribution by gender

educational category of all in Switzerland. What is noteworthy is that there are 10% more women than men in this educational level and that gender inequality does actually tend to increase in the youngest birth-cohort, as the share of men decreases by a few points. This is not the case within the secondary general education level, where gender inequality is the lowest and remains constant,

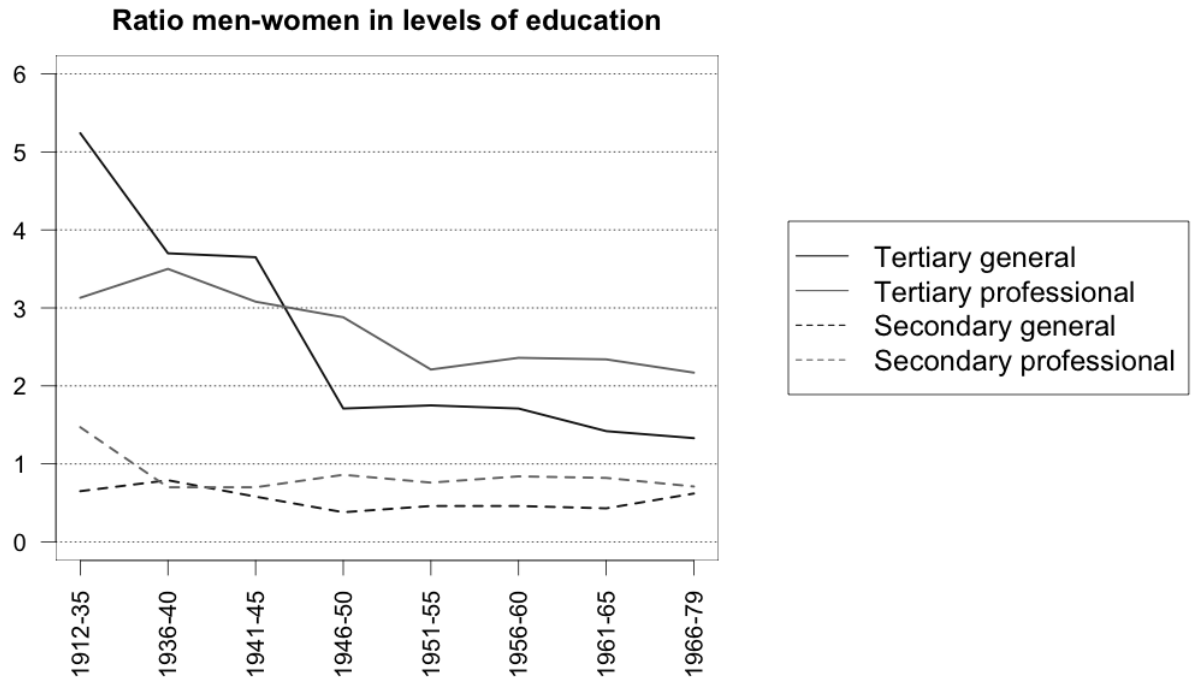

Figure 6.3: Trends in gender ratio distribution by level of education (measured in odds-ratio).
Read : men in oldest cohort were 5 time more likely than women to have a tertiary general education degree rather than to have no tertiary general education degree

although women are slightly more numerous than men. Yet this educational level represents only a very small share of the total educational stratification in Switzerland, as no more than 10% of people gained this education in each cohort. Indeed, people who go to secondary general education and pass the maturity[36] degree usually continue to further education, while those who do not intend to continue to further education are more likely to go into vocational tracks. This is the reason why this educational level has not expanded, as it is not an educational level rewarded on the labour market.

A different picture arises when it comes to tertiary education, as shown in the lower graphs of Figure 6.2. In particular, the graph that depicts the evolution of the proportion of graduates into tertiary vocational levels indicates a constant increase in the share of population attaining this level. While less than 10% of the population reached this level in the oldest cohort, more than 20% did in the youngest cohort. Additionally, it is within this level of education that the gender gap is the highest: for instance, about 15% of women in the youngest cohort reached this level, whereas almost 30% of men did. Furthermore, this gender difference has not declined much over birth-cohorts, as this gap remains stable and high with there being on average 10% more men than

36 Which is not the case of everyone in this educational level, as it contains people who attained secondary general education with or *without* maturity.

women in this educational level. Such high and persisting gender difference must account for the specialisation of this type of education. In fact, tertiary vocational education encompasses schools that mostly prepare students for male-dominated jobs. Yet since the late 1990s introduction of Universities of Applied Sciences that focus on preparation for female-dominated jobs, this gender gap should have declined. It remains to be seen whether our sample limitation hinders us to see this evolution or whether there indeed has been no strong impact of the development of these applied Universities on gender inequalities at the tertiary vocational educational level.

In contrast, gender inequality at the tertiary general education level has declined over time quite significantly. While this level of education also underwent an upward shift between the oldest and youngest cohorts, the gender gap clearly decreased, especially from the 1946-1950 birth-cohort onwards. Although more men than women attain this level of education in the youngest cohort, there are only less than 5% more men than women. Despite this gender equalisation, it remains noteworthy that in the youngest cohort, less than 20% of the total population of Switzerland reaches tertiary general education, such as University or polytechnic schools, indicating that educational expansion in Switzerland, although not insignificant, still remains relatively moderate in comparison to other Western countries. Yet according to latest OECD's report "education at a glance" (2013), the attainment of tertiary education in Switzerland expanded more importantly that what we observe here. In 2011, 35% of the Swiss population had a tertiary education degree. So it might be the case that our study fails to capture latest developments in the expansion of the Swiss educational system. Nevertheless, it is also possible that OECD's figures overestimate this expansion, through the groupings of educational titles it uses. This measurement effect in the OECD report can be suspected through the distribution of the two types of tertiary education tracks, with the overrepresentation – as compared to our findings – of tertiary graduates from *general* education (25%), and the underestimation of those who graduated from *vocational* tracks (11%). In addition to potential measurement effects, one further explanation of the potential overestimation of the expansion of the Swiss educational system could stem from the growing share of highly qualified migrants that Switzerland has welcomed over recent years. Thus, OECD's figures require higher scrutiny and qualifications.

A closer look at the educational distribution according to the citizenship criteria indeed proves instructive. As can be seen from Figure D.1 in Appendix D, the share of the foreign population that has not attained at least secondary education is much higher than in the group of Swiss citizens, regardless of gender. Still in the youngest cohort, more than 20% of foreigners had only completed compulsory education, indicating that a sizeable share of the foreign population in Switzerland

lacks appropriate educational attainment. However, we also observe that access to tertiary education is not so uncommon in the foreign population: about 30% have reached this educational level. Foreign women, like Swiss women, have seen their opportunities in higher education increase over time, and they are now more likely to attain this level than Swiss women. In contrast, the share of foreign men to reach this level looks relatively stable over time, except in the youngest cohort, which depicts an increase. Yet Swiss men remain the most represented in this education level, accounting for an average for 40%. Nevertheless, a closer look at the educational distribution demonstrates that Swiss men's premium in access to tertiary education pertains to terti*ary vocati*onal tracks. At the general tertiary education level, their share remains relatively stable and extremely low, as it does for Swiss women. Furthermore, in cohorts born after 1960, the foreign population is more likely to reach tertiary general educational levels than their Swiss counterparts. From this standpoint, the foreign population is becoming increasingly qualified and to some extent more qualified than Swiss citizens – thus lending some support for the potential overestimation of educational expansion over the recent years in Switzerland, as it is maintained by OECD (2013). Another interesting feature of the foreign population as compared to the Swiss population is the low gender gap at tertiary educational levels. This observation certainly stems from the lower share of foreign men who attain tertiary *vocational* education, a highly sex-segregated educational track. Finally, it is noticeable that within the youngest cohort of graduates of tertiary general education, the gender gap actually reversed in the foreign population: foreign women now have a premium over – in decreasing order – foreign men, Swiss men and Swiss women. Thus, there is considerable heterogeneity in educational distribution between Swiss and non-Swiss citizenship.

In spite of these differences, Switzerland, like other Western countries, overall exhibited educational expansion during the twentieth century. In particular, the share of individuals attaining at least secondary education increased considerably. This expansion was nevertheless more moderate at the tertiary education level. In regard to gender inequalities, while they weakened to a certain extent, they still remain significant in several respects. Indeed, in line with the literature on occupational sex-segregation (Charles and Grusky 2005), we observe educational sex-segregation operating at two levels in Swiss educational system, as can be seen in Figure 6.3: (1) at the vertical level women dominate in secondary levels of education and men in tertiary levels; (2) at the horizontal level women tend to be more likely to amass in general tracks and men into vocational tracks. In fact, the odds ratio statistic indicates that on average, women are about twice as likely as men to attain secondary general education, rather than not attaining this educational level, while this likelihood is more moderate when it comes to secondary vocational education, with women being, on average,

only 1.3 time more likely than men to reach this educational level. At the tertiary level, although men are still more numerous than women, as we have already mentioned, the feminisation is much more pronounced in general tracks than in vocational ones. While men were 5.2 times more numerous in tertiary general education levels and 3.1 times in tertiary vocational ones in the oldest birth-cohort, they dropped respectively to 1.3 times and 2.2 times in the youngest cohort. This gender segregation trend is particularly pronounced within the Swiss citizen population, certainly because of its higher attainment within vocational tracks that are more gender-segregated. Thus, having presented overall trends in educational expansion by gender in Switzerland, we can now wonder how these transformations have impacted the role of education in the social mobility process. We will first look at trends in educational equalisation.

6.3 . Have educational opportunities equalised over time in Switzerland?

In order to assess trends in the effect of social origin on educational attainment and thus analysing whether there has been an equalisation effect in Switzerland, two sets of analysis are presented here: (1) an analysis of absolute trends of educational inequality and (2) an analysis of relative trends of educational inequality using the log-linear modelling technique.

6.3.1 . Absolute trends in educational inequality

Absolute trends of educational inequality are measured by looking at the distribution of education according to each category of class origin – outflow percentages. However, for the sake of clarity, the distributions will only be depicted according to two antagonistic class origins using the ESeC typology collapsed into three categories, namely the salariat class versus the working class. Furthermore, gender differences according to class background will also be underlined, though plots will not be depicted for reasons of space limitation. They are, however, available on request.

From the first graph on the left side of Figure 6.4, we observe that the increase in the proportion of the Swiss population attaining at least secondary education benefited mainly to those with a working social class background. Indeed, while in the oldest cohort less than 50% of those with working-class origins had reached at least this educational level, this increased to almost 90% in the youngest cohorts. In contrast, among those with a salariat origin, 80% of them had reached this educational level in the oldest birth-cohort. Therefore, it is clear that educational expansion in Switzerland reduced social origin inequality in access to at least secondary education. While children from the salariat class were 35% more likely to reach at least secondary education than those from a working-class background in the oldest cohort, the gap has dropped to 10% in the

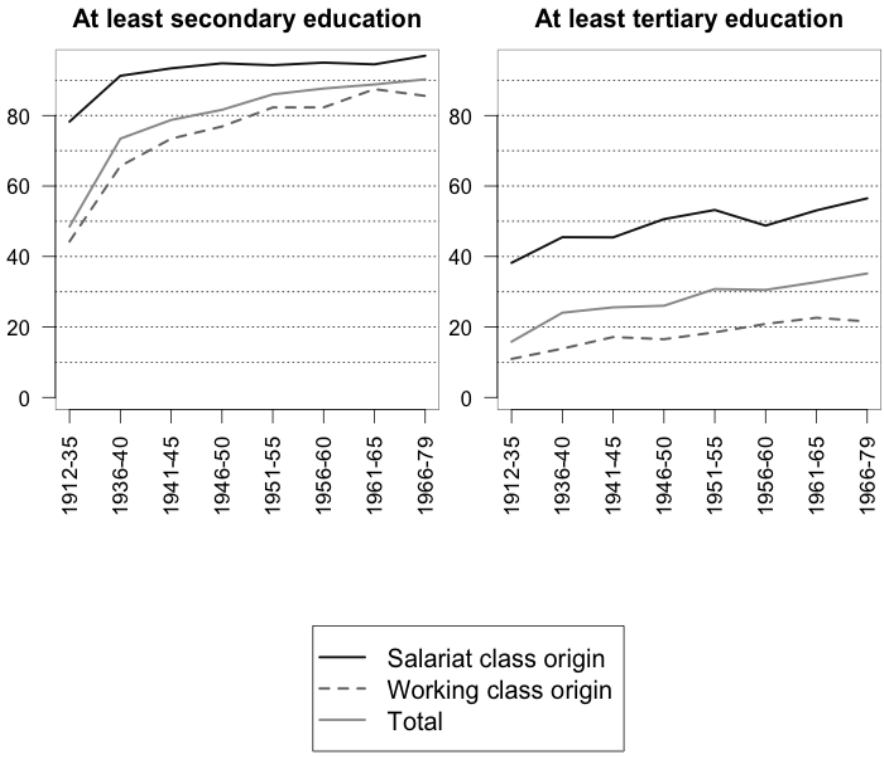

Figure 6.4: Trends over birth-cohorts in educational expansion by social origin

youngest cohorts. This decline constitutes a considerable change in terms of educational equality.

However, this decreasing trend of the effect of social origin on education is not further corroborated when it comes to attaining at least tertiary education. Indeed, as shown in the second graph of Figure 6.4, although the share of people who reached this level of education increased for both salariat and working-class social backgrounds, this increase looks more moderate within the latter and sharper within the former. Thus, while we observe an equalisation trend in regard to having attained at least secondary education, at the tertiary level we observe a trend towards increasing inequality between social backgrounds. It must be underlined that this latter trend holds particularly for women, while among men, there seems to be a slight decline in differences between social backgrounds. This difference must be understood in that so few women in the oldest birth-cohort reached tertiary education that social origin was not the main discriminating criterion at that time.

Looking at more specific educational levels enables us to see how the access to and the composition of each educational level changed over time. From graphs in Figure 6.5 we observe that secondary vocational education has increasingly become a working-class educational level over time. Indeed, while those from a salariat origin in this educational level were slightly underrepresented in the oldest birth-cohorts, their share has decreased, whereas in the meantime this educational level expanded. In other words, expansion of secondary vocational education benefited mostly working-

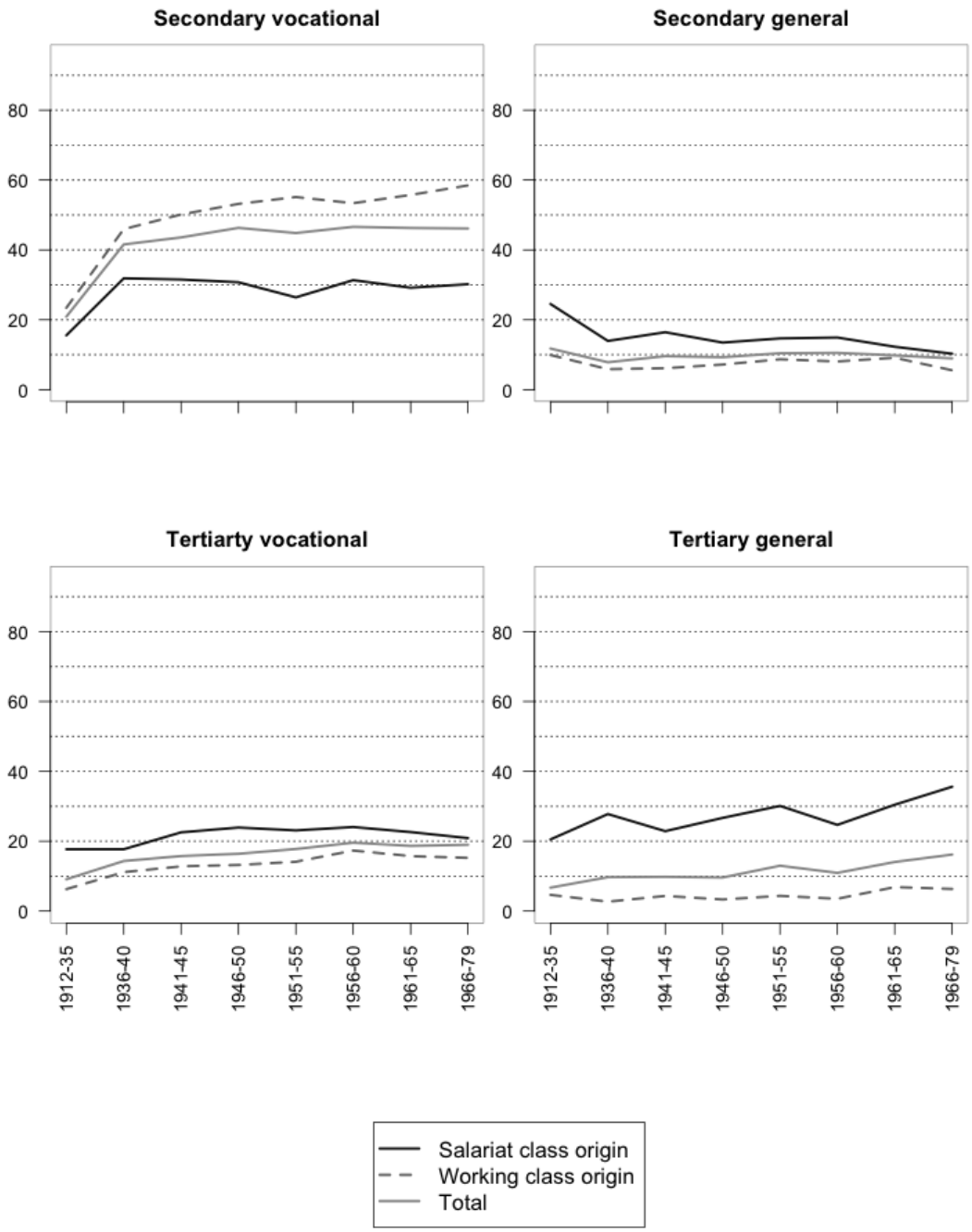

Figure 6.5: Trends over birth-cohorts in educational distribution by social origin

class children, given that this educational level has increasingly become characteristic of this class origin. Indeed, the gap between the two antagonistic social backgrounds has constantly increased over time, resulting with more than 55% of children from a working-class background composing this level in the youngest cohort, compared to less than 30% of children from the salariat class.

Although this increase holds for both men and women, it is more marked among women.

In contrast, the difference in social composition of those who attained secondary general education with or without maturity has decreased over time. While this educational level represents only a small share of the total distribution of education, differences by social background declined, as indicated by the graph in the upper right side of Figure 6.5. Further investigation indicates that this decreasing difference between social background is mainly driven by women, whereas this decline is very limited among men.

At tertiary educational levels, the effect of social origin goes in diverging trends according to the track considered. When looking at tertiary vocational education, social background differences are rather small and decrease over time, as the gap between both salariat and working class backgrounds weakens over birth-cohorts. However, such decreasing difference between social origin, while being very marked among men with a drop in social origin gap of more than 10 points over birth-cohorts, the same does not hold for women. Although women are underrepresented in this level of education, as we noted above, women who attain this level are more likely to come from a salariat background. Furthermore, this salariat background advantage for women tends to increase over time, at least until the 1951-1955 birth-cohort. Thus, class background inequality in access to tertiary vocational education seems to have decreased only for men over time, while it tended to rather increase among women.

Regarding social background differences in reference to tertiary general education, they increased over time. The number of individuals from a working-class origin remained relatively stable over birth-cohorts, whereas those from a salariat origin increased significantly: from 20% in the oldest cohort to more than 35% in the youngest. The gap between social backgrounds thus increased more than 10 points during this time frame. It is noteworthy that this increase has been much more sharp amongst women than amongst men: while the social background gap oscillated between around 25% to around 32% for the latter, resulting in a gap of less than 10 points among the latter, it increased about 25 points for the former.

Further differences arise according to citizenship criteria (see Figure D.2 in Appendix D). We observe that foreigners from a working-class background are much less likely to have attained at least secondary education, although their share increased at the same time the educational system expanded. In contrast, their salariat class counterparts do not display disadvantages, especially in the youngest cohorts. Indeed, foreigners with a salariat class origin are actually more likely than Swiss citizens from the same social background to attain at least tertiary education, and particularly tertiary general education. And this trend has increased in the youngest birth-cohorts, indicating that

educational inequalities are exacerbating in the foreign population. Yet being from a salariat class background, regardless of citizenship, still remains the most salient dimension in accessing tertiary education. However, Swiss citizens with a working-class background have a slight premium over foreigners with the same background to attain tertiary education. This small premium essentially happens within tertiary *vocational* tracks, as working-class children are nearly nonexistent within tertiary *general* educational levels.

To summarise, educational expansion increased overall educational opportunities, particularly for children of a working-class background, since educational expansion happened mainly at the secondary *vocationa*l level and to a lower extent at the tertiary *vocational* level, but not into general education tracks. Furthermore, it seems that the gender equalisation effect observed in the overall distribution of educational levels in the previous section has mainly been driven by women from a salariat social background. Indeed, women who attained tertiary educational levels were much more likely than men to come from a salariat social background. However, this trend must be interpreted under the historical lens, as women from older birth-cohorts exhibited completely different situations in terms of educational chances, as compared to their male counterparts. Thus, while figures seem to indicate more marked increasing inequality according to social background for women, they could be interpreted more as an adjustment to men's situation rather than an increasing inequality trend. In fact, while women used to be massively excluded from access to at least secondary education within oldest cohorts, this gender disadvantage progressively faded away with educational expansion and development, and social background differences became more salient, while this was already the case among men. We furthermore observe that foreigners with a salariat class origin are considerably over-represented in tertiary educational levels. However, the trends observed are not net of structural changes. Indeed, over the period considered, the salariat class grew significantly while the working class decreased. Therefore, an investigation of relative trends in educational inequality must be undertaken to assess whether we observe a substantial equalisation effect in Switzerland.

6.3.2 . Relative trends in educational inequality

To assess whether the association between social origin and educational attainment changed over time in Switzerland, we fitted the three basic log-linear models as presented in the methodological chapter. As we mentioned earlier, in cases where the Unidiff model did not provide a significant improvement over the CnSF model, different combinations of simpler models were fitted to the data, such as a Unidiff model with linear trend and Unidiff models constrained. Furthermore, systematically, models were fitted by using two different birth-cohort variables: the most detailed

version divides birth-cohorts into eight categories, whereas the most synthesised version encompasses five birth-cohort categories. As log-linear models tend to be sensitive to sample size, we assume that models constructed with the five birth-cohort version provide the best measure of trends in educational equalisation. Results of the models fitted are displayed in Tables 6.1 and 6.2 respectively for men and women. So what do fitted models tell us in regard to the evolution of educational inequality in Switzerland?

As we can see for men, when using the most detailed version of birth-cohorts, we observe that the Unidiff model fails to provide a significant improvement over the CnSF. Thus, simpler models were fitted. The Unidiff model with a linear trend must also be rejected. However, when fitting a Unidiff model by constraining Unidiff parameters of birth-cohorts 1912-1935, 1936-1940 and 1946-1950 to be equal as well as those from birth-cohorts 1941-1945, and 1951 onwards to be equal (M4), we observe a significant improvement over the CnSF model. Furthermore, in model M5, we test whether Unidiff parameters for birth-cohorts 1956-1965 differ from the 1941-1945 and other post 1951 birth-cohorts. This model also provides a significant improvement over the CnSF model. Thus, these constrained models indicate that there has been a change in the association between social origin and educational attainment (OE) over birth-cohorts in Switzerland, at least among men. However, it is not very clear whether this trend can be summarised more adequately with two or three parameters. In fact, while the model M5 does not provide a significant improvement over the model M4, strictly speaking, this model is still very close to the acceptable threshold with a p-value of 0.06. Thus, as can be seen in Figure 6.6, which plots Unidiff parameters of the different models fitted, this first set of analysis suggests that educational inequality decreased between the pre-1940s and the post-1950s birth-cohorts overall. It also seems that for people born between 1956 and 1965, the decrease reached its highest level, although this trend does not reach the significance threshold of 5%. When using the synthesised version of birth-cohorts, this trend is corroborated. In fact, the Unidiff model describes the data more adequately than the CnSF model. As can be seen in Figure 6.6, the Unidiff parameters indicate that educational inequality decreased for men in Switzerland up to the 1965 birth-cohort. Subsequently, inequality reinforced in the following birth-cohort. Regarding the Unidiff linear trend model (M3), while providing more information than the CnSF model, it must be rejected for the full Unidiff model (M2), as this latter model provides slightly more information than the former. In other words, the reinforced trend in the OE association observed within the youngest cohort as compared to previous ones is a significant effect. Can similar trend be observed within women?

Models fitted in Table 6.2 indicate that the Unidiff model (M3) does not provide a significant

Table 6.1: Results of fitting the log-linear models to men educational mobility tables according to their father's social position, divided into eight cohorts and five cohorts (men aged 30–64)

Models OE	G2	Df	P	DI	%G2	BIC
* Men, 8 cohorts educational mobility table N=7513						
M0. Cond. Ind.	1434.7	192	0.0000	15.59	-	-278.8
M1. CnSF	225.3	168	0.0020	5.59	84.3	-1274
M2. Unidiff	213.5	161	0.0040	5.4	85.12	-1223.3
Parameters M2	*c1 = 1; c2 = 1.03; c3 = 0.87; c4 = 0.99; c5 = 0.85; c6 = 0.71; c7 = 0.78; c8= 0.88*					
M3. Unidiff Linear trend	222.6	167	0.0030	5.59	84.49	-1267.8
Parameters M3	*-0.004*					
M4. Unidiff constrained	**217.8**	**167**	**0.0050**	**5.51**	**84.82**	**-1272.5**
Parameters M4	***c1, c2 & c4= 1; c3, c5, c6, c7, c8= 0.82***					
M5. Unidiff constrained	214.3	166	0.0070	5.47	85.06	-1267.1
Parameters M5	*c1 , c2, c4= 1; c3, c5 & c8= 0.87 ; c6 & c7= 0.75*					
Model comparison						
M0 - M1	1209.40	24	0.0000			
M1 - M2	11.80	7	0.1090			
M1 - M3	2.70	1	0.0990			
M1 - M4	**7.50**	**1**	**0.0060**			
M1 - M5	11.00	2	0.0040			
M4 - M5	3.50	1	0.0600			
* Men, 5 cohorts educational mobility table N=7513						
M0. Cond. Ind.	1361.2	120	0.0000	15.23	-	290.3
M1. CnSF	138.5	96	0.0030	4.51	89.82	-718.2
M2. Unidiff	**124.6**	**92**	**0.0130**	**4.27**	**90.85**	**-696.5**
Parameters M2	***c1 = 1; c2 = 0.90; c3 = 0.81; c4 = 0.69 ; c5= 0.84***					
M3. Unidiff Linear trend	132.6	95	0.0070	4.39	90.26	-715.2
Parameters M3	*-0.005*					
Model comparison						
M0 - M1	1222.70	24	0.0000			
M1 - M2	**13.90**	**4**	**0.0070**			
M1 - M3	5.90	1	0.0150			
M3 - M2	**8.00**	**3**	**0.0450**			

Notes: Cond Ind=conditional independence model; CnSF=constant social fluidity model (the model which assumes the OE association to be constant); Unidiff=uniform difference model (the model which assumes the OE association changed). G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index, %G2=proportion of reduction of deviance, BIC=Bayesian information criterion. On the parameters lines, c1 to c5/c8 refer to corresponding birth-cohorts. *To be significant, each new effect added into a model is compared to previous nested model and should exhibit a p-value below 0.05 (see models comparison panels)*

improvement over the CnSF model (M1). However, two simpler versions of the Unidiff model do when we constrain some Unidiff parameters to be equal. Although the parameters do not indicate a clear trend, it seems that they point towards increasing educational equalisation overall, as younger birth-cohorts depict more fluidity than older ones. In this first set of analysis using the most detailed version of birth-cohorts, this is model M4, which provides the most adequate picture of trends in educational inequality for women in Switzerland. What do models indicate to us when running the

Table 6.2: Results of fitting the log-linear models to women educational mobility tables according to their father's social position, divided into eight cohorts and five cohorts (women aged 30–64)

Models OE	G2	Df	P	DI	%G2	BIC
* Women, 8 cohorts educational mobility table N=7994						
M0. Cond. Ind.	1187.6	192	0.000	13.6	-	-537.8
M1. CnSF	167.6	168	0.494	4.37	85.89	-1342.1
M2. Unidiff	158.6	161	0.534	4.29	86.65	-1288.2
Parameters M2	*c1 = 1; c2 = 1; c3 = 0.93; c4 = 1.03; c5 = 0.84; c6 = 0.97; c7 = 0.73; c8= 0.90*					
M3. Unidiff Linear trend	165.9	167	0.509	4.35	86.03	-1334.8
Parameters M3	*-0.0032*					
M4. Unidiff constrained	**162.7**	**167**	**0.580**	**4.39**	**86.3**	**-1338**
Parameters M4	***c1, c2, c4 & c6=1; c3, c5, c7 & c8=0.85***					
M5. Unidiff constrained	159.8	166	0.621	4.29	86.54	-1332
Parameters M5	*c1 , c2, c4 & c6= 1; c3 & c8= 0.91 ; c5 & c7= 0.78*					
Model comparison						
M0 - M1	1020.00	24	0.000			
M1 - M2	9.00	7	0.251			
M1 - M3	1.70	1	0.197			
M1 - M4	**4.90**	**1**	**0.027**			
M1 - M5	7.80	2	0.020			
M4 - M5	2.90	1	0.089			
* Women, 5 cohorts educational mobility table N=7994						
M0. Cond. Ind.	1136.3	120	0.000	13.65	-	57.9
M1. CnSF	**107.2**	**96**	**0.205**	**3.78**	**90.57**	**-755.5**
M2. Unidiff	101.1	92	0.243	3.68	91.11	-725.7
Parameters M2	*c1 = 1; c2 = 1.08; c3 = 0.97; c4 = 0.83; c5= 0.95*					
M3. Unidiff Linear trend	105.8	95	0.211	3.76	90.69	-747.9
Parameters M3	*-0.0027*					
M4. Unidiff constrained	101.2	94	0.287	3.68	91.09	-743.5
Parameters M4	*c1, c3 & c5= 1; c2 = 1.11; c4= 0.86*					
M5. Unidiff constrained	101.1	93	0.266	3.68	91.1	-734.6
Parameters M5	*c1= 1; c2 = 1.08; c3 & c5=0.96; c4= 0.83*					
Model comparison						
M0 - M1	**1029.10**	**24**	**0.000**			
M1 - M2	6.10	4	0.193			
M1 - M3	1.40	1	0.243			
M1 - M4	6.00	2	0.051			
M1 - M5	6.10	3	0.109			
M4 - M2	0.10	2	0.859			

Notes: Cond Ind=conditional independence model; CnSF=constant social fluidity model (the model which assumes the OE association to be constant); Unidiff=uniform difference model (the model which assumes the OE association changed). G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index, %G2=proportion of reduction of deviance, BIC=Bayesian information criterion. On the parameters lines, c1 to c5/c8 refer to corresponding birth-cohorts. *To be significant, each new effect added into a model is compared to previous nested model and should exhibit a p-value below 0.05 (see models comparison panels)*

same set of analysis while using the more synthesised and robust birth-cohort version? First of all, the Unidiff model does not provide more information than the CnSF model. Therefore, further

simpler models were run, but none of them provide a significant improvement over the CnSF, strictly speaking. However, Model M4, which is a Unidiff constrained model, actually provides quite a bit more information than the CnSF model, with a p-value of 0.051. Stated differently, although we cannot accept this model, it should not be rejected on the grounds of statistical significance. Parameters of this model indeed indicate a rather stable situation over time in terms of educational inequality. Nonetheless, they further indicate that for women born between 1942 and 1949, educational inequality reinforced, while for those born between 1958 and 1965, it decreased. For all other cohorts, the level of inequality seems to have remained relatively stable. In other words, we observe within women, as for men, a reinforced OE inequality trend within the youngest birth-cohort. We should add that similar trends are displayed when controlling for citizenship (see Figure D.3 in Appendix D), amongst both men and women, although educational inequality seem to have less importantly reinforced in the youngest cohort within Swiss women. In other words, it would seem that foreign women account for a non-negligible weight in this trend.

In Table D.1, we report parameter details of best log-linear models fitted in order to provide some bases in regard to how much educational opportunities depend on social origin, for both men and women. For instance, we can see that men who have a father in the higher salariat class rather than one in the semi-/unskilled manual class are about 155 times more likely to attain tertiary general education rather than only completing compulsory education. Although this odds-ratio drops to 54 times and 21 times for men from the lower salariat and the intermediate employee class origin respectively, they still indicate that access to tertiary general education in Switzerland significantly depends on social background, despite the general equalisation trend observed for men, at least for those born prior to the mid-1960s. A similar trend can be observed among women. Although this odds-ratio is to a certain extent more moderate than that observed for men, it remains quite significant: women with a higher salariat, lower salariat or intermediate employee class origin rather than a semi-/unskilled one are respectively 67 times, 33 times and 11 times more likely to reach tertiary general education rather compulsory education.

Thus, this analysis of relative trends in educational inequality in Switzerland indicates that educational equalisation has increased at least for people born prior to 1965. While this increase is particularly obvious for men, this is much less the case for women. In fact, their situation does not seem to have changed substantially over time. Another noticeable fact about Switzerland that holds for both men and women is the general reinforced trend in educational inequality witnessed within the youngest birth-cohort (1966 to 1979). All in all, educational inequality in Switzerland (1) decreased to a certain extent but not linearly, (2) appears to have been much more moderate for

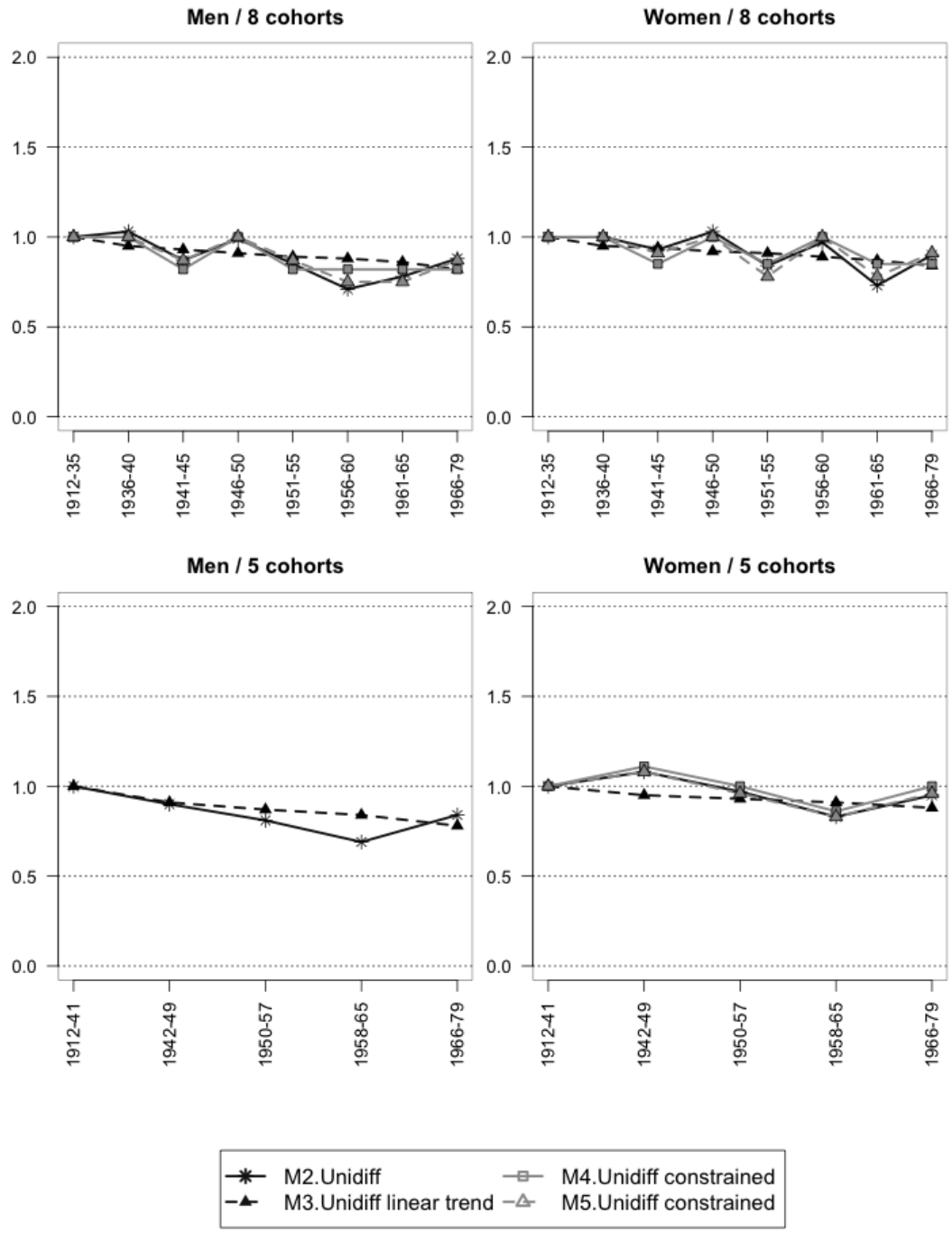

Figure 6.6: Plots of parameters of the different Unidiff models fitted on men and women educational mobility tables, divided into eight cohorts and five cohorts.

women, and (3) reinforced in the youngest birth-cohort. In turn, we can wonder to which extent these trends in educational inequality have impacted the way education is rewarded on the labour market.

6.4 . Has return to education changed over time in Switzerland?

To answer this question, equivalent analytical framework has been undertaken, as it was on educational inequality. Thus, we will begin by depicting (1) trends in absolute return to education and (2) trends in relative return to education. We should further underline for the sake of clarity that by return to education, we understand the occupational advantage afforded by education. In that, here return to education is not defined in terms of income, as is usually the case in the economic literature, but in terms of social position.

6.4.1 . Absolute trends in return to education

Unlike the measure of absolute trends of educational inequality, we measure absolute trends in return to education by looking at inflow percentages, the distribution of education within each social position category. Nonetheless, we here again focus only on the two antagonistic class destinations of the social structure, which are the salariat class versus the working class, in order to draw main trends. Similarly, gender differences will be pointed out accordingly when needed, while findings are not displayed here but are available on request.

The first graph on the left of Figure 6.7 shows the overall evolution of return to education for those who attained at least secondary education over time. In this respect, we can first of all say that having attained at least secondary education has almost always ensured reaching a social position in the salariat class, for even in the oldest birth-cohort, about 80% of those in a salariat occupation had gained such education, and in the youngest cohort, this rate borders the 100% threshold. In other words, education is highly important factor to reach salariat occupations. However, while chances of attaining the salariat class for people with at least secondary education increased together with educational expansion, chances to reach a working-class position with this type of education also increased. Indeed, while only 30% of those who attained at least secondary education ended up in working-class occupations in the oldest cohort, the rate is about 70% within the younger cohorts. Thus, educational expansion has considerably changed the occupational prospects reachable according to educational attainment: in fact, while it was quite clear among older cohorts that having attained at least secondary education would enable one to attain a salariat position and having not attained such would lead one into a working-class position, this picture is much less

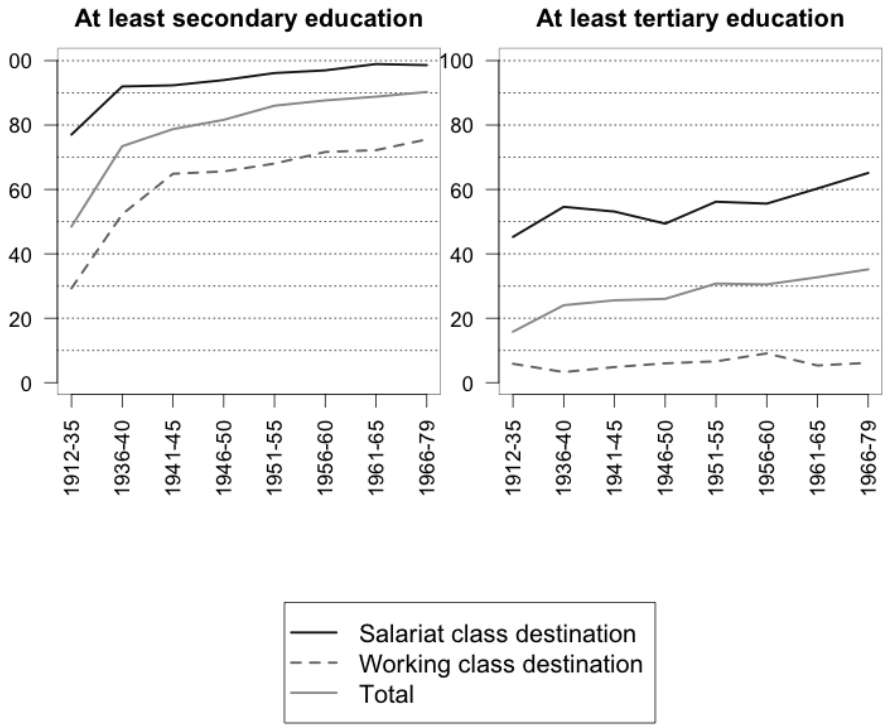

Figure 6.7: Trends over birth-cohorts in educational expansion by social class destination

obvious today. The gap between the salariat and the working-class levels was around 30% for the youngest cohorts whereas it averaged around 45% for the oldest. Thus, from this standpoint, educational expansion seems to have devalued education and weakened social class polarisation.

In the foreign population, however (see Figure D.4 in Appendix D), a considerable gap remains between those who have attained at least secondary education and those who have not, in terms of employment prospects: those without at least a secondary educational level are far more likely to be found in a working-class position than their Swiss citizen counterparts. This again suggests that education is a more salient variable in the foreign population than among Swiss citizens. Yet the downgrading trend observed in the whole population is also visible in this group, although it remains much more moderate.

However, as the second graph in Figure 6.7 indicates, when we look at the evolution of chances to attain salariat class among those who reached at least tertiary education, we observe an alternative picture with respect to the dynamics of inequality. The picture provided shows that at tertiary level the importance of education on social position attained actually increased quite considerably. Indeed, while the number of people with this educational level who attained the working class

remained low and stable under the 10% line over birth-cohorts, the share of their counterparts who reached the salariat class constantly increased. This trend showing the increasing importance of tertiary education for the attainment of salariat positions is further corroborated when we look at the increasing gap between salariat and working-class destination, which broadens from 40% to 60%. Thus, in contrast to previous statements showing that the polarisation between social classes decreased when considering at least secondary education levels, the polarisation actually increased when we look at only tertiary levels of education. These two observations hold for both men and women, although this trend is more marked for women than for men. Furthermore, the percentage of women reaching a salariat class position has become increasingly composed of tertiary-educated women over time. This is in line with the general trend observed earlier in regard to women's increasing opportunities in tertiary educational levels. But do these trends differ within each level in terms of type of education?

A more thorough investigation of secondary education levels provides us the key of this diverging outcome in terms of return to education. As is visible in the upper left graph in Figure 6.8, the share of those with secondary vocational education who ended up in the working class constantly increased over time. In contrast, the share of those with the same education who reached the salariat class increased less markedly and then started to decrease from the 1946-1950 birth-cohort onwards. As a consequence, this type of education has increasingly become a level that secures oneself into working-class social positions. The gap between the salariat and the working class has indeed considerably increased over time, with a growth of more than 25%. Interestingly, this trend is more marked among men than women. It may be induced by the higher propensity for women to attain intermediate or salariat positions, as working-class occupations tend to be more male-dominated due to their high manual component. In other words, having a secondary vocational educational level seems to be much less of an obstacle for women to reach a salariat position than it is for men. However, since the number of women in a salariat position with this type of education has met a moderate decrease since the 1946-1950 birth-cohort, this female advantage over men may very well be disappearing in youngest cohorts. Nonetheless, not only has secondary vocational education become increasingly an educational level for a pupil from a working-class background, as shown in the previous section, but attaining this level of education has increasingly led to attaining a working-class position.

In regard to secondary general education, as can be seen in the upper right graph in Figure 6.8 while this level of education represents a small share of the total educational structure, the inequality ratio in composition of salariat versus working-class positions decreased, especially since the post-1950

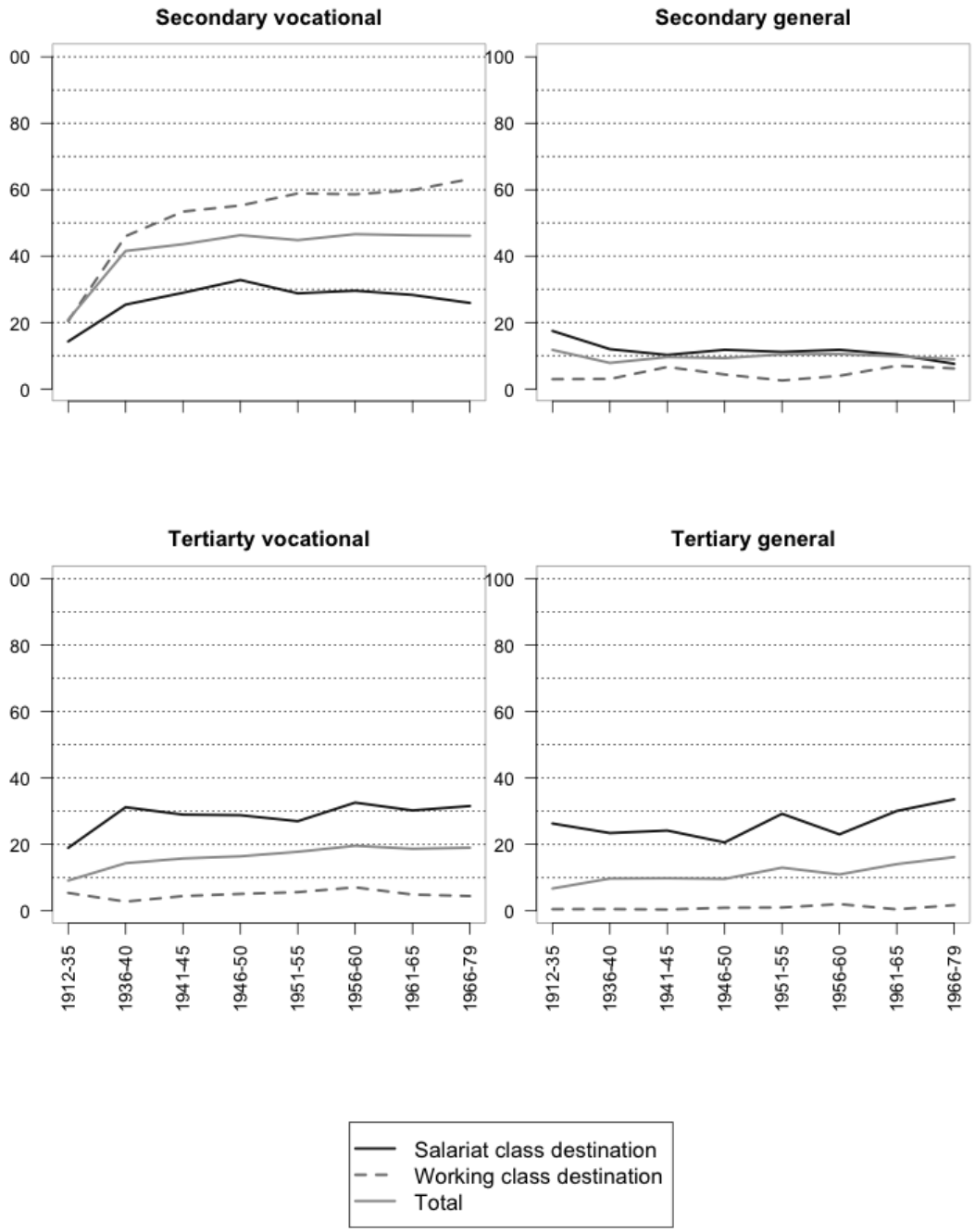

Figure 6.8: Trends over birth-cohorts in educational distribution by social class destination

birth-cohorts. Stated differently, while there were more people with a salariat position who had gained this educational level than those with a working-class position, this distinction has disappeared among the youngest cohorts. This education level no longer constitutes a good bet for social distinction strategy.

This weakening inequality is actually mostly attributable to women: indeed, among men this distinction is nearly nonexistent, whereas among women this educational level was more characteristic of a salariat class position than a working-class one within oldest birth-cohorts, while this is less the case in younger ones. In other words, this educational level has witnessed a certain downgrading over time, particularly for women. Nevertheless, this special case does not enable us to speak about a general downgrading, as this educational level encompasses only a minority of the whole educational structure.

In contrast to secondary general education, both tertiary vocational and tertiary general educational levels over time have exhibited an overall increasing polarisation between chances of accessing the salariat class versus the working class. As can be seen in graphs in the lower part of Figure 6.8, not only are these levels of education mostly characteristic of people who attained a salariat position, but also, as people with this social position are about 30% more than those with a working-class position to hold this educational level, this social position security is likely to remain over time. Notably, this trend holds for both men and women, although it is less sharp in regard to the tertiary vocational educational level among women. In contrast, for women this trend is much more marked within the tertiary general education level from the 1960s birth-cohorts onwards. This observation coincides with the increasing share of women in this educational level over time.

We also observe differences according to citizenship (see Figure D.4 in Appendix D). Although those who are found in the salariat class are very much likely to have graduated from any type of tertiary education, the share with this educational level is more significant in the foreign population than in the Swiss citizen population. Interestingly, the increasing trend of the share of graduates with tertiary general education in the salariat stems mostly from the foreign population, whereas this trend is quite stable among Swiss citizens: between birth-cohort 1956-1960 and the youngest one, the share of graduates with tertiary general education found in the salariat class grew from about 35% to 55% in the foreign population while it remained stable and below the 30% threshold in the Swiss citizen population.

Thus, tertiary education has increasingly become important over time, particularly for birth-cohorts who entered the labour market in the post-1960s years. This trend coincides, of course, with the tertiarisation process that Western societies have gone through since the last third of the twentieth century. In this context of changing social structures, looking at relative trends in return to education should enable us to assess the extent of significance of this increasing absolute return to education trend.

6.4.2 . Relative trends in return to education

Here again, we followed the same framework as previously in order to capture the evolution in the association between educational attainment and social position attained over birth-cohorts. Models fitted are displayed in Tables 6.3 and 6.4 for men and women respectively.

In regard to men's return to education table, the Unidiff model does provide a significant improvement over the CnSF model for both birth-cohort variable configurations. Unidiff parameters in both cases indicate a non-linear increasing trend, as can be seen in Figure 6.9: while men born around the 1940s have seen their level of return to education decrease, in subsequent cohorts, return to education remained rather stable and increased significantly within the youngest one. Surprisingly, however, in the eight birth-cohort version, the Unidiff model with a linear trend more adequately describes the data than the complete Unidiff model. Yet as this trend is not corroborated with the five birth-cohort version, we assume that variations depicted by Unidiff parameters are substantial and thus that return to education actually varied non-linearly for men over birth-cohorts in Switzerland. Thus, overall return to education for men in Switzerland did not decrease, except for those born in the 1940s. In contrast, return to education maintained and even increased for those born after the mid-1960s.

In contrast, women's return to education clearly increased, and more importantly, it increased linearly. Indeed, as can be seen in Table 6.4, the Unidiff model first of all does provide a significant improvement over the CnSF for both birth-cohort configurations. Second, Unidiff parameters clearly indicate a rather linear and important increase in return to education, as can be seen in Figure 6.9. Third, when fitting a Unidiff model with a linear trend, not only does the model provide a significant improvement over the CnSF model, but it must also be preferred over the complete Unidiff model on the grounds of model comparison. Last but not least, the parameters of the Unidiff linear trend model clearly adjust quite well with those of the complete Unidiff model, indicating in fact that the Unidiff linear trend model constitutes a robust outcome. In other words, in spite of some weak variations over birth-cohorts in the level of return to education for women in Switzerland, their occupational advantage afforded by education overall increased both linearly and significantly. Indeed, with an increase in parameters up to 1.35 in the youngest cohort, women's return to education increased substantially.

For both men and women, these trends are corroborated when excluding self-employed and small employers (ESeC category 4) from the table, as this category has a higher propensity to rely on inheritance and other non-meritocratic assets rather than on educational credentials in order to attain this social position. Results of models fitted without this category are displayed in Tables D.2 and

Table 6.3: Results of fitting the log-linear models to men return to education tables, divided into eight cohorts and five cohorts (men aged 30–64)

Models ED	G2	Df	P	DI	%G2	BIC
* Men, 8 cohorts return to education table N=7529						
M0. Cond. Ind.	3345.2	192	0.0000	26.35	-	1631.3
M1. CnSF	248.3	168	0.0000	5.27	92.58	-1251.3
M2. Unidiff	228.0	161	0.0000	4.99	93.19	-1209.2
Parameters M2	*c1 = 1; c2 = 1.03; c3 = 0.91; c4 = 0.92; c5 = 1.09; c6 = 1.04; c7 = 1.06; c8= 1.24*					
M3. Unidiff Linear trend	**236.8**	**167**	**0.0000**	**5.09**	**92.92**	**-1253.9**
Parameters M3	***0.007***					
Model comparison						
M0 - M1	3096.90	24	0.0000			
M1 - M2	20.30	7	0.0180			
M1 - M3	11.50	1	0.0010			
M3 - M2	8.80	6	0.1830			
* Men, 5 cohorts return to education table N=7529						
M0. Cond. Ind.	3268.6	120	0.0000	26.11	-	2197.4
M1. CnSF	159.8	96	0.0000	4.46	95.11	-697.2
M2. Unidiff	**141.1**	**92**	**0.0010**	**4.11**	**95.68**	**-680.1**
Parameters M2	***c1 = 1; c2 = 0.90; c3 = 1.01; c4 = 1.04 ; c5= 1.21***					
M3. Unidiff Linear trend	150.4	95	0.0000	4.26	95.4	-697.6
Parameters M3	*0.006*					
Model comparison						
M0 - M1	3108.80	24	0.0000			
M1 - M2	18.70	4	0.0050			
M1 - M3	9.40	1	0.0060			
M3 - M2	9.3	3	0.0250			

Notes: Cond Ind=conditional independence model; CnSF=constant social fluidity model (the model which assumes the ED association to be constant); Unidiff=uniform difference model (the model which assumes the ED association changed). G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index, %G2=proportion of reduction of deviance, BIC=Bayesian information criterion. On the parameters lines, c1 to c5/c8 refer to corresponding birth-cohorts. *To be significant, each new effect added into a model is compared to previous nested model and should exhibit a p-value below 0.05 (see models comparison panels)*

D.3 respectively for men and women, in appendix D.

In addition to that, similar trends in Unidiff parameters are returned when models are run only on the Swiss citizen population (see Figure D.5). We nonetheless observe within the youngest cohort that (1) for men, return to education increased slightly more on the whole population than only on Swiss citizens, and that (2) for women, return to education looks more marked within the Swiss population than the whole population. In other words, these crude trends suggest that foreign men enjoy higher returns to education than Swiss men, and Swiss women higher returns than their foreign counterparts.

Finally, in Table D.4 in the same appendix, parameters of best models fitted for men and women are displayed. These parameters indicate how much education conditions social position attained. We

Table 6.4: Results of fitting the log-linear models to women return to education tables, divided into eight cohorts and five cohorts (women aged 30–64)

Models ED	G2	Df	P	DI	%G2	BIC
* Women, 8 cohorts return to education table N=6922						
M0. Cond. Ind.	2679.4	192	0.000	21.99	-	981.7
M1. CnSF	232.2	168	0.001	4.91	91.33	-1253.3
M2. Unidiff	210.9	161	0.005	4.59	92.13	-1212.8
Parameters M2	*c1 = 1; c2 = 1.26; c3 = 1.16; c4 = 1.32; c5 = 1.41; c6 = 1.34; c7 = 1.49; c8= 1.60*					
M3. Unidiff Linear trend	**213.0**	**167**	**0.009**	**4.6**	**92.05**	**-1263.7**
Parameters M3	***0.0123***					
Model comparison						
M0 - M1	2447.20	24	0.000			
M1 - M2	21.30	7	0.008			
M1 - M3	19.20	1	0.000			
M3 - M2	2.10	6	0.862			
* Women, 5 cohorts return to education table N=6922						
M0. Cond. Ind.	2605.1	120	0.000	21.98	-	1544
M1. CnSF	145.5	96	0.001	4.23	94.41	-703.3
M2. Unidiff	129.4	92	0.006	3.98	95.03	-684.2
Parameters M2	*c1 = 1; c2 = 1.06; c3 = 1.14; c4 = 1.22; c5= 1.35*					
M3. Unidiff Linear trend	**130.6**	**95**	**0.009**	**3.99**	**94.99**	**-709.4**
Parameters M3	***0.0089***					
Model comparison						
M0 - M1	2459.60	24	0.000			
M1 - M2	16.10	4	0.009			
M1 - M3	14.90	1	0.000			
M3 - M2	1.20	3	0.745			

Notes: Cond Ind=conditional independence model; CnSF=constant social fluidity model (the model which assumes the ED association to be constant); Unidiff=uniform difference model (the model which assumes the ED association changed). G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index, %G2=proportion of reduction of deviance, BIC=Bayesian information criterion. On the parameters lines, c1 to c5/c8 refer to corresponding birth-cohorts. *To be significant, each new effect added into a model is compared to previous nested model and should exhibit a p-value below 0.05 (see models comparison panels)*

can see for instance that men who completed tertiary vocational education and tertiary general education rather than only compulsory education were respectively 104 times and 557 times more likely to attain a higher salariat position rather than a semi-/unskilled one. The same parameters are respectively 50 and 152 for women. In other words, the association between educational attainment and social position is very strong in Switzerland.

Altogether, not only has education become in absolute terms increasingly important in the occupational attainment process, but it also has in relative terms. This trend is particularly salient among women, while it is relatively more moderate in regard to men. Yet among men, there is a clear increasing trend in return to education within the youngest birth-cohort, suggesting that

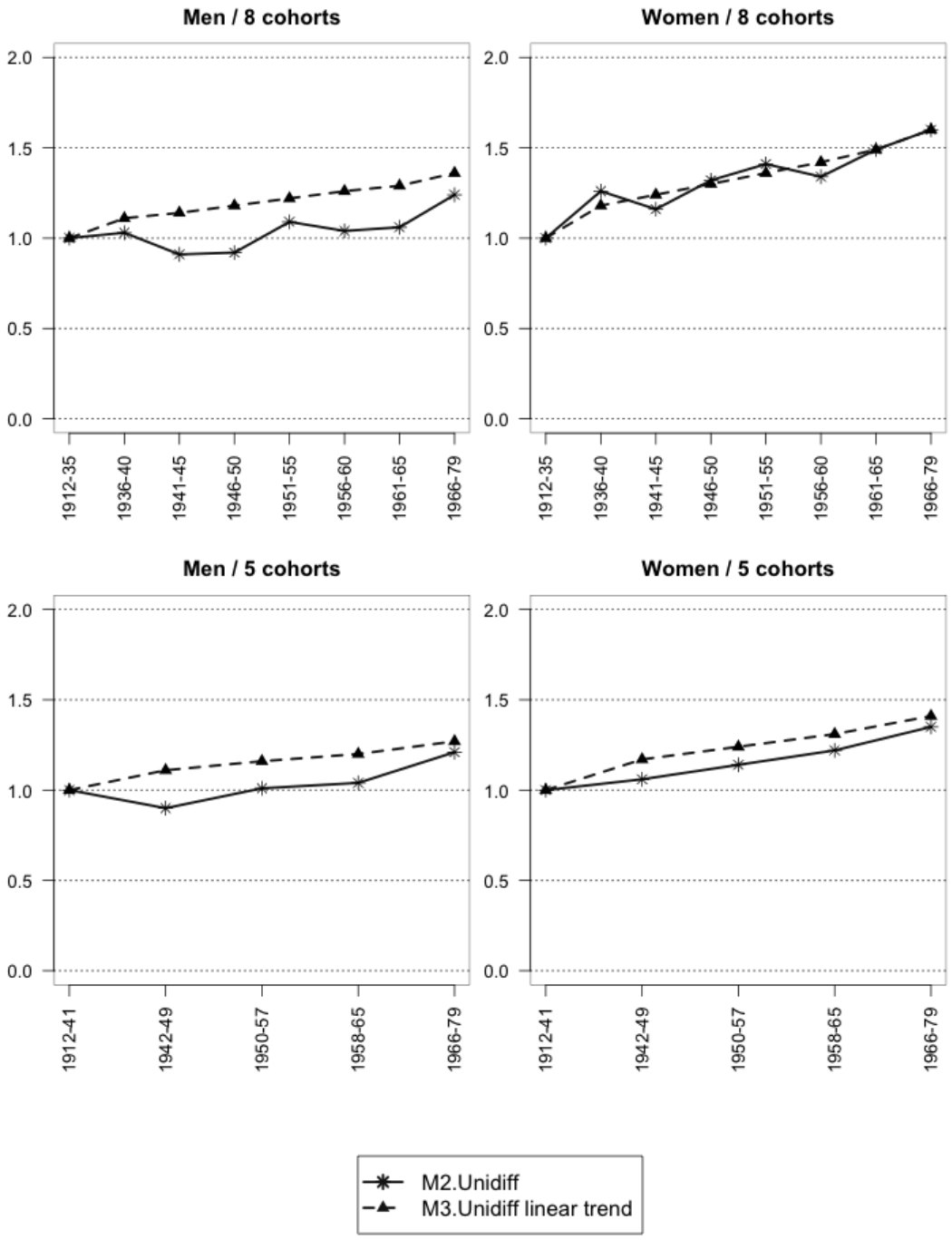

Figure 6.9: Plots of parameters of the different Unidiff models fitted on men and women return to education tables, divided into eight cohorts and five cohorts.

education in Switzerland is becoming increasingly important. However, while education gains importance on the labour market, we can wonder whether the direct effect of social origin on social destination varies according to levels of education, in line with the compositional effect claims.

6.5 . Is the direct origin-destination association weaker in higher levels of education?

From the previous chapter in which we modelled the association between social origin and social destination in Switzerland, we observed some minor variations in social fluidity, pointing in no consistent direction. It is important to stress that this trend (1) is not statistically significant, and (2) is not linear, as social fluidity actually decreases within younger cohorts. Thus, change in social fluidity in Switzerland is rather limited, if at all present. However, we can wonder whether this relatively minor change could have been driven by a compositional effect. Indeed, compositional effect has been described as being one possible way to increase social fluidity. A compositional effect results from the observation that the association between social origin and social destination decreases within higher levels of education, meaning that social selection among the highly educated depends primarily on their educational assets rather than their ascriptive assets. In turn, this effect, coupled with educational expansion, is likely to increase social fluidity as more and more people reach a social position according to meritocratic assets.

To test this effect, we modelled the three-way interaction table between social origin, educational attainment and social destination and looked whether the origin-destination association varied significantly by levels of education with a Unidiff model. Results displayed in Tables 6.5 and 6.6 respectively for men and women do indicate that a compositional effect in Switzerland exists, as the Unidiff model clearly provides a better fit than the CnSF model.

Unidiff parameters depicted in Figure 6.10. indicate that for both men and women this is indeed within the highest level of education – tertiary general education – that the origin-destination association is the lowest. This effect is particularly strong among women with a parameter of 0.18. There are, however, gender differences regarding the level of education which displays the highest level of origin-destination association, besides the first categories of the education variable that refers to compulsory education. For women, it is among the level of tertiary vocational education that the OD association is the strongest (0.80), whereas among men this is within the secondary vocational education category (0.66).

Interestingly, when we replicate models only on the Swiss citizens population, we observe that the Unidiff model is no more significant than the constant association model (models not displayed but

Table 6.5: Results of fitting the log-linear models to test the compositional effect hypothesis on men's mobility table (men aged 30–64)

Models OED	G2	Df	P	DI	%G2	BIC
* Men, OED table N=6954						
M0. Cond. Ind.	643.4	180	0.0000	10.65	-	-949.1
M1. CnSF	202.6	144	0.0010	4.5	68.51	-1071.4
M2. Unidiff	**183.3**	**140**	**0.0080**	**4.55**	**71.51**	**-1055.3**
Parameters M2	*e1 = 1; e2 = 0.51; e3 = 0.66; e4 = 0.56; c5 = 0.32*					
Model comparison						
M0 - M1	440.80	36	0.0000			
M1 - M2	19.30	4	0.0001			

Notes: Cond Ind=conditional independence model; CnSF=constant social fluidity model (the model which assumes the OD association to be constant); Unidiff=uniform difference model (the model which assumes the OD association changed). G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index, %G2=proportion of reduction of deviance, BIC=Bayesian information criterion. On the parameters lines, e1 to e5 refer to corresponding educational levels. *To be significant, each new effect added into a model is compared to previous nested model and should exhibit a p-value below 0.05 (see models comparison panels)*

Table 6.6: Results of fitting the log-linear models to test the compositional effect hypothesis on women's mobility table (women aged 30–64)

Models OED	G2	Df	P	DI	%G2	BIC
* Women, OED table N=6369						
M0. Cond. Ind.	357.3	180	0.0000	7.68	-	-1219.4
M1. CnSF	191.5	144	0.0050	4.21	46.41	-1069.8
M2. Unidiff	**179.1**	**140**	**0.0140**	**4.08**	**49.86**	**-1074.2**
Parameters M2	*e1 = 1; e2 = 0.64; e3 = 0.59; e4 = 0.80; c5 = 0.18*					
Model comparison						
M0 - M1	165.80	36	0.0000			
M1 - M2	12.40	4	0.0150			

Notes: Cond Ind=conditional independence model; CnSF=constant social fluidity model (the model which assumes the OD association to be constant); Unidiff=uniform difference model (the model which assumes the OD association changed). G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index, %G2=proportion of reduction of deviance, BIC=Bayesian information criterion. On the parameters lines, e1 to e5 refer to corresponding educational levels. *To be significant, each new effect added into a model is compared to previous nested model and should exhibit a p-value below 0.05 (see models comparison panels)*

available on request). The inspection of Unidiff parameters provides us with the reason for such a difference: while on the total population, the association between social origin and social destination within tertiary graduate women is very low (0.18), among Swiss women the same it is much stronger (0.52). This difference is enormous and indicates that the compositional effect among women accounts for a significant share of highly educated foreign women. In contrast, within the male population, we observe very little difference according to citizenship, as can be seen in Figure 6.10.

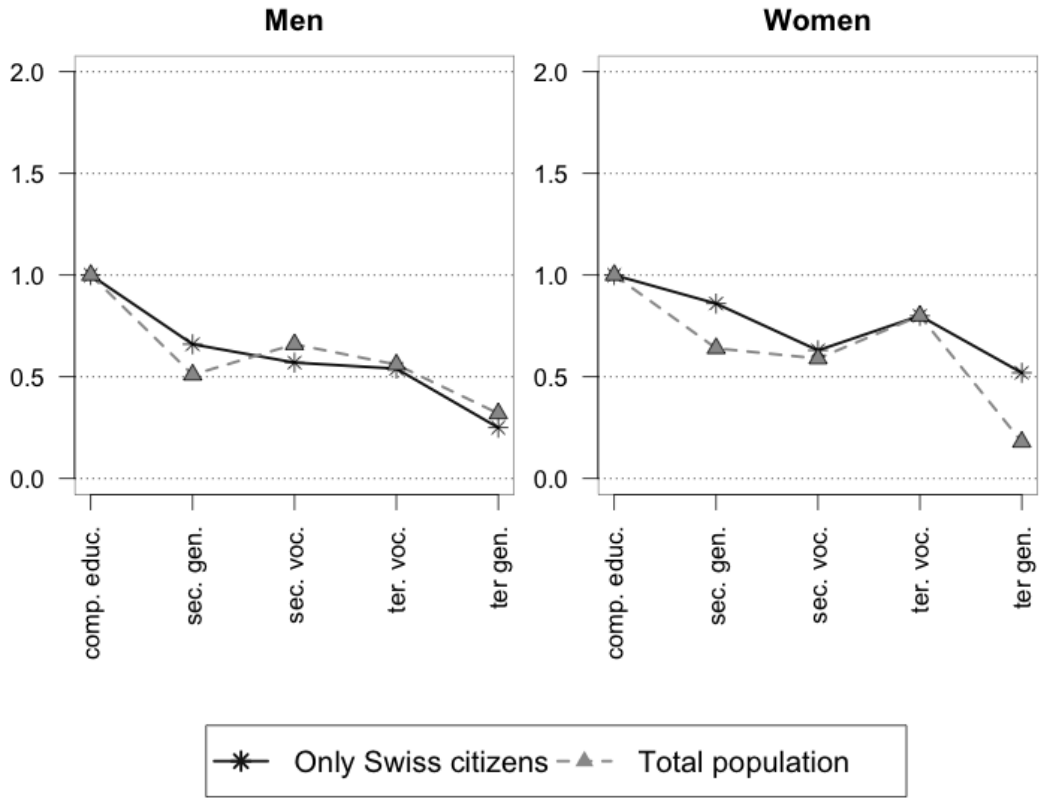

Figure 6.10: Plots of parameters of the Unidiff models fitted on men and women to test the compositional effect hypothesis (OD according to E) on all the population and only Swiss citizens.

Thus, the association between social origin and social destination decreases significantly by levels of education, at least for men. For women, this effect is mostly driven by foreigners. However, it appears that this effect has had scarce effect on the overall structure of social fluidity in Switzerland, given the near-constant – or at least trendless – social fluidity trend pointed out in the previous chapter. This effect, while substantial, most likely had only a very limited impact on social fluidity, as it has not been coupled with significant educational expansion. We verify this assertion in the next section.

6.6 . Does the origin-destination association remain constant when effects of education are controlled?

In order to ascertain the trends on the mediating effect of education on intergenerational social mobility, we ran a last set of models to our data on a four-way mobility table containing variables

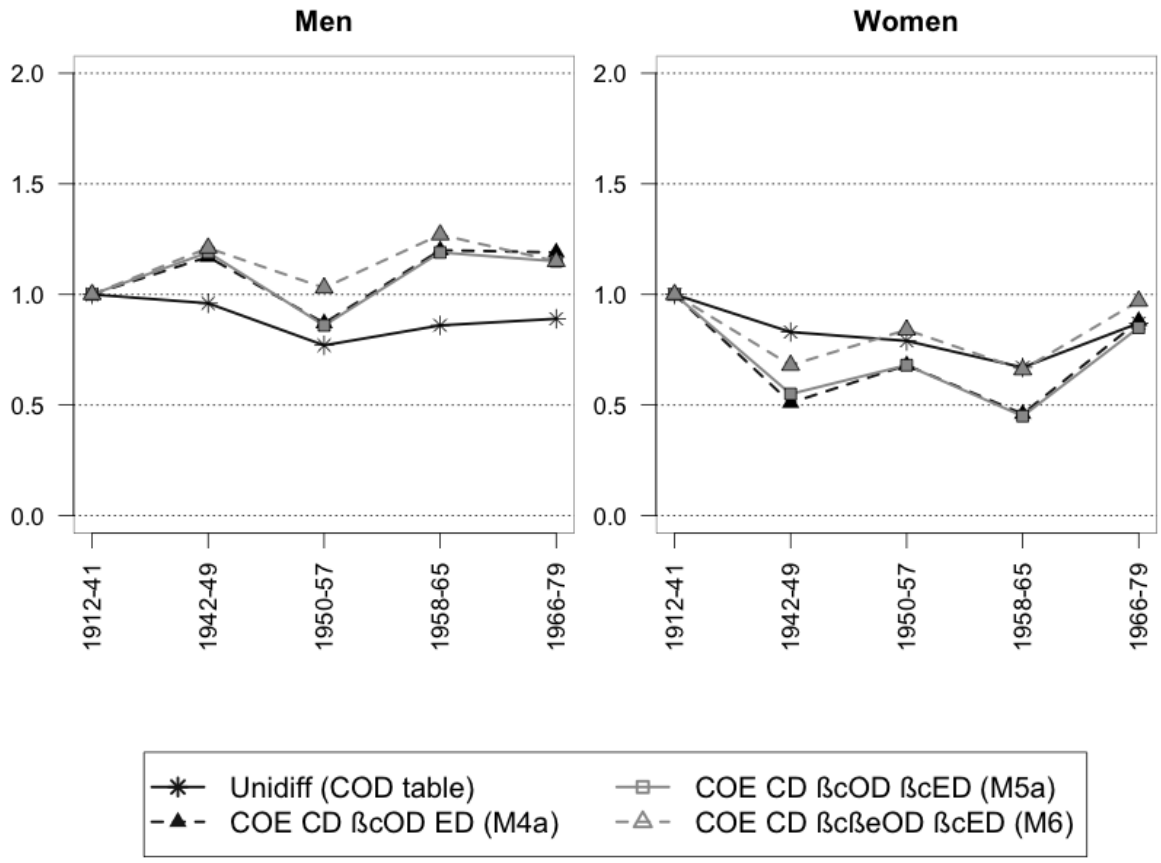

Figure 6.11: Unidiff parameters of the origin-destination association for models controlling effects of education fitted on men and women mobility tables, divided into five cohorts

for birth-cohort, social origin, educational attainment, and social position attained. In fact, it could be the case that another trend in the origin-destination association arises when the educational variable is introduced in our models. Therefore, to test the extent to which our conclusions still hold when we put all variables together in one single model set, we replicated models presented in Pollak and Müller (2013). Models fitted are displayed in Table D.5.

Models M2 and M3 indicate that respectively adding the origin-destination and the education-destination associations to the baseline model (M1) improves the fit of the model to the data for men and women. When we put these two terms together in M4, the model fit further improves. Then in models M4a-c, we test whether adding diverse Unidiff effects separately improves the fit. For both men and women, adding a Unidiff effect on the OD association over birth-cohort does not provide a significantly better adjustment of the model to the data (M4a). In other words, variations in the OD association remain too small to conclude a substantial OD change, even when controlling

for education. In regard to return to education (M4b) and compositional effect (M4c), both effects remain significant, at least when they are taken separately, being for men or women. A further set of models tests whether both effects combined together add to the model fit as well. As can be seen from model comparison between M4b/M4c to M5b, both effects still remain significant when they are put together. Finally, the comparison of model M5b and model M6 once again confirms that no significant change in the OD association can be uncovered, even when accounting for the previous significant effects. These observations hold for both men and women.

In other words, our main conclusions remain unchanged when controlling for direct effects of each combination of models we fitted in previous sections. In particular, from Figure 6.11 we observe that the trend in the association between social origin and social destination across birth-cohorts depicts the same *trendless fluctuation* pattern as found in the previous chapter, even when controlling for the effect of education, whether being return to education or educational expansion. From this standpoint, since we have asserted the robustness of our substantial conclusions, we can now turn to a thorough discussion of our findings.

6.7 . Discussion and conclusion

Our goal in the chapter was to assess in the context of Switzerland (1) the extent of change on educational inequality (equalisation effect), (2) the extent of change in the occupational advantage afforded by education (return to education), and (3) the extent of difference in the association between social origin and social destination according to level of education (compositional effect). We further assessed overall trends in educational expansion in Switzerland and systematically pointed out gender differences in respect to our research questions. We hypothesised that educational equality increased in Switzerland over time (H2a), particularly within the youngest cohorts (H2b); that return to education had remained stable (H3a), but decreased in the youngest cohort (H3b); and that the association between social origin and social destination would be weaker in higher levels of education (H4). We further expected some gender convergence over time and some differences between men and women (H7), and between Swiss citizens and foreign residents (H8).

Our results indicate that the share of the population attaining at least secondary education considerably increased over birth-cohorts in Switzerland. Yet Switzerland remains a country characterised by strong development of secondary vocational education, with about 40% of the total population attaining this type of education, and with the limited expansion of higher education, as less than 20% of people from the youngest birth-cohort gained tertiary general education. Thus, first

of all, educational expansion in Switzerland remains relatively moderate in comparison to other Western countries. We also observed that amongst youngest cohorts, the foreign population outnumbered Swiss citizens in tertiary general educational tracks, congruently with the changing profile of migration in Switzerland, due to the recruitment of highly qualified migrants over recent years (Pecoraro 2005; Piguet 2013).

Regarding gender inequality, it decreased quite considerably, lending support to our hypothesis (H7). Indeed, women used to be far less likely than men to attain at least secondary education in the oldest birth-cohorts, whereas this difference almost faded away within the youngest birth-cohort. However, at tertiary educational levels, gender inequality did not completely disappear. Indeed, gender differences remain rather significant, particularly within the tertiary vocational level, as men who gain any type of tertiary education outnumber women by a margin of 15%. Thus, while educational opportunities did equalise between men and women, this trend is not as sharp as what has been observed in most other Western countries. However, gender inequality in educational attainment is lower within the foreign population, particularly at tertiary education levels. In particular, within the youngest cohort, foreign women actually outperform men, being foreigner or Swiss, within tertiary general tracks. Thus, contrary to our hypothesis (H8), the foreign population does not systematically lag behind the Swiss citizen population. In contrast, some segments of the foreign population look particularly advantaged. Overall, this lower propensity for gender segregation in the foreign population stems from its lower representation in vocational tracks, as compared to Swiss citizens.

Educational expansion in Switzerland benefited mainly those with a working class background. However, at tertiary education levels, children of working-class origin still lag behind salariat class origin one. This trend is particularly pronounced within the tertiary general educational level. Thus, while we observe an equalisation trend in regard to having attained at least secondary education, at the tertiary level we observe a trend towards increasing inequality between social backgrounds. More thorough investigation reveals that women who attained tertiary education were much more likely than men to come from a salariat social background. In addition to that, within the foreign population, those who graduated from tertiary education were considerably more likely than Swiss citizens to come from a salariat class background. Since this trend is extremely pronounced within the youngest cohorts, social reproduction is increasing in the foreign population.

Yet in relative terms, educational inequality decreased to a certain extent, but not linearly. Indeed, for men and women, the Unidiff parameters indicate that while educational inequality declined up to birth-cohorts born in the mid-1960s, in the subsequent cohort they reinforced. This latter trend is

consistent with previous research in Switzerland (Jann and Combet 2012), and among women accounts to a certain extent for foreign women in particular. Furthermore, this overall decreasing trend appears to be much less marked for women than for men. In other words, while women from younger cohorts gained better access to education than before, these women were more likely than men to be positively selected on a higher social class background. Yet overall these observations corroborate one of our hypotheses (H2a), though not the second one (H2b). Indeed, the trend towards increasing educational equality has come to an halt, and even reversed, in the youngest cohort, suggesting that the development of Universities of Applied Sciences since the 1990s in Switzerland may have not favoured greater equality of educational opportunity, but rather the contrary. This observation, however, would require more scrutiny to assert the effect of these new educational tracks on the total structure of educational opportunity.

In the meantime, as educational equality increased in Switzerland, return to education did as well. In fact, educational attainment became increasingly important in order to reach a salariat position. In particular, for birth-cohorts who started to enter the labour market in the post-1960s years, a tertiary general educational degree became more important over time. This trend also holds in relative terms net of structural changes for both men and women. It is particularly salient among women, while it is more moderate in regard to men. Thus, in contrast to other European countries, return to education in Switzerland did not decrease but rather increased. This observation is at odds with our hypotheses. We predicted that return to education would have remained relatively stable rather than increase (H3a), but also that it would have decreased in youngest cohorts (H3b). One simple explanation of such counter-intuitive trends could stem from the non-congruence between the educational and the social structures, with the limited and late expansion of tertiary education in Switzerland, as well as the considerable supply of occupations in salariat occupations. In particular, it could be the case that since the social structure expanded more rapidly and earlier than the educational structure, oldest cohorts with only, say, secondary vocational education, could still reach high social positions. In contrast, for younger cohorts who entered the labour market following educational expansion, education might have become more crucial in attaining the same social position.

Finally, we observe a compositional effect for both men and women in Switzerland, in line with our expectations (H4). Parameters indeed reveal that the association between social origin and social destination is almost independent within the tertiary general educational level. Into other educational levels, this association is weaker as compared to compulsory education, but displays gender differences in levels of association between social origin and social destination. Nonetheless,

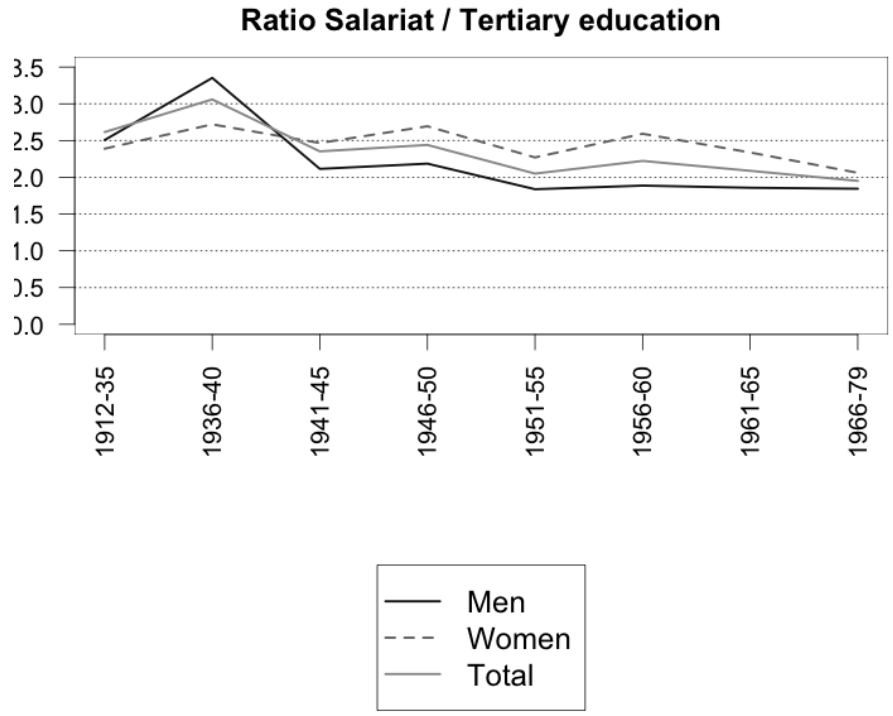

Figure 6.12: Ratio between share of salariat class destination and share of tertiary-educated over birth-cohort in Switzerland

after excluding foreign residents, the compositional effect is no more significant among women. Parameters indicate that among Swiss women who graduated from tertiary general education, social origin still remains important. This observation suggests that foreign women who attain the highest educational level in contrast to Swiss women are recruited only on their merit, rather than on their social origin. Overall, while a compositional effect takes place in Switzerland, at least among men, it remains unclear as to whether this effect actually fostered social fluidity, given the relatively constant level of social fluidity that was pointed out in the previous chapter. Most likely, this effect, while substantial, had only a limited impact on social fluidity in Switzerland, as it has not been complemented with significant educational expansion.

All in all, the configuration of trends in intergenerational social mobility in Switzerland is quite unusual. Overall trends point in the direction of an equalisation effect and a compositional effect. Furthermore, there is clear evidence that return to education not only maintained but increased – at least within the youngest cohorts – in Switzerland, unlike other European countries. All these observations support our research hypotheses, and even go beyond when it comes to returns to

education. Thus, from this standpoint, we could reach the simple conclusion that Switzerland is a rather meritocratic country, as the effect of social origin on social destination seems to have decreased when this effect is mediated by education. Yet asserting such conclusions would be misleading since the direct effect of social origin on social destination has remained rather constant over birth-cohorts in Switzerland. In fact, the constant social fluidity trend that we pointed out in the previous chapter still holds when we control for the different mediating effects of education on this association. In other words, Switzerland provides an interesting example of a configuration where all mechanisms that can increase social fluidity take place without having substantially increased social fluidity. These observations are mostly in line with Jacot's (2013) recent publication, in which he underlined that in Switzerland, social origin still had a significant influence on social destination when controlling for education. This outcome must be interpreted, of course, in light of Switzerland's institutional context, which is characterised by a low expansion of tertiary education, especially at general levels, and a highly tertiarised labour force.

Finally, on the substantial ground, this analysis leaves us with three remaining remarks. First, our analysis clearly demonstrates that theoretical assumptions of the liberal theory of industrialism are, in fact, wrong. While this theoretical framework expected that social fluidity would increase logically if educational inequality decreased and return to education increased, what we actually observe here is an offset. It seems indeed that social origin has become less important to reach secondary educational levels but *not* tertiary ones. Thus, social origin remains an important predictor of the attainment of tertiary education. Yet in the meantime, the value of education on the labour market maintained and even increased – for women especially. Stated differently, changes in educational opportunities and return to education do not systematically imply changes in social fluidity and greater meritocracy. As some scholars underline (Goldthorpe and Jackson 2008), the idea of an education-based meritocracy in modern societies should not overshadow the persisting direct effect of social origin on social destination. Switzerland, in this respect, does provide an interesting example of what we could provocatively call a “non-meritocratic meritocracy”.

Second, all our analysis indicates that inequalities might actually have reinforced within youngest birth-cohorts. In fact, for both men and women, educational inequalities increase within cohorts born after the mid-1960s. Furthermore, return to education increased among men within the same birth-cohort, while it was quite constant in older ones, and among women it kept on increasing linearly. One possible explanation for that could be found in the consequences of the 1990s economic crisis in Switzerland, which was marked with a significant increase in unemployment (Flückiger 1998). It remains unclear whether the development of Universities of Applied Sciences

since the late 1990s accounts for this polarisation effect. It would seems to us that, since the polarisation appears to be located mainly between secondary vocational and tertiary general levels, these Applied Universities should be likely to reduce class inequalities – or at least not reinforce them. However, a non-negligible share of this reinforced inequality trend could also stem from the growing heterogeneity in the profile of the foreign population. Indeed, over recent years, Switzerland has increasingly recruited highly qualified migrants. We clearly observe this trend in our data, since within the youngest cohorts foreigners who are found within a salariat position are more likely than Swiss citizens to have graduated from tertiary general education. In the meantime, a noticeable share of the foreign population has remained poorly educated, particularly those originating from countries outside the EU. Yet on the theoretical ground, these observations clearly lend some support to *the trendless fluctuations thesis*, originally phrased by Sorokin (1927) and later championed by Erikson and Goldthorpe (1992b), which states that no society is actually characterised by either an increase or a decrease in social mobility, but instead by alternation of waves of increase and waves of decrease.

Third, the finding of a constant and even increasing level of return to education in Switzerland constitutes a notable exception in Europe. Indeed, while in most European countries it was found that return to education actually decreased (Breen and Luijkx 2004a), we have found the contrary in the Swiss context. One possible explanation for this might pertain to the specificities of Swiss social stratification, with the moderate development of tertiary education and the significant development of the salariat, which accounts for about 50% of the social structure within youngest cohorts in the male population. The lack of enough qualified labour force would actually constitute the most straightforward explanation for such a trend. Yet over recent years, education might have become more determinant on the labour market because of educational expansion. Notably, this effect must have been reinforced by the increasing share of highly qualified foreign workers that arrived in Switzerland over recent years. These two trends clearly adjust to the Swiss labour market, whose core feature is a high demand for highly qualified individuals.

In fact, as can be seen in Figure 6.12, there have always been more opportunities in the salariat than individuals educated at the tertiary educational level in Switzerland. In fact, the ratio never drops below the 1.5 threshold. A similar trend was observed in Germany by Klein (2011) to explain the rather constant level of return to education in this country. Klein further analysed how the slight reduction in university return to education in Germany stems from a compositional effect. While decreasing return to education is often attributed to educational expansion (Ganzeboom and Luijkx 2004), an alternative explanation is that of a compositional shift in the structure of occupations.

Klein indeed highlights that the slight decrease in return to education observed in Germany stems from the higher development of jobs in administrative and management positions than those in the professional social services over recent decades, since these former occupations are less dependent on education. In this context, we could wonder along similar lines to which extent the increasing return to education trend observed in Switzerland stems from some form of compositional effect in the occupational structure and if we observe heterogeneous social mobility dynamics in the big service class. This will be our endeavour in the next and final empirical chapter of this thesis. In order to analyse whether this is the case, we shall assess first the extent of specificity of the Swiss pattern of social mobility to clearly point out where overall barriers to social mobility are located, then we will look more thoroughly into the social mobility pattern to see whether we can observe finer social mobility dynamics with a different class schema than what we have used so far.

7 . Barriers to social mobility in Switzerland: finding the Swiss pattern of social mobility and disaggregating the big service class in social mobility analysis

7.1 . Introduction

In the two preceding chapters, we found that the impact of social origin on the social position attained remained constant over birth-cohorts in Switzerland, but that educational inequality had decreased and return to education maintained and even increased. This latter observation is peculiar enough as return to education actually decreased in many European countries. Therefore, in this context, we can wonder whether this trend in return to education could stem from a compositional effect in the employment structure, particularly within the salariat. Indeed, while in Switzerland and other Western countries, the tertiarisation process considerably increased the share of occupations in the salariat, this trend has been particularly marked in Switzerland since almost 50% of men and 40% of women are located in the class within the youngest birth-cohort.

As a consequence, we propose in the present chapter to thoroughly analyse the social mobility pattern to understand social mobility dynamics in Switzerland, particularly by disaggregating the salariat class. To do so, we will fit Erikson and Goldthorpe's model of core social fluidity (1992b), first following the classic core approach, in order to situate Switzerland in a comparative perspective, and second, using a disaggregated framework to assess heterogeneity in the social mobility dynamic within the service class. Therefore, not only should we fit the classical core model of social fluidity to our data, but we should also question whether new dynamics can be observed in this changing context by readapting the core model of social fluidity.

In line with our hypotheses:

- the Swiss pattern of social fluidity should deviate from the core model of social fluidity (H5a), as this has been observed for Germany, and,
- particularly the children from the self-employed should be more downwardly mobile than it is assumed under the core model (H5b).

- the service class should display heterogeneous social mobility dynamics (H6a) and,
- high social immobility should be found in the self-employed service class (H6b).

Our analysis is divided into two parts. In the first part, we will aim to find the Swiss pattern of social fluidity. To do so, we will replicate Erikson and Goldthorpe's core model of social fluidity and adjust it to our data. In the second part, we will address the issue of whether subtler social mobility dynamics can be observed within the service class when we apply the Oesch class schema to our data. In both parts, we will systematically draw trends in class distribution evolution as well as inflow and outflow distributions according to social origin and educational attainment.

7.2 . Finding the pattern of social fluidity in Switzerland

7.2.1 . Trends in class distribution following the "core social fluidity approach"

Figure 7.1 displays trends in the distribution of each social class in the version that will be used to undertake analysis of core social fluidity in Switzerland for men, women and father. This plot will certainly help us to correctly understand the commonalities and the specificities of Switzerland in terms of social fluidity. Although similar plots were presented in the first empirical chapter of this thesis, this one is different in that some social class categories are more aggregated (the service class, the white collar) and other are disaggregated (petite bourgeoisie and farmers). Furthermore, we plotted the father's social position.

Major trends indicate that almost half of men in Switzerland occupy a position in the service class. This share remains rather stable over birth-cohorts. In contrast, the share of women in this class considerably increases over the same interval of time. While about 25% of women entered this class in the oldest cohort, about 40% of women born in the post-1940s entered this class. Looking at the distribution of fathers in this class also indicates that the service class developed significantly over the twentieth century. The white collar class is dominated by women, with more than 30% of them in this class, while only about 10% of men and fathers have this class position. The petite bourgeoisie displays a decreasing trend for both men and women over time, although this trend is more pronounced within women. Interestingly, we do not observe a reversal trend in the youngest cohort in this category, as the literature suggests (Arvanitis and Marmet 2001; Buchmann et al. 2009; Tillmann and Budowski 2007). There can be two possible explanations for this: either our sample does not really capture this phenomenon for reasons of time frame or operationalisation; or the reversal trend actually happened within other segments of self-employment that are not captured

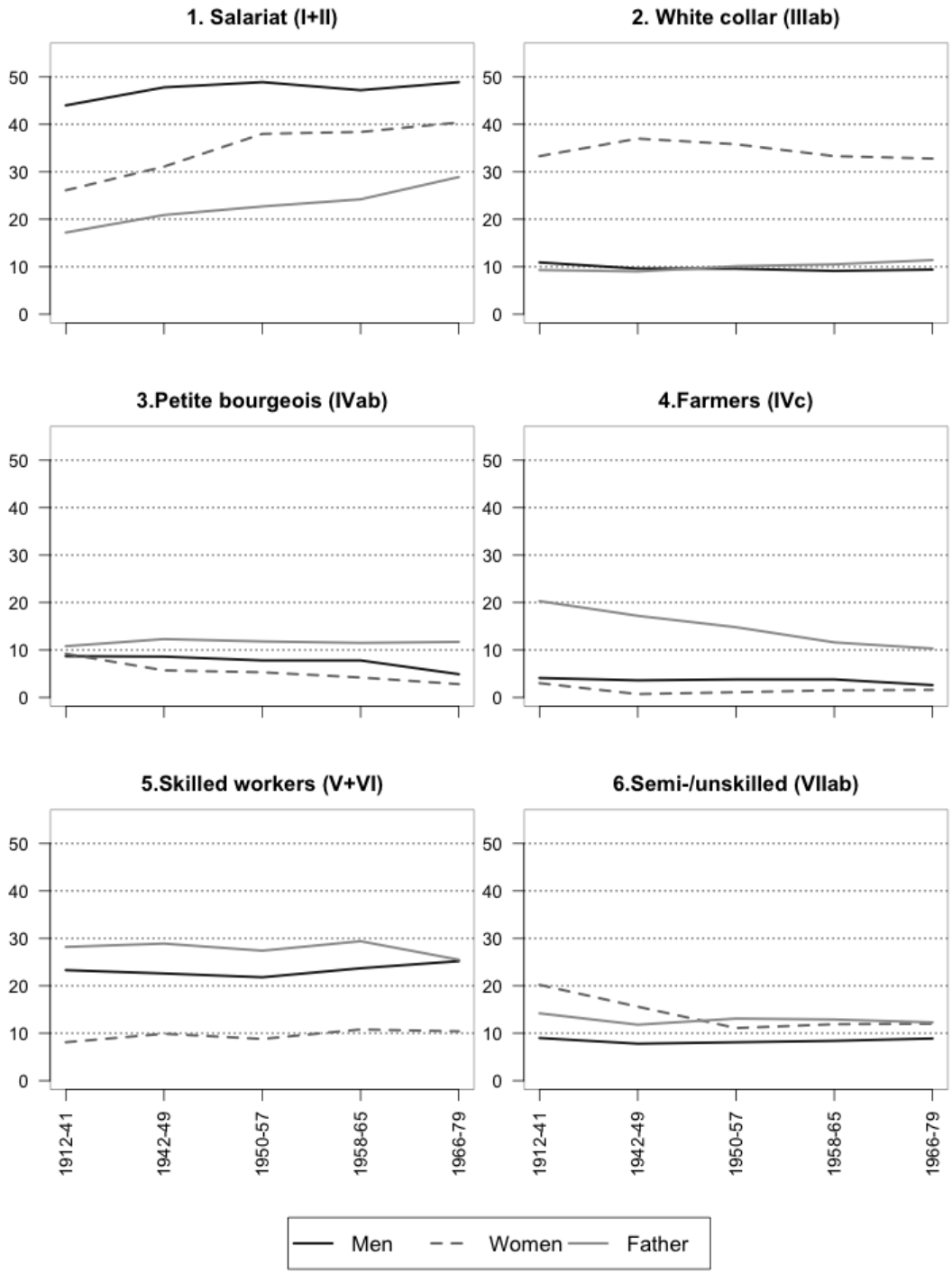

Figure 7.1: Marginal distributions of class origin (father) and class destination by gender over birth-cohorts in percentages following the core social fluidity approach

through this classification. Regarding fathers, about 10% of them remain in the petite bourgeoisie over birth-cohorts. The class of farmers is, for the first time, isolated here. We observe that this class was quite significantly developed among fathers of the oldest birth-cohorts. However, with

industrialisation, it significantly decreased, accounting for about 10% of all social origins within the youngest birth-cohort. Regarding men and women, less than 5% of them actually occupied a farmer position across all birth-cohorts. It is noteworthy that the share of skilled workers tends to have slightly increased over time for men. Finally, we observe that the share of women within the semi-/unskilled class decreased up to the post-1940s birth-cohort. At that point, it stabilised around the 10% level, as it did for their male and father counterparts.

Altogether, the farmers as a class origin decreased significantly, the petite bourgeoisie class decreased moderately, and the service class became the biggest social class over time for both men and women. From this standpoint, we can wonder which form the social mobility pattern in Switzerland takes. But before fitting and eventually adjusting the core model of social fluidity to Switzerland, a general inspection of outflow and inflow percentages in the mobility tables of men and women will certainly provide us interesting information regarding reproduction and recruitment within each of the aforementioned classes as well as according to education.

7.2.2 . General pattern of absolute reproduction and recruitment within the equivalent “core model” classes

Table 7.1 shows the outflow and inflow percentages distribution between class of origin and class destination by gender.

Looking at the distribution of outflow percentages first, we observe that social reproduction is the highest within the salariat class for both men and women: more than 70% of sons of the salariat class remain in this class themselves and almost 55% of daughters do. In contrast, sons of white collar workers are much more likely to attain the salariat class (55%) than to remain in their father's class. Nonetheless, about 20% of them experience downward social mobility within the skilled worker class. Daughters of white collar workers are equally likely to remain in their father's class position or to move upwardly in the salariat class. Interestingly, social reproduction is not very high among sons and daughters of the petite bourgeoisie (respectively 15% and 7%). Almost half of petite bourgeoisie sons actually experience upward mobility within the salariat class, while 20% of them do exhibit social downgrading within the skilled worker class. Thus, this class doesn't appear highly cohesive. Three quarters of women with a petite bourgeoisie class background end up in salariat and white collar positions. A similar pattern can be observed within the farmer class: first, only 20% of men and 7% of women actually remain in the farmer class; second, 24% of sons of farmers attain salariat positions and 28% skilled workers positions; third, about 50% of daughters of farmers gain a salariat or white collar position. Yet almost 40% of the latter end up either in a

Table 7.1: Distribution of outflow and inflow percentages between class of origin and class destination by gender following the equivalent core social fluidity classes.

Men

	Outflow percentages							Inflow percentages						
	1	**2**	**3**	**4**	**5**	**6**		**1**	**2**	**3**	**4**	**5**	**6**	total
1. Salariat	71.4	7.7	6.4	0.4	11.1	3.1	100	34.4	18.4	19.7	2.7	10.9	8.3	23.1
2. White col.	54.4	11.5	6.6	0.8	20.3	6.4	100	11.6	12.2	8.9	2.3	8.9	7.7	10.3
3. Petite bourg.	49.4	8.9	14.7	1.5	19.8	5.7	100	11.5	10.3	21.8	4.8	9.4	7.5	11.1
4. Farmers	24.3	7.4	6.8	20.7	28.1	12.6	100	7.5	11.3	13.4	85.0	17.6	21.9	14.4
5. Sk. workers	43.9	10.5	7.5	0.4	28.8	8.9	100	25.5	30.3	27.9	2.8	34.3	29.3	27.9
6. unsk. workers	33.5	12.6	4.6	0.6	32.9	15.9	100	9.4	17.6	8.2	2.4	18.9	25.3	13.2
Total	47.1	9.1	7.4	3.3	23.7	8.8	100	100	100	100	100	100	100	100

Women

	Outflow percentages							Inflow percentages						
	1	2	3	4	5	6		1	2	3	4	5	6	total
1. Salariat	54.3	29.8	4.4	0.5	6.1	4.8	100	36.1	20.9	21.9	8.8	15.0	8.8	23.5
2. White col.	38.3	39.6	3.8	0.4	7.7	10.1	100	10.7	11.7	8.0	3.2	8.0	7.8	10.0
3. Petite bourg.	37.2	36.7	6.8	0.2	8.1	11.1	100	12.6	13.1	17.2	1.7	10.1	10.3	11.7
4. Farmers	22.5	27.4	4.2	6.9	15.6	23.5	100	8.3	10.7	11.6	66.2	21.2	23.9	13.9
5. Sk. workers	32.8	37.0	4.9	0.7	11.3	13.3	100	25.3	30.1	28.4	14.0	32.1	28.3	28.1
6. unsk. workers	21.1	39.0	5.1	0.7	11.2	22.9	100	6.9	13.6	12.8	6.2	13.6	20.8	12.7
Total	35.7	34.8	4.6	1.4	9.8	13.6	100	100	100	100	100	100	100	100

skilled worker or in skilled-/unskilled worker position. Thus, a petite bourgeoisie social background seems to offer greater upward mobility opportunities than a farmer social background. Social reproduction is quite important within the skilled worker class among men, although more than 40% of men with this social background attained a salariat position. Women with a skilled worker class background are much more likely to move upward within the salariat (33%) or the white collar (37%) classes rather than to stay in their social origin class (11%). Finally, almost half of men with a semi-/unskilled class background remained in this class or moved to the neighbour class of skilled workers. Yet 33% of them reached the salariat and 13% the white collar classes. For women with the same social background, direct social reproduction is more marked than for men (23%), but still about 60% of them gained a salariat or white collar class.

Overall, the salariat class and the white collar class for women constitute the most important classes in which children of any social background are likely to be found. Such massive aggregation towards the upper fractions of the social structure is quite logical since – as we observed previously – the Swiss social structure is highly tertiarised. However, when examining it from another angle, inflow percentage distributions provide us with more precise information of the composition of

each class destination according to social background, as inflow percentages indicate which social background each class recruits.

From inflow percentages in Table 7.2, we observe that the salariat class recruits significantly from the salariat class (34% for men and 36% for women of self-recruitment) and the skilled worker class (25%). white collar and petite bourgeoisie origins account together for another 20% of the composition of the salariat class. The skilled workers background also constitutes an important share of the white collar class (30%). Furthermore, this class depicts the smallest level of self-recruitment, with only 12% of men and women in this class coming from the white collar background. Interestingly, about 20% of men and women in the white collar class come from the salariat. The petite bourgeoisie class recruits predominantly from the skilled worker class (28%) and from the salariat (about 20%), suggesting that this class provides both upward and downward mobility opportunities. It is noteworthy that self-recruitment in this class is actually lower in the petite bourgeoisie than in the salariat (22% and 17% respectively for men and women). We would have expected a higher share of self-recruitment in this class, given the importance of family business transmission. It is within the class of farmers that self-recruitment is the highest: 85% for men and 66% for women. The skilled worker class recruits not only from its own class (around 33%) but also from the farmer class (18% for men and 21% for women). Thus, children of farmers do move downwardly into the skilled worker class but also into the semi-/unskilled class. Furthermore, the semi-/unskilled class recruits predominantly from the skilled workers and the semi-/unskilled classes. We can now observe how education conditions the attainment of social position.

7.2.3 . The role of education on the pattern of class attainment

We demonstrated in the previous chapter that education plays an important role on class attainment in Switzerland. A brief look at outflow and inflow percentages between educational attainment and class destination as depicted in Table 7.2 will certainly provide us with more insights in this respect. From the outflow table first, we observe that very few people who attained only compulsory education actually reached salariat position: 14% for men and 9% for women. These people are likely to end up in skilled worker and semi-/unskilled worker positions. In contrast, both men and women with secondary general education were more likely to attain the salariat and white collar classes than any other class. Regarding people who graduated with secondary vocational education, they ended up mostly in the skilled worker class for men and the white collar class for women. For both men and women, secondary vocational education seems to hinder chances to reach the salariat class while at least 60% of those who graduated with any type of tertiary education reached the

Table 7.2: Distribution of outflow and inflow percentages between educational attainment and class destination by gender following the equivalent core social fluidity classes

Men

	Outflow percentages							Inflow percentages						
	1	**2**	**3**	**4**	**5**	**6**		**1**	**2**	**3**	**4**	**5**	**6**	**Total**
1. Compulsory	14.4	10.0	5.8	6.9	36.9	25.9	100	3.8	13.0	9.8	26.0	19.5	36.8	13.0
2. General sec.	51.5	16.9	8.3	1.4	13.8	8.1	100	7.6	12.2	7.7	2.9	4.0	6.4	6.9
3. Vocational sec.	26.6	12.6	10.0	4.2	35.6	10.9	100	23.2	53.8	55.2	52.1	61.8	50.6	41.1
4. Vocational ter.	69.0	6.0	7.1	2.5	13.5	1.8	100	35.4	15.2	23.0	18.4	13.8	5.1	23.8
5. General ter.	92.3	3.5	2.1	0.0	1.3	0.6	100	30.0	5.7	4.3	0.6	0.9	1.1	15.2
Total	47.1	9.7	7.4	3.3	23.7	8.8	100	100	100	100	100	100	100	100

Women

	Outflow percentages							Inflow percentages						
	1	**2**	**3**	**4**	**5**	**6**		**1**	**2**	**3**	**4**	**5**	**6**	**Total**
1. Compulsory	9.5	29.0	4.8	2.4	13.8	40.5	100	4.6	14.2	17.8	29.5	24.2	51.1	19.9
2. General sec.	42.6	41.6	3.0	0.6	7.6	4.6	100	14.7	14.7	8.0	5.2	9.5	4.2	12.3
3. Vocational sec.	26.3	43.5	5.4	1.8	11.3	11.7	100	35.2	59.5	56.1	60.7	55.2	41.1	47.1
4. Vocational ter.	60.9	24.8	4.3	0.5	7.1	2.5	100	21.7	9.1	11.8	4.6	9.2	2.3	11.3
5. General ter.	84.6	8.8	2.9	0.0	1.8	1.8	100	23.8	2.5	6.3	0.0	1.9	1.3	9.4
Total	35.7	34.8	4.6	1.4	9.8	13.6	100	100	100	100	100	100	100	100

salariat class. This share even reaches the 80% threshold in regard to tertiary general education, while a small share of men with tertiary vocational education gained skilled worker positions and a moderate share of women with the same education attained the white collar class.

The inspection of inflow percentages corroborates the trends we depicted: the salariat class recruits predominantly people educated at tertiary levels, while the farmers, skilled manual and semi-/unskilled worker classes recruit primarily people with only compulsory education. Furthermore, those with secondary vocational education are mainly recruited in white collar and skilled manual classes.

So far, we have seen how reproduction varies between social classes and how each class recruits according to social background and education. Now we will fit the core model of social fluidity to Switzerland and see whether it requires some adjustments.

7.2.4 . Fitting and adjusting the core model of social fluidity to Switzerland

To fit and adjust the core model of social fluidity to Switzerland, we first converted matrices of all eight effects of this model into the ESeC class schema. The original model indeed relied on the EGP

class schema. Yet as we discussed in the methodological chapter, these two class schema stem from the same theoretical foundations and are thus expected to be highly comparable. However, the ESeC class schema entails one minor difference with respect to the original EGP framework: they do not enable to distinguish within routine occupations between the agricultural routine workers and non-agricultural routine workers. They are just collapsed together under the label “semi-/unskilled class”. As a consequence, the conversion of the core model of social fluidity is problematic for two reasons. First, for the sector effect (SE), we could not arbitrate whether this class was in primary production or not. Therefore, no sector effect was specified at all within this category. By doing this, we neither favoured agricultural nor non-agricultural workers. Nonetheless, this practice may lower the overall sector effect to a certain extent. Second, for the positive affinity effect (AF2), the original core model of social fluidity specifies positive affinity between non-agricultural unskilled workers and skilled manual workers as well as a higher propensity for children of farmers to attain the non-agricultural unskilled worker position. In this case as well, no positive affinity was specified for the categories of unskilled worker to avoid confusion. However, besides these two minor adjustments, models displayed should be comparable with the original core model of social fluidity. A detail of matrices converted are displayed in appendix F in table F.5. In addition, in Tables F.1 we provide an overview of all effects that are tested in each models, and in Tables F.3, the detail and meaning of each of these effect.

Models presented below are systematically adjusted for both men and women. However, as the core model of social fluidity was first designed on the men's mobility table, our prime strategy consists of fitting and adjusting the model to men's situation. For the sake of comparison, the same models will be adjusted to the women's mobility table. By doing so, we can assess the extent to which women's pattern of social fluidity converges or diverges with that of men. Furthermore, this strategy is important, as the core model of social fluidity has hardly ever been investigated in Switzerland. In this context, the prime goal here is to find a baseline pattern that describes social fluidity in Switzerland in order to provide a point of reference. Improvement of models will be assessed mostly through the decrease in G2, although other indicators should be used. The lower the G2, the more estimated frequencies adjust to the data.

Models fitted are displayed in Tables 7.3 and 7.4 for men and women. As can be seen, the core model (M2a) provides a satisfactory fit for both men and women, as compared to the constant association model (M1), since it misclassifies 5.71% of the data for men and 4.9% for women (the original dissimilarity index for the constant association model being respectively 4.69% and 3.97%). Furthermore, this model captures a decrease of 86.20% for men and 78.26% for women of

Table 7.3: Results of fitting the core log-linear model of social fluidity and some adjustments to men's mobility tables according to their father's social position, controlling for birth-cohorts (men aged 30–64, ESeC class schema)

Models OD	G2	Df	P	DI	%G2	BIC
* Men, 5 cohorts origin-destination mobility table N=6984						
M0. Cond. Ind.	1586.1	125	0.000	16.54	-	479.6
M1. CnSF	145.2	100	0.002	4.69	90.85	-739.8
M2a. Core classic	218.9	117	0.000	5.71	86.2	-816.7
M2b. AF1 G	**217.7**	**117**	**0.000**	**5.76**	**86.27**	**-817.9**
M2c. AF2 G	224.2	117	0.000	5.67	85.87	-811.4
M2d. AF1 G+AF2 G	223.8	117	0.000	5.68	85.89	-811.9
M2e. AF1 S	237.2	117	0.000	5.77	85.04	-798.4
M2f. AF2 S	256.0	117	0.000	6.13	83.86	-779.6
M2g. AF1 S+AF2 S	260.7	117	0.000	6.27	83.56	-774.9
M3a. M2b + AF1 Ga	215.1	117	0.000	5.73	86.44	-820.5
M3b. M2b + AF1 Gb	207.6	117	0.000	5.6	86.91	-828
M3c. M2b + AF1 Gc	215.1	117	0.000	5.74	86.44	-820.5
M3d. M2b + AF1 Gd	**190.1**	**117**	**0.000**	**5.21**	**88.01**	**-845.5**
M3e. M2b + AF1 Ge	192.2	117	0.000	5.22	87.88	-843.4
M3f. M2d + AF2a	**180.3**	**117**	**0.000**	**5.04**	**88.63**	**-855.3**
M3g. M2d + AF2b	183.5	117	0.000	5.03	88.43	-852.1

Corresponding parameters	**HI1**	**HI2**	**IN2**	**IN2**	**IN3**	**SE**	**AF1**	**AF2**
Core classic	**-0.22**	**-0.42**	**0.43**	**0.81**	**0.96**	**-1.03**	**-0.77**	**0.46**
M2a. Core classic	-0.17	-0.61	0.08	0.88	2.38	-0.15	0.09	0.44
M2b. AF1 G	**-0.15**	**-0.49**	**0.08**	**0.90**	**2.24**	**-0.22**	**-0.11**	**0.44**
M2c. AF2 G	-0.11	-0.62	0.13	0.90	2.14	-0.20	0.10	0.42
M2d. AF1 G+AF2 G	-0.09	-0.05	0.13	0.92	2.06	-0.26	-0.09	0.42
M2e. AF1 S	-0.14	-0.67	0.16	0.69	2.36	-0.22	0.05	0.39
M2f. AF2 S	-0.11	-0.89	0.29	0.40	2.83	0.05	0.30	0.24
M2g. AF1 S+AF2 S	-0.09	-0.68	0.30	0.38	2.69	-0.04	-0.11	0.20
M3a. M2b + AF1 Ga	-0.13	-0.47	0.09	0.91	2.23	-0.22	-0.15	0.42
M3b. M2b + AF1 Gb	-0.08	-0.45	0.12	0.82	2.19	-0.28	-0.22	0.35
M3c. M2b + AF1 Gc	-0.08	-0.57	0.12	0.77	2.23	-0.27	-0.13	0.31
M3d. M2b + AF1 Gd	0.01	-0.31	0.18	0.71	2.19	-0.23	-0.35	0.23
M3e. M2b + AF1 Ge	-0.01	-0.32	0.18	0.70	2.13	-0.22	-0.34	0.24
M3f. M2d + AF2a	**-0.06**	**-0.30**	**0.18**	**0.72**	**2.16**	**-0.33**	**-0.28**	**0.29**
M3g. M2d + AF2b	-0.04	-0.30	0.20	0.69	2.22	-0.34	-0.30	0.26

Notes: Cond Ind=conditional independence model; CnSF=constant social fluidity model; Core classic=core model of social fluidity. G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index, %G2=proportion of reduction of deviance, BIC=Bayesian information criterion. *The smaller the G2, the better the model fit.*

the G2 of the original conditional independence model. Finally, parameters provide overall consistent effects with the original core model of social fluidity, in particular among women. Yet some actually return quite unusual or even problematic values, especially for men. First, the first inheritance effect (IN1), of the main diagonal, which captures immobility in all cases, is very low:

0.08 for men and 0.13 for women, whereas the original core model indicates a first inheritance effect of 0.43. Yet in his article, Jacot documents the same effect of value of 0.18 and 0.14 for men and women respectively. Thus, this effect might substantially be weaker in Switzerland than in other countries. Second, the third inheritance effect (IN3), which measures reproduction within the class of farmers, is very high: 2.38, while Erikson and Goldthorpe (1992) report a value of 0.96. However, they report for Germany a value of 2.17, thus high inheritance within the class of farmers might be a feature of "Germanic countries". Third, the sector effect (SE) seems to be much weaker in Switzerland than in the original core model: -0.15 versus -1.03. Yet to some extent this might be due to weaknesses met in the operationalisation of this effect implied by the ESeC class schema. Fourth and more importantly, the negative affinity effect (AF1) is much lower than expected and actually returned a positive value among men: 0.09. This latter point is highly problematic. These awkward parameters thus suggest that the core model of social fluidity as fitted here does not appropriately describe the Swiss pattern of social fluidity, and as a consequence, requires some adaptations.

In order to find a better adjustment of the core model of social fluidity to the Swiss data, we first fitted deviated versions of the core model of social fluidity that exist in the literature before seeking adaptations based on the data. First, we fitted the two affinity matrices that were proposed for Germany in Erikson and Goldthorpe's Constant Flux study (1992), as Germany is a country with a high level of institutional proximity with Switzerland. Second, we fitted the two affinity matrices that were proposed by Jacot for Switzerland (2013). These models are displayed in Tables 7.3 and 7.4 under the names M2b to M2g. On all models fitted, only the model with the German negative affinity matrix (AF1) provides a slight improvement over the classic core model. For women, it is the German positive affinity matrix (AF2) that seems to provide better ground to describe the Swiss social mobility pattern. Yet we will for now carry on focusing on modelling men's social mobility pattern and thus start from the German negative affinity matrix. This model indeed provides more consistent parameters for men, as now the negative affinity parameter returns a negative value (-0.11). It must, however, be underlined that we are quite surprised that the "core S" model introduced by Jacot (2013) to describe the Swiss pattern of social fluidity adjusted to the data so poorly in comparison to the classic core model of social fluidity.

As we have seen, by specifying a negative upward mobility affinity from semi-/unskilled workers to the white collar and petite bourgeoisie classes such as that specified for Germany in the constant flux, we arrived at a slightly more satisfactory core model. This model thus happens to be a good baseline model in our endeavour to model the Swiss pattern of social fluidity. Therefore, we ran

Table 7.4: Results of fitting the core log-linear model of social fluidity and some adjustments to women's mobility tables according to their father's social position, controlling for birth-cohorts (women aged 30–64, ESeC class schema)

Models OD	G2	Df	P	DI	%G2	BIC
* Women, 5 cohorts origin-destination mobility table N=6382						
M0. Cond. Ind.	788.8	125	0.000	12.26	-	-306.3
M1. CnSF	111.2	100	0.208	3.97	85.9	-764.9
M2a. Core classic	171.5	117	0.001	4.9	78.26	-853.5
M2b. AF1 G	**176.8**	**117**	**0.000**	**5.09**	**77.58**	**-848.2**
M2c. AF2 G	169.4	117	0.000	4.87	78.52	-855.6
M2d. AF1 G+AF2 G	174.9	117	0.000	5.06	77.83	-850.2
M2e. AF1 S	176.8	117	0.000	5.08	77.59	-848.3
M2f. AF2 S	186.3	117	0.000	5.31	76.39	-838.8
M2g. AF1 S+AF2 S	188.7	117	0.000	5.37	76.08	-836.1
M3a. M2b + AF1 Ga	175.9	117	0.000	5.07	77.7	-849.1
M3b. M2b + AF1 Gb	173.6	117	0.000	5.05	77.99	-851.5
M3c. M2b + AF1 Gc	171.1	117	0.000	4.96	78.31	-853.9
M3d. M2b + AF1 Gd	**160.1**	**117**	**0.000**	**4.85**	**79.7**	**-864.9**
M3e. M2b + AF1 Ge	160.9	117	0.000	4.86	79.6	-864.2
M3f. M2d + AF2a	**150.1**	**117**	**0.000**	**4.68**	**80.97**	**-874.9**
M3g. M2d + AF2b	149.3	117	0.000	4.68	81.08	-875.8

Corresponding parameters	**HI1**	**HI2**	**IN2**	**IN2**	**IN3**	**SE**	**AF1**	**AF2**
Core classic (men only)	**-0.22**	**-0.42**	**0.43**	**0.81**	**0.96**	**-1.03**	**-0.77**	**0.46**
M2a. Core classic	-0.22	-0.46	0.12	0.34	1.62	-0.28	-0.28	0.22
M2b. AF1 G	**-0.22**	**-0.61**	**0.13**	**0.34**	**1.62**	**-0.25**	**-0.06**	**0.22**
M2c. AF2 G	-0.16	-0.45	0.17	0.39	1.40	-0.33	-0.28	0.24
M2d. AF1 G+AF2 G	-0.16	-0.60	0.17	0.39	1.41	-0.30	-0.06	0.24
M2e. AF1 S	-0.25	-0.65	0.11	0.30	1.74	-0.22	-0.04	0.21
M2f. AF2 S	-0.20	-0.56	0.14	0.13	1.80	-0.27	-0.28	0.04
M2g. AF1 S+AF2 S	-0.23	-0.74	0.12	0.10	1.95	-0.20	-0.10	0.04
M3a. M2b + AF1 Ga	-0.20	-0.60	0.12	0.36	1.61	-0.26	-0.09	0.20
M3b. M2b + AF1 Gb	-0.18	-0.59	0.11	0.35	1.60	-0.28	-0.13	0.17
M3c. M2b + AF1 Gc	-0.12	-0.67	0.14	0.20	1.58	-0.35	-0.17	0.05
M3d. M2b + AF1 Gd	**-0.11**	**-0.51**	**0.12**	**0.35**	**1.60**	**-0.18**	**-0.26**	**0.08**
M3e. M2b + AF1 Ge	-0.11	-0.52	0.12	0.34	0.15	-0.17	-0.26	0.08
M3g. M2d + AF2b	-0.17	-0.51	0.13	0.41	1.61	-0.23	-0.15	0.23

Notes: Cond Ind=conditional independence model; CnSF=constant social fluidity model; Core classic=core model of social fluidity. G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index, %G2=proportion of reduction of deviance, BIC=Bayesian information criterion. *The smaller the G2, the better the model fit.*

another set of models (M3a to M3g). In the first model (M3a) we tested whether the disaffinity from semi-/unskilled workers to the white collar and petite bourgeoisie classes is symmetrical: whether white collar and petite bourgeoisie children are less likely to reach a semi-/unskilled workers position. This symmetry proves to slightly improve the model, thus we continued our endeavour. We further tested whether a negative affinity for children of the salariat in the attainment of skilled

workers (M3b) existed, and whether this effect is symmetric (M3c). This effect proves to be indeed significant, but not symmetrical. We thus reject model M3c and carried on from model M3b. From there, we further specified a negative affinity effect for children of farmers to attain the salariat and the white collar classes (M3d). This effect is very important, since the deviance (G2) decreases more than 15 points. However, this effect is not symmetrical (M3e). Finally, we tested whether there was a positive affinity for children of the farmer class to attain the skilled worker class (M3f). This effect is also quite important, as the G2 drops 10 points. In a final model, we tested whether this last effect was symmetrical (M3g), but we must actually reject this hypothesis. Thus, Switzerland depicts more negative and positive affinities than other European countries. These effects, however, stem mainly from the farmer and semi-/unskilled class. In other words, this suggests that barrier to attain and leave these classes are quite important.

Parameters of our best model indicate that the first hierarchy effect (HI1) is very low in Switzerland (-0.06 versus -0.22 in the core model). Furthermore, the first inheritance (IN1) effect is also smaller (0.18 versus 0.43) but the third inheritance (IN3) effect is much stronger (2.16 versus 0.96). Finally, both negative (AF1) and positive (AF2) effect are rather moderate (AF1: -0.38 versus -0.77; AF2: 0.29 versus 0.46). For women, the different improvement made in the model for men also proved to be important, and parameters of the final model provide consistent findings. However, to adequately model women's pattern of social fluidity, a more thorough investigation should certainly be undertaken. Indeed, in many respects women's social mobility pattern may differ from that of men and it would be better to evaluate it separately, given the important extent of occupational sex-segregation in Switzerland. This is what Jacot (2013) did by proposing different affinity matrices for men and women. However, while the “core-CH” model of social fluidity found here may not be perfect, it still provides consistent outcomes for women, as parameters return reliables values.

Thus, we overall arrive at a satisfactory adaptation of the core model of social fluidity to the Swiss context. This adaptation, however, came at the price of a certain number of adjustments, which in our view qualify to some respect the idea of basic cross-national invariance in social mobility pattern, as phrased by the FJH hypothesis. We shall in the remaining section of this chapter address now to which extent we can observe finer social mobility dynamics in the service class when applying the Oesch class schema to our data.

7.3 . Adjusting the pattern of social fluidity to the different fractions of the service class

7.3.1 . Disaggregating the service class: trends in class distribution with the Oesch class schema

As we mentioned in the methodological chapter, comparability between the ESeC class schema and the Oesch class schema is not perfect, strictly speaking. Furthermore, the operationalisation of this class schema was problematic for some surveys because of a lack of information on self-employment status. However, the ESeC and the Oesch class schema overall remain relatively comparable. We thus expect a significant convergence with the two class schema.

As a brief reminder, the Oesch class schema is based on the core concept of work-logic. With this concept, Oesch is able to identify four different fractions within the service class: (1) the traditional bourgeoisie; (2) the technical specialists; (3) the managers; and (4) the socio-cultural specialists. He furthermore distinguishes between white collar workers, office clerks and service workers, which would correspond in the recent version of the Goldthorpe class schema to classes IIIa and IIIb respectively. However, in comparison to our previous analysis, we are unable to isolate a class of farmers within this class schema. By default, we expect them to be found in the petite bourgeoisie. Yet overall, this class schema is highly interesting in that it enables disaggregation within different fractions of the service class: (1) the traditional bourgeoisie, (2) the technical specialists, (3) the managers, (4) the socio-cultural specialists.

We can see in Figure 7.2 that the share of people in the traditional bourgeoisie remains relatively stable over birth-cohorts for both men and fathers: it accounts for almost 5% of the total social structure for fathers and about 8% for men. Yet we observe some variations in the youngest cohorts, with a decline in the 1958-1965 birth-cohort and a very slight increase in the post-mid-1960s birth-cohorts. For women, while they lagged behind within oldest birth-cohorts, they also levelled around the 5% threshold since the post-1940s birth-cohorts. The technical specialists fraction of the service class developed quite significantly over time. Indeed, it accounted for men and for fathers for 10% and less than 5% respectively within the oldest birth-cohort, while in the youngest, these proportions increased to 15% and 10%. It is also noteworthy that the share of women in this class also increased over birth-cohorts, although more moderately. The manager class represented around 20% of the social structure for men, 10% for women, and slightly more for fathers. These proportions remain stable over time and increase for women in the youngest cohorts. Finally, the last fraction of the service class, the socio-cultural specialists, is highly feminised and developed

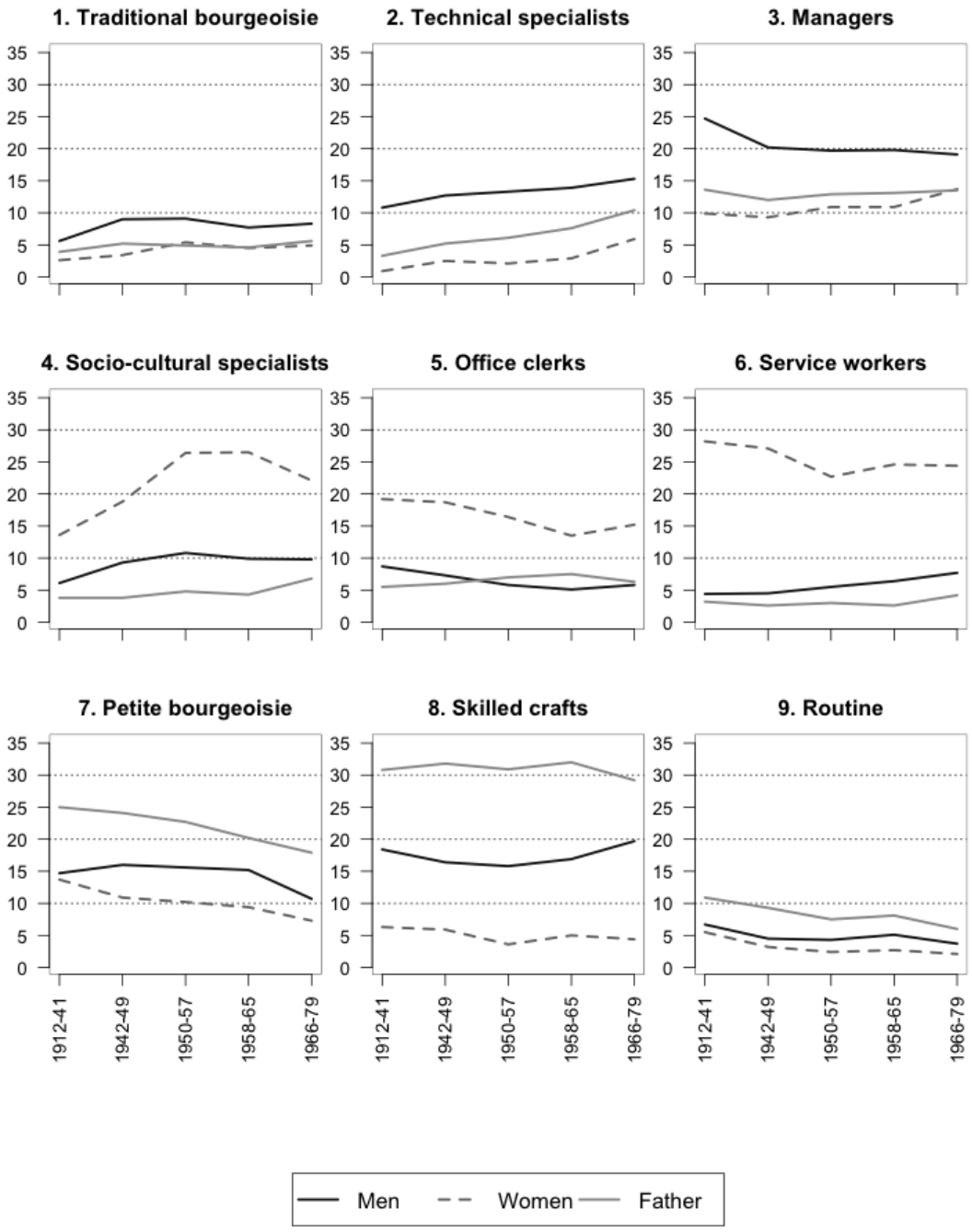

Figure 7.2: Marginal distributions of class origin (father) and class destination by gender over birth-cohorts in percentages with the Oesch classes

importantly for women born until the early 1950s, when it represented more than 25% of the social structure for women. However, within the youngest birth-cohort, the share of women in this class decreased about 5%. Eventually, the decrease could stem from an age effect, since this birth-cohort

is particularly younger than other ones. Thus, we could wonder to which extent this is an occupational maturity effect or, alternatively, a career interruption effect stemming from maternity leave. Yet this class remains one of the leading female classes. Indeed, about 10% of men are located in this class and less than 5% among fathers. Thus, we observe different dynamics within the different fractions of the service class in terms of development and gender.

The Oesch class schema furthermore disaggregates the white collar class by isolating first the office clerks class and then the service workers class. They are not, however, strictly comparable with the ESeC white collar class, as Oesch integrates some unskilled service occupations into this class, which in ESeC are classified in the semi-/unskilled category. This explains why almost 50% of women in the oldest cohort are classified in either an office clerk position or a service worker one. In contrast, they hardly represent 5% of the routine class. Overall, these two white collar classes are female-dominated, particularly within the service worker class. However, the gender gap is less marked within the office clerks class than in the service workers ones. Yet in the latter class, the share of men increases over birth-cohorts, whereas in the former class, it decreases.

Trends in the three remaining classes are rather consistent with previous observations. However, as compared to the ESeC class schema, in the Oesch class schema the number of men and fathers found in routine/unskilled occupations is lower, because some of them are actually allocated into service worker occupations within the class schema. Yet overall, major trends in the Swiss social stratification look rather consistent with those depicted with the ESeC classification. We can now turn to the analysis of inflow and outflow percentages according to first, social origin, and second, educational attainment.

7.3.2 . General pattern of absolute reproduction and recruitment within the disaggregated service class

We first turn to the analysis of outflow and inflow percentages between class of origin and class destination with the Oesch class schema. As can be seen in the outflow percentages in Table 7.5, we observe that social reproduction in the traditional bourgeoisie class is among the highest, as 37% of sons with this social background remain in this class. When they are not intergenerationally immobile, sons of the traditional bourgeoisie end up in socio-cultural specialist positions. Regarding sons of technical specialists, they are equally likely to remain in their father's class or to reach manager position and socio-cultural specialist position. Furthermore, around 12% reach the traditional bourgeoisie class. 35% of sons of managers follow in their father's footsteps. Those who do not do so go into professional positions, either in the technical work-logic or in the interpersonal

Table 7.5: Distribution of outflow and inflow percentages between class of origin and class destination by gender with Oesch classes.

Men

	Outflow percentages										Inflow percentages									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	
1. Tradi. bourg.	37.0	10.3	12.7	16.3	2.0	3.2	11.4	5.8	1.2	100	22.5	3.8	3.1	8.5	1.5	2.7	3.9	1.7	1.3	4.9
2. Technical spe.	11.7	19.7	27.0	14.4	3.6	3.5	7.3	10.9	1.8	100	9.5	9.7	8.8	10.0	3.8	3.9	3.3	4.1	2.6	6.6
3. Managers	8.9	15.1	34.9	14.2	5.0	4.8	8.6	7.5	1.0	100	14.2	14.6	22.3	19.4	10.4	10.6	7.8	5.6	2.8	13.1
4. Socio-cult. spe.	7.5	16.1	23.6	26.4	2.5	3.4	10.3	7.0	3.1	100	4.2	5.5	5.3	12.7	1.8	2.7	3.3	1.8	3.0	4.5
5. Office clerks	6.5	13.2	24.9	8.4	10.7	5.5	12.4	13.7	4.7	100	5.5	6.7	8.4	6.0	11.6	6.5	5.9	5.4	6.7	6.9
6. Service workers	5.0	17.4	22.2	6.6	10.2	10.3	8.2	15.5	4.6	100	1.7	3.6	3.0	1.9	4.5	4.8	1.6	2.5	2.7	2.8
7. Petite bourg.	6.2	11.1	14.8	6.7	4.6	5.3	29.2	17.8	4.4	100	17.0	18.4	16.2	15.6	16.2	20.0	44.9	22.8	20.6	22.1
8. Skilled crafts	5.4	13.1	17.1	6.4	7.6	7.1	12.1	25.4	5.8	100	20.2	29.7	25.7	20.4	36.9	37.0	25.5	44.7	37.5	30.7
9. Routine	4.9	12.4	17.3	6.0	9.7	8.0	6.5	22.8	12.4	100	5.2	8.0	7.4	5.4	13.3	11.8	3.9	11.4	22.8	8.5
Total	8.0	13.3	20.1	9.5	6.4	6.0	13.8	18.0	4.9	100	100	100	100	100	100	100	100	100	100	100

Women

	Outflow percentages										Inflow percentages									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	
1. Tradi. bourg.	13.9	5.9	17.1	25.2	15.8	6.7	11.5	3.3	0.6	100	15.5	9.0	7.6	5.5	4.9	1.3	5.9	3.4	1.1	4.8
2. Technical spe.	7.0	6.3	12.4	31.7	15.0	16.5	6.7	2.4	2.0	100	11.7	14.3	8.2	10.2	6.9	4.9	5.1	3.7	5.2	6.9
3. Managers	4.6	5.1	15.5	31.1	17.0	14.1	8.1	3.3	1.2	100	13.4	20.3	18.0	17.7	13.8	7.3	10.8	8.8	5.5	12.8
4. Socio-cult. spe.	6.4	5.0	10.8	47.6	11.0	11.7	4.5	2.0	1.2	100	7.5	7.9	5.0	10.8	3.5	2.4	2.4	2.1	2.1	4.8
5. Office clerks	3.7	1.9	13.2	22.6	22.0	24.1	6.8	3.5	2.2	100	5.3	3.7	7.5	6.3	8.7	6.1	4.4	4.6	4.9	6.4
6. Service workers	3.4	3.1	10.8	18.5	19.7	26.7	8.0	3.6	6.3	100	2.7	3.4	3.4	2.9	4.3	3.8	2.9	2.6	7.9	3.3
7. Petite bourg.	3.8	1.8	9.2	19.5	13.2	28.9	14.2	6.2	3.2	100	18.1	11.7	17.1	17.8	17.1	24.1	30.4	26.5	23.6	21.4
8. Skilled crafts	2.6	2.8	10.4	17.4	16.2	31.0	9.8	6.5	3.3	100	18.8	11.7	17.1	17.8	17.1	24.1	30.4	26.5	23.6	31.7
9. Routine	4.2	1.0	6.1	14.4	19.9	36.9	8.6	4.0	4.9	100	7.0	2.2	4.0	4.7	9.1	10.9	6.5	6.1	12.7	7.9
Total	4.3	3.2	11.3	22.3	15.9	25.6	9.6	4.8	3.0	100	100	100	100	100	100	100	100	100	100	100

service one. Finally, 26% of sons of socio-cultural specialists reach a similar position to their father. However, others moved into the manager and technical specialist segments of the service class. Thus, although social reproduction is higher in each fraction of the service class, they still exhibit quite a bit of positive affinity between each other. And it is true that being from any service class background usually hinders downward social mobility moves.

The inspection of the inflow mobility table corroborates these trends. It further reveals that a notable share of technical specialists have a manager class background. This is also the fraction that has the highest share of men with a skilled crafts social background: nearly 30%. Furthermore, a non-negligible share of the socio-cultural specialists come from the traditional bourgeoisie but also from manager backgrounds.

Women's opportunities are slightly different, given the gendered nature of the social structure. Daughters of any fractions of the service class concentrate into socio-cultural specialist positions. Furthermore, this is the class where social reproduction is the highest. Yet 17% of women with a traditional bourgeoisie background reach manager positions. Furthermore, being from a technical specialist or a socio-cultural specialist background is positively associated with a traditional bourgeoisie position. Now, do we also observe differences within each service class fractions in terms of educational attainment?

7.3.3 . The role of education on the pattern of attainment to the different fractions of the service class

Table 7.6 indicates outflow and inflow percentage distributions of class destination with the Oesch class schema by educational attainment. From the outflow table, we observe that the tertiary-educated concentrate into manager (for men) and socio-cultural specialist positions (almost 30% of all tertiary-educated for each). Yet the other two fractions of the service class still depict high levels of tertiary education graduates. Tertiary vocational education characterises primarily managers and, to a lower extent, technical specialists for men. It furthermore seems that secondary vocational education constitutes a disadvantage to reach any fraction of the service class. However, 14% of graduates with this educational level are found in the manager class. Finally, about 45% of those with secondary general education end up divided equally within manager or socio-cultural specialist positions.

The inspection of inflow percentages reveals that it is among the socio-cultural specialists that we find the highest number of people with tertiary general education. In fact, almost half of this class is composed of highly educated individuals. Furthermore, this class has the highest number of people with secondary general education (17%). The highest number of individuals with tertiary vocational education is found in the technical specialists fraction (42%) whereas the manager class depicts the highest number of individuals with secondary vocational education of all service class fractions (30%). Overall, similar trends are exhibited among women – though the gender bias applies and implies that almost half of tertiary-educated women at the general level attain socio-cultural specialist positions.

The description of outflow and inflow percentages provides us with some insights regarding the heterogeneity of profiles of the different fractions of the service class according to social origin and educational attainment. However, these percentages are not net of margin effect and thus do not adequately reflect the pattern of social mobility. We now propose to turn to more thoroughly model

Table 7.6: Distribution of outflow and inflow percentages between educational attainment and class destination by gender with Oesch classes.

Men

	Outflow percentages										Inflow percentages									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	
1. Compulsory	2.2	4.2	9.9	1.7	11.5	10.0	14.1	30.7	15.8	100	3.4	3.9	6.1	2.2	22.8	20.7	12.7	21.2	39.8	13.0
2. General sec.	4.2	11.9	22.4	22.8	7.0	5.2	12.8	9.6	4.0	100	3.7	6.2	7.7	16.6	7.7	6.0	6.4	3.7	5.6	6.9
3. Vocational sec.	5.1	8.3	14.6	2.6	8.6	8.9	18.5	27.9	5.5	100	26.0	25.3	29.7	11.3	55.8	60.1	54.5	62.9	45.8	41.1
4. Vocational ter.	10.3	22.8	28.7	9.1	3.1	2.9	13.0	8.6	1.6	100	31.5	41.6	34.7	23.1	11.8	11.6	22.8	11.5	7.9	23.8
5. General ter.	18.0	19.7	28.1	28.5	0.8	0.6	3.3	0.7	0.3	100	35.3	23.0	21.8	46.8	1.9	1.6	3.7	0.6	1.0	15.2
Total	8.0	13.3	20.1	9.5	6.4	6.0	13.8	18.0	4.9	100	100	100	100	100	100	100	100	100	100	100

Women

	Outflow percentages										Inflow percentages									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	
1. Compulsory	2.0	1.6	3.8	4.9	11.3	49.5	9.4	7.6	9.9	100	7.8	8.4	5.8	3.7	12.1	33.1	16.8	27.2	55.8	19.9
2. General sec.	3.7	2.6	11.7	43.8	15.1	12.4	5.8	3.5	1.5	100	10.5	10.0	12.7	24.2	11.7	6.0	7.5	9.1	6.0	12.3
3. Vocational sec.	2.7	2.5	10.4	13.2	22.5	29.2	11.6	5.7	2.2	100	29.1	37.8	43.8	28.0	67.2	54.1	57.5	56.7	34.4	47.1
4. Vocational ter.	6.2	3.8	19.1	38.4	8.0	10.9	10.8	1.9	0.9	100	18.0	15.1	21.4	21.8	6.4	5.4	14.3	4.9	3.9	11.3
5. General ter.	14.3	8.7	17.4	47.3	4.0	3.7	3.6	1.0	0.0	100	34.6	28.7	16.2	22.3	2.6	1.5	4.0	2.1	0.0	9.4
Total	4.3	3.2	11.3	22.3	15.9	25.6	9.6	4.8	3.0	100	100	100	100	100	100	100	100	100	100	100

the association between social origin and social destination with our disaggregated service classes.

7.3.4 . Fitting and adjusting the core model of social fluidity to the disaggregated service class in Switzerland

The strategy here is to address whether specific dynamics exist in social mobility within the service class. In order to do so, we will first of all fit the original model of core social fluidity and our “core CH” model to our data coded into the Oesch class schema. Next, we will test whether we arrive at a better model fit by introducing some changes into the different matrices of the model. However, strict comparability between previous models will not be achieved for two main reasons: (1) as already mentioned, both the ESeC and the Oesch class schema do not exactly correspond with each other, and (2) the Oesch class schema does not isolate a class of farmers, and the operationalisation of the routine agricultural class is somewhat problematic. As a consequence, while we are not able to disentangle primary sector from other sectors, it is not possible to define and thus fit a sector effect matrix in the following models. Last but not least, similarly to our previous endeavour, models will be primarily applied to the men's social mobility table while the deviation of women's mobility pattern from that of men will be interpreted accordingly. Outcomes are displayed in Tables 7.7and 7.8. To understand these models well, more information is available in Appendix F: Table

F.2 summarises all effects that were tested in each model, Table F.4 details the meaning of each effect and Table F.5 provides details of matrices fitted to our data.

The first models fitted show that for men, the "core CH" model fits the data slightly better than the classic core model of social fluidity. This slight improvement nonetheless has significant impact on the parameters of the model: while with the original classic core model of social fluidity we had inconsistent parameters, they are now all consistent, except for one effect. Indeed, only the third inheritance effect (IN3) indicates an almost null reproduction effect in the petite bourgeoisie class. For women, however, the "core CH" model hardly makes any difference from the "classical core" model. What is furthermore problematic among women is that three parameters over seven return inconsistent values: both hierarchy effects (HI1 and HI2) and the third inheritance effect (IN3). In spite of these problems, we will carry on modelling the Swiss pattern of social fluidity starting from the "core CH" model.

First of all, we addressed issues of inheritance. We did so by adapting the first inheritance effect (IN1) to our new class schema: inheritance here is defined as only happening in all cells of the main diagonal. This model (M4a) significantly reduces the value of the G2. In other words, inheritance is more marked within each fraction of the service class than between different ones. In a second model (M4b), we tested whether a similar outcome can be observed when the second inheritance effect (IN2) is translated only on the main diagonal for all fractions of the service class and the petite bourgeoisie. This model, however, must be rejected. Nonetheless, when inheritance within the technical specialists and managers is removed from the latter matrix, significant reduction in G2 happens (M4c). Thus,t reproduction is particularly strong within the traditional bourgeoisie and the socio-cultural specialists, and not within the two other fractions of the service class. Finally, in another model (M4d) we tested whether the traditional bourgeoisie displays particularly high social reproduction within the third inheritance effect (IN3). This specification must be rejected on the statistical ground. However, it must be noted the third inheritance effect displays unstable and inconsistent parameters in the models fitted so far.

Next, we carried on our investigation by readapting the original sector effect to the Oesch class schema. As underlined, the Oesch class schema does not enable us to distinguish between the primary sector and other sector – yet it isolates a category of self-employment work-logic: the traditional bourgeoise, such as employers or liberal professions, and the petite bourgeoisie. Like sector effects, self-employment constitutes an important dimension to social reproduction. Model 4e does suggest so. Thus, a higher propensity for any category of self-employment to not mix with other classes seems to exist.

Table 7.7: Results of fitting the core log-linear model of social fluidity and some adjustments to men's mobility tables according to their father's social position, controlling for birth-cohorts (men aged 30–64, Oesch class schema)

Models OD	G2	Df	P	DI	%G2	BIC
* Men, 5 cohorts origin-destination mobility table N=6296						
M0. Cond. Ind.	1503.3	320	0.000	18.33	0.00	-1296.0
M1. CnSF	339.5	256	0.000	7.58	78.59	-1899.9
M2. Core classic	700.5	313	0.000	10.88	55.84	-2037.6
M3. Core CH	689.3	313	0.000	10.68	56.54	-2048.0
M4a. M3+IN1oe	**599.0**	**313**	**0.000**	**10.17**	**62.23**	**-2139.0**
M4b. M4a+IN2oe1	626.5	313	0.000	10.31	60.50	-2211.5
M4c. M4a+IN2oe2.	**552.3**	**313**	**0.000**	**9.50**	**65.18**	**-2185.7**
M4d. M4c+IN3oe	554.0	313	0.000	9.55	65.07	-2184.0
M4e. M4c+SEoe	**537.5**	**312**	**0.000**	**9.33**	**66.11**	**-2191.8**
M4f. M4e+AF2oe1	526.1	312	0.000	9.39	66.83	-2203.2
M4g. M4e+AF2oe2	520.9	312	0.000	9.44	67.16	-2208.4
M4h. M4e+AF2oe3	517.4	312	0.000	9.44	67.38	-2211.9
M4i. M4e+AF2oe4	**508.6**	**312**	**0.000**	**9.43**	**67.93**	**-2220.7**
M4i. M4i+AF1oe1	496.2	312	0.000	9.25	68.71	-2233.1
M4k. M4i+AF1oe2	**492.9**	**312**	**0.000**	**9.23**	**68.93**	**-2236.4**
M4l. M4i+AF1oe3	493.9	312	0.000	9.24	68.86	-2235.4

Corresponding parameters	**HI1**	**HI2**	**IN2**	**IN2**	**IN3**	**SE**	**AF1**	**AF2**
Core classic	**-0.22**	**-0.42**	**0.43**	**0.81**	**0.96**	**-1.03**	**-0.77**	**0.46**
Core CH	**-0.06**	**-0.30**	**0.18**	**0.72**	**2.16**	**-0.33**	**-0.28**	**0.29**
M2. Core classic	-0.16	0.20	0.23	1.02	-0.05	-	-0.65	0.39
M3. Core CH	-0.09	-0.38	0.26	0.87	0.01	-	-0.23	0.26
M4a. M3+IN1oe	**0.03**	**-0.39**	**0.47**	**1.02**	**-0.43**	**-**	**-0.27**	**0.13**
M4b. M4a+IN2oe1	-0.41	-0.57	0.23	0.40	0.44	-	-0.35	0.12
M4c. M4a+IN2oe2.	**-0.41**	**-0.43**	**0.26**	**1.08**	**-0.28**	**-**	**-0.37**	**0.10**
M4d. M4c+IN3oe	-0.44	-0.45	0.24	0.72	0.29	-	-0.35	0.15
M4e. M4c+SEoe	**-0.42**	**-0.32**	**0.24**	**0.96**	**-0.50**	**-0.20**	**-0.37**	**0.07**
M4f. M4e+AF2oe1	-0.46	-0.37	0.28	0.77	-0.46	-0.23	-0.35	0.26
M4g. M4e+AF2oe2	-0.38	-0.35	0.35	0.79	-0.53	-0.22	-0.34	0.21
M4h. M4e+AF2oe3	-0.39	-0.36	0.35	0.84	-0.51	-0.20	-0.33	0.21
M4i. M4e+AF2oe4	**-0.39**	**-0.34**	**0.36**	**0.87**	**-0.57**	**-0.21**	**-0.32**	**0.24**
M4i. M4i+AF1oe1	-0.38	-0.37	0.33	0.81	-0.39	-0.16	-0.38	0.19
M4k. M4i+AF1oe2	**-0.37**	**-0.37**	**0.34**	**0.79**	**-0.37**	**-0.16**	**-0.40**	**0.19**
M4l. M4i+AF1oe3	-0.35	-0.48	0.34	0.75	-0.23	-0.12	-0.36	0.14

Notes: Cond Ind=conditional independence model; CnSF=constant social fluidity model; Core classic=core model of social fluidity. G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index, %G2=proportion of reduction of deviance, BIC=Bayesian information criterion. *The smaller the G2, the better the model fit.*

We then turned to the definition of positive affinities (AF2). We first tested whether there was a higher propensity for children of the non-salariat class (except the routine class) to reach any of the

Table 7.8: Results of fitting the core log-linear model of social fluidity and some adjustments to men's mobility tables according to their father's social position, controlling for birth-cohorts (women aged 30–64, Oesch class schema)

Models OD	G2	Df	P	DI	%G2	BIC
* Women, 5 cohorts origin-destination mobility table N=5604						
M0. Cond. Ind.	875.7	320	0.000	14.62	-	-1886.3
M1. CnSF	291.4	256	0.064	7.27	63.06	-1918.2
M2. Core classic	516.6	313	0.000	10.23	34.51	-2184.9
M3. Core CH	516.6	313	0.000	10.22	34.51	-2185.0
M4a. M3+IN1oe	**490.5**	**313**	**0.000**	**10.08**	**37.82**	**-2211.1**
M4b. M4a+IN2oe1	567.1	313	0.000	10.99	28.12	-2134.5
M4c. M4a+IN2oe2.	**539.2**	**313**	**0.000**	**10.65**	**31.65**	**-2162.4**
M4d. M4c+IN3oe	546.2	313	0.000	10.68	30.76	-2155.4
M4e. M4c+SEoe	**531.6**	**312**	**0.000**	**10.57**	**32.61**	**-2161.4**
M4f. M4e+AF2oe1	528.7	312	0.000	10.51	32.98	-2164.3
M4g. M4e+AF2oe2	525.5	312	0.000	10.49	33.38	-2167.4
M4h. M4e+AF2oe3	524.9	312	0.000	10.49	33.46	-2168.0
M4i. M4e+AF2oe4	**523.4**	**312**	**0.000**	**10.44**	**33.64**	**-2169.5**
M4j. M4i+AF1oe1	523.9	312	0.000	10.45	33.59	-2169.1
M4k. M4i+AF1oe2	**523.5**	**312**	**0.000**	**10.45**	**33.63**	**-2169.4**
M4l. M4i+AF1oe3	520.3	312	0.000	10.29	34.04	-2172.6

Corresponding parameters	**HI1**	**HI2**	**IN2**	**IN2**	**IN3**	**SE**	**AF1**	**AF2**
Core classic (men only)	**-0.22**	**-0.42**	**0.43**	**0.81**	**0.96**	**-1.03**	**-0.77**	**0.46**
Core CH	**-0.17**	**-0.51**	**0.13**	**0.41**	**1.55**	**-0.23**	**-0.15**	**0.22**
M2. Core classic	0.22	0.53	0.16	1.60	-1.31	-	-0.36	0.26
M3. Core CH	0.22	0.17	0.16	1.60	-1.31	-	-0.02	0.26
M4a. M3+IN1oe	**0.25**	**0.16**	**0.30**	**1.71**	**-1.56**	**-**	**0.03**	**0.23**
M4b. M4a+IN2oe1	-0.46	-0.33	0.12	0.34	-0.06	-	-0.02	0.10
M4c. M4a+IN2oe2.	**-0.46**	**-0.28**	**0.11**	**0.76**	**-0.48**	**-**	**-0.03**	**0.10**
M4d. M4c+IN3oe	-0.47	-0.32	0.11	0.71	-0.30	-	-0.02	0.12
M4e. M4c+SEoe	**-0.46**	**-0.19**	**0.10**	**0.69**	**-0.73**	**-0.18**	**-0.04**	**0.08**
M4f. M4e+AF2oe1	-0.43	-0.19	0.13	0.59	-0.72	0.20	-0.07	0.19
M4g. M4e+AF2oe2	-0.38	-0.18	0.17	0.63	-0.78	-0.19	-0.06	0.15
M4h. M4e+AF2oe3	-0.38	-0.19	0.17	0.66	-0.75	-0.16	-0.06	0.15
M4i. M4e+AF2oe4	**-0.37**	**-0.16**	**0.17**	**0.69**	**-0.80**	**-0.18**	**-0.06**	**0.16**
M4j. M4i+AF1oe1	-0.37	-0.18	0.18	0.68	-0.80	-0.17	-0.02	0.16
M4k. M4i+AF1oe2	**-0.37**	**-0.18**	**0.18**	**0.67**	**-0.77**	**-0.17**	**-0.05**	**0.15**
M4l. M4i+AF1oe3	-0.35	-0.20	0.17	0.63	-0.68	-0.15	-0.11	0.12

Notes: Cond Ind=conditional independence model; CnSF=constant social fluidity model; Core classic=core model of social fluidity. G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index, %G2=proportion of reduction of deviance, BIC=Bayesian information criterion. *The smaller the G2, the better the model fit.*

technical specialist and manager fractions of the service class. This effect improves the quality of the adjustment of our model to our data (M4f). In a second model (M4g), we additionally specified

that children of the technical specialists and managers have a positive affinity with other fractions of the service class. This specification proves to be also relevant. Then we tested whether children from the traditional bourgeoisie or from a socio-cultural specialist social background are more likely to attain a petite bourgeoisie social position. The G2 of this model (M4h) further decreases. Finally, we defined a final symmetrical affinity between the petite bourgeoisie and the socio-cultural specialists. This affinity significantly improved the adjustment of our model (M4i) to the data.

We next tested whether a negative affinity could be found within the different fractions of the service class. We tested in the three last models (1) if children of the petite bourgeoisie were less likely to be found in the technical specialists, the managers, the office clerks and the service workers classes (M4j); (2) if, additionally, children of the socio-cultural experts were less likely to be found in the office clerk and the service worker classes (M4k); (3) and if children from a skilled crafts background were less likely to be found in the traditional bourgeoisie or the socio-cultural specialists classes (M4l). While the two former effects happen to adjust better to our data, this is not the case of the latter effect.

Thus, model M4k provides the best model fit that we were able to find. It must be noted that this final model still misclassifies more than 9% of the data. This high dissimilarity index must, however, be related to that of the constant association model, which amounts to more than 7.50%. This indicates that the Oesch class schema adjusts overall worse to the data than ESeC. Nonetheless, in spite of these statistical limitations, this analysis still provides interesting insights. Parameters of our best model fit all provide consistent effects, except for one. In fact, during most of our modelling procedures, the third inheritance effect (IN3) returned a negative value. This problem might pertain to some extent to operationalisation difficulties. In particular, this problematic parameter might stem from lack of ability to isolate a class of farmers. It would certainly be interesting to do so in future research. Furthermore, it must be underlined that the modelling procedure has not been very convincing in regard to the women's mobility table. In fact, for women the G2 of our best model for men is actually worse than that of the classic core model of social fluidity or its Swiss variant – the “core CH”. The best model for women is M4a, which tests inheritance within the main diagonal of all classes. Yet notwithstanding this poor fit of the women's mobility table, parameters of effects fitted do converge overall with those for men. It remains, however, to be seen whether parameters will remain stable even after imposing some gender-specific constraints to women's model of social fluidity. Yet overall, we were able to find some heterogeneous social mobility dynamics within the different fractions of the service class to some

extent. This actually leaves us with two visions of the Swiss pattern of social mobility.

7.4 . Two visions of the Swiss pattern of social mobility

In this last section, we would like to address how far both final models of core social fluidity in Switzerland fitted with both the ESeC and the Oesch class schema do converge or diverge.

Parameters of each effect in the mobility tables of men and women are displayed in Tables 7.9 and 7.10. Overall, quite notable differences do exist between each class schema approach. However, the patterns are very similar with both cases having a high propensity of immobility on the main diagonal. The disaggregated approach of the service class, however, indicates some heterogeneity in the dynamics of social immobility within its different fractions. Those with assets that can be stored and transmitted, such as *property assets* and *cultural assets,* have a higher propensity of social reproduction than the other fraction (Savage et al. 1992). This is the case of the traditional bourgeoisie and the socio-cultural specialists. We could have expected that the technical specialists fraction would depict this trend as well. However, this service class fraction seems to dispose from fewer assets than the socio-cultural specialists, as overall they come from lower social backgrounds and have a more vocational type of education. We observe that this latter fraction, as well as the manager fraction, displays less immobility and more mobility with the other fractions of the service class. However, despite these heterogenous social (im)mobility dynamics within the service class, it remains very clear that being from any service class background is still an advantage in avoiding downward social mobility.

Thus, although the service class is not as unified as it may have appear, it still remains relatively homogenous to some extent. Being from any of the service class fractions might indeed offer better life chances on average, as compared to non-salariat classes. Yet it remains to be seen whether we could observe either an increasing or a decreasing heterogeneity by analysing dynamics from a temporal stance. We could probably expect some fractions, especially those with the highest cultural resources, such as the socio-cultural specialists, to become increasingly rigid over time, while the manager class could eventually remain the class that offers the highest chances of upward – but also downward – social mobility. We can now turn to an overall discussion of our findings.

7.5 . Discussion and conclusion

The objectives in this chapter were twofold: (1) to find the Swiss pattern of social mobility and (2) to address whether we could observe some heterogeneous social mobility dynamics in the service class. This latter endeavour was guided by the idea of finding clues to explain the constant and even

Table 7.9: Men's mobility pattern according to the final model of core social fluidity for each ESeC and Oesch class schema

Final model parameters :	HI1	HI2	IN1	IN2	IN3	SE	AF1	AF2
ESeC	-0.06	-0.30	0.18	0.72	2.16	-0.33	-0.28	0.29
Oesch	-0.37	-0.37	0.34	0.79	-0.37	-0.16	-0.40	0.19

	ESeC							**Oesch**								
	E1	**E2**	**E3**	**E4**	**E5**	**E6**		**Oe1**	**Oe2**	**Oe3**	**Oe4**	**Oe5**	**Oe6**	**Oe7**	**Oe8**	**Oe9**
E1	0.90	0.23	0.23	-0.39	-0.34	-0.64	**Oe1**	1.09	-0.48	-0.48	0.02	-0.83	-0.83	-0.21	-0.83	-0.83
							Oe2	0.02	0.34	0.14	0.14	-0.35	-0.35	-0.47	-0.70	-0.70
							Oe3	0.02	0.14	0.34	0.14	-0.35	-0.35	-0.47	-0.70	-0.70
							Oe4	0.02	0.00	0.00	1.09	-0.70	-0.70	-0.33	-0.70	-0.70
E2	0.23	0.18	0.00	-0.33	0.00	-0.34	**Oe5**	-0.47	-0.21	-0.21	-0.35	0.34	0.00	-0.12	0.00	-0.70
							Oe6	-0.47	-0.21	-0.21	-0.35	0.00	0.34	-0.12	0.00	-0.70
E3	0.23	0.00	0.90	-0.04	0.00	-0.34	**Oe7**	-0.35	-0.33	-0.33	-0.47	-0.12	-0.12	0.85	-0.12	-0.83
E4	-0.97	-0.67	-0.10	3.00	-0.10	0.00										
E5	-0.06	0.00	0.00	-0.33	0.18	-0.06	**Oe8**	-0.47	-0.21	-0.21	-0.35	0.00	0.00	-0.12	0.34	-0.35
E6	-0.64	-0.34	-0.34	-0.06	-0.06	0.18	**Oe9**	-0.83	-0.70	-0.70	-0.70	-0.70	-0.70	-0.83	-0.35	0.34

E1=Salariat; E2=White-collar; E3=Petite-bourgeoise; E4=Farmers; E5=Skilled-manuals; E6=Semi-/unskilled workers; Oe1=Traditional bourgeoisie; Oe2=Technical specialists; Oe3= Managers; Oe4= Socio-cultural specialists; Oe5= Office clerks; Oe6= Service workers; Oe7= Petite-bourgeoise; Oe8= Skilled crafts; Oe9= Routine.

Table 7.10: Women's mobility pattern according to the final model of core social fluidity for each ESeC and Oesch class schema

Final model parameters :	HI1	HI2	IN1	IN2	IN3	SE	AF1	AF2
ESeC	-0.17	-0.51	0.13	0.41	1.55	-0.23	-0.15	0.22
Oesch	-0.37	-0.18	0.18	0.67	-0.77	-0.17	-0.05	0.15

	ESeC							**Oesch**								
	E1	**E2**	**E3**	**E4**	**E5**	**E6**		**Oe1**	**Oe2**	**Oe3**	**Oe4**	**Oe5**	**Oe6**	**Oe7**	**Oe8**	**Oe9**
E1	0.54	0.05	0.05	-0.40	-0.33	-0.84	**Oe1**	0.80	-0.26	-0.26	-0.03	-0.61	-0.61	-0.22	-0.61	-0.61
							Oe2	-0.03	0.17	0.12	0.12	-0.35	-0.35	-0.50	-0.45	-0.45
							Oe3	-0.03	0.12	0.17	0.12	-0.35	-0.35	-0.50	-0.45	-0.45
							Oe4	-0.03	0.00	0.00	0.80	-0.45	-0.45	-0.38	-0.45	-0.45
E2	0.05	0.13	0.00	-0.23	0.00	-0.33	**Oe5**	-0.50	-0.22	-0.22	-0.35	0.17	0.00	-0.15	0.00	-0.45
							Oe6	-0.50	-0.22	-0.22	-0.35	0.00	0.17	-0.15	0.00	-0.45
E3	0.05	0.00	0.54	0.00	0.00	-0.33	**Oe7**	-0.35	-0.38	-0.38	-0.50	-0.15	-0.15	0.12	-0.15	-0.61
E4	-1.07	-0.55	-0.18	1.91	-0.18	0.00										
E5	-0.17	0.00	0.00	-0.23	0.13	-0.17	**Oe8**	-0.50	-0.22	-0.22	-0.35	0.00	0.00	-0.15	0.17	1.00
E6	-0.84	-0.33	-0.33	-0.17	-0.17	0.13	**Oe9**	-0.61	-0.45	-0.45	-0.45	-0.45	-0.45	-0.61	-0.35	0.17

E1=Salariat; E2=White-collar; E3=Petite-bourgeoise; E4=Farmers; E5=Skilled-manuals; E6=Semi-/unskilled workers; Oe1=Traditional bourgeoisie; Oe2=Technical specialists; Oe3= Managers; Oe4= Socio-cultural specialists; Oe5= Office clerks; Oe6= Service workers; Oe7= Petite-bourgeoise; Oe8= Skilled crafts; Oe9= Routine.

increasing return to education trend that we found in the preceding chapter, since it could have been driven by a compositional shift in the occupational structure.

Our first main concern was to assess the extent of commonality and variation of the Swiss pattern of social mobility with the original model of core social fluidity as proposed by Erikson and Goldthorpe. We hypothesised that the Swiss case would deviate from this model and display affinities with the German variant of the model (H5a). Although findings indicate that the Swiss pattern of social fluidity displays a high degree of commonality with the original model, a certain number of adjustments were necessary to improve the quality of our model. In line with our hypothesis, some of these adjustments stem from the refinements proposed by Erikson and Goldthorpe for the case of Germany. Our starting point for the adjustment of the core model of social fluidity was the German negative affinity matrix (AF1), which specifies that children of the semi-/unskilled worker class have a lower likelihood to move into white collar and petite bourgeoisie positions. Subsequently, further refinements were undertaken, mostly in the form of negative affinity: (1) we specified that the German effect is symmetric, so that white collar and petite bourgeoisie children have a lower propensity to move into the semi-/unskilled class; (2) children of the salariat in Switzerland are less likely to attain skilled worker position; and (3) children of farmers, similarly to children of semi-/unskilled workers, are very unlikely to reach the salariat or the white collar class. In contrast, we found that children of farmers have a positive affinity (AF2) with the skilled worker class. This is the only adaptation of the positive affinity matrix that we specified and it lent some support to our second hypothesis stating that self-employed children should exhibit more downward mobility in Switzerland (H5b). However, it seems to hold true for children of farm origin, while those from the petite bourgeoise have more resources and are protected from moving into semi-/unskilled occupations.

Altogether, these adaptations seem rather consistent with the explanations pointed out for Germany in *The Constant Flux* (Erikson and Goldthorpe 1992b:149–150). The authors suggested that there was an important division within the working class between its skilled and non-skilled components, stemming from the dual educational system. In fact, holding an apprenticeship in Germany certainly improves occupational life-chances, as compared to having attained no particular level of education. The same seems to apply in Switzerland and actually expends to the children of farmers. Furthermore, children of the highest fractions of the Swiss social stratification – namely the salariat, the white collar and the petite bourgeoisie – are particularly protected from downward social mobility moves. Thus, the Swiss social mobility pattern looks particularly rigid, as it depicts important barriers between the manual and non-manual classes.

All these adaptations suggest that Switzerland deviates quite significantly from the original model of core social fluidity, particular since Germany has been considered the country with the highest level of deviation from the original model. In fact, we found that the Swiss pattern deviates from the core model of social fluidity even more than Germany. Furthermore, these observations were found to hold for Swiss men essentially, as when fitting the same model to women, we observed that women's pattern of social mobility deviates significantly from that of men. While we decided not to continue the investigation of women's own pattern of social mobility in Switzerland, since we think it should be addressed thoroughly and properly in further research, this deviation of women's pattern as compared to men's in itself constitutes an outcome. This point is at odds with our hypothesis of gender convergence in social mobility dynamics (H7).

We wonder in this respect whether the original core model of social fluidity as proposed by Erikson and Goldthorpe displays a *male-bias*. In fact, the core model of social fluidity was originally constructed to describe social mobility in 1970s industrial societies, which by definition were still highly characterised with the male breadwinner family model. Since then, women's position in society has considerably changed, as they now actively take part in the labour market. In the meantime, the social structure of Western societies underwent an upward shift with the coming of tertiarisation and educational expansion. As a consequence, the social stratification of Western societies has been considerably transformed and the service class has become a big – one might say too big – class. In this context, we are led to wonder whether we can observe heterogeneous social mobility dynamics in different fractions of the service class. We were able to disaggregate the big service class into four main fractions as proposed by Oesch (2006a, 2006b): (1) the traditional bourgeoisie, (2) the technical specialists, (3) the managers, and (4) the socio-cultural specialists. This was our second objective in this last empirical chapter.

In the second part of our analysis, we addressed this issue of the changing social structure and its consequences on social mobility dynamics. Indeed, the significant expansion of the service class over the time frame considered implies that almost 50% of the Swiss population is found in this class. Yet by disaggregating the service class into four different fractions, we have tried to find subtler social mobility dynamics. We were indeed able to show some heterogeneity in the social mobility dynamics of the different fractions of the service class we isolated. Starting with the Swiss adaptation of the core model of social fluidity – the so-called core-CH – we proposed several sets of adaptations that proved to adjust significantly better to our data. Additionally, we were able to show that social inheritance is more important on the main diagonal into each salariat class than into the sole large salariat class. We also found differential affinities with other classes for each fraction of

the salariat classes. Notably, the traditional bourgeoisie and the socio-cultural specialists have overall fewer affinities with other classes but display positive affinity together. In contrast, the technical specialists and the managers have more positive affinity with each other, but also with other non-salariat classes.

These findings clearly corroborate our hypothesis (H6a). Social mobility dynamics are indeed heterogeneous within the service class. Specifically, the salariat could be divided into two broad main categories with, on the one hand, the technical specialists and the managers who display the highest extent of mobility since they rely on lower cultural resources. Indeed, on average they gain vocation-oriented education at the tertiary level for the former and the secondary level for the latter. On the other hand, the traditional bourgeoisie and the socio-cultural specialists who are the most immobile. This observation supports our hypothesis H6b stating that the self-employed category in the service class displays more immobility. However, this category does not hold the monopoly of high social immobility propensity, since socio-cultural specialists hold a similar level of immobility. Thus, property assets (characteristics of the traditional bourgeoisie) and cultural assets (characteristics of the socio-cultural specialists) play a similar sizeable role in social reproduction.

These findings altogether provide us with some clues in regard to our original endeavour to explain the specific stable and increasing return to education trend that we found in the preceding chapter. For men, the stable trend in return to education certainly stems from the stable share of the manager position over time in the Swiss social structure. If their share had increased, return to education could eventually have decreased, since these occupations rely less on higher education. In contrast, as the technical specialist fractions increased continuously over time, and since this service class fraction on average requires tertiary vocational education, the general level of return to education remained stable for men. As regard to women, the linear increase of return to education over time clearly stems from the development of occupations in the socio-cultural specialist service class fraction. Indeed, the share of women within this fraction increased significantly over time. Thus, we find some indication of a compositional effect in the social structure to explain the specificity of the trend of return to education in the Swiss context.

Yet while the disaggregated analysis of the service class provides us with some interesting insights in regard to social mobility dynamics, it must be underlined that the service class overall seems to remain a rather unified group. In fact, coming from any service class background seems to significantly hinder chances of downward mobility overall. In other words, to be able to conclude that each fraction of the service class we identified is actually different, further research would be required in order to more thoroughly address to extent to which they display different life chances.

They certainly do, to some extent, and they certainly differentiate with each other in terms of cultural habits, for instance.

Additionally, further research undertaken with the Oesch class schema should also try to improve the coding procedure of this class schema for cases where we lack information on self-employment and by isolating the farmers from the rest of the petite bourgeoisie in the class schema. We are well aware of operationalisation weaknesses that this class schema displays, especially with our data in which information on self-employment is sometimes scarce or lacking, but its theoretical rationale is interesting enough to encourage scholars to use this class schema for the analysis of social mobility in post-industrial societies – particularly since we wonder to which extent our research findings happen to stem from the Swiss specificity or whether they could be corroborated in cross-national contexts. We could, in turn, wonder whether we could find evidence of a new "disaggregated core model of social fluidity". All of these final remarks lay the groundwork for future research. But for now, we must turn to the overall discussion of findings uncovered in this thesis.

8 . Meritocracy did not come. Concluding remarks on intergenerational social mobility in the Swiss social stratification mountain

8.1 . Too little meritocracy and social mobility in the Swiss democracy: the persistent importance of social origin in the Swiss social stratification mountain

In Switzerland, as in many other countries in the world, principles of liberty and equality constitute the cornerstone of democracy. They define that everyone is born *sous la même étoile*[37] and equally gifted to succeed in life and become a responsible citizen. The influence of social background on life chances in democratic societies should thus only be of marginal importance, acting as a relic of old hierarchical orders dating from feudal times, when individuals' fates were determined at birth. Indeed, the sole criteria that should count to select and allocate individuals in a democratic society will be talent and merit. Consequently, these societies are expected to be highly meritocratic, since they give to each individual equal opportunity to make his or her place in the society. From this standpoint, by looking at how much social background influences individuals' social position in society, the study of intergenerational social mobility can provide a measure of equality of opportunity to test how true this meritocratic assumption actually is. It is commonly expected that if class-based educational inequality is erased and if education becomes the main determinant of a person's social position, then an education-based meritocracy is in place. In other words, the study of social mobility enables us to outline how open democratic societies are. If social mobility increases, it is assumed that these societies tend more and more towards democratic requirements, whereas if it decreases, they might be in danger because these requirements become fewer and fewer.

We assessed these issues in the context of Switzerland, an extremely prosperous country where education plays a major role in the allocation process. We wondered to which extent social mobility has increased since the beginning of the last century in this country, and if in turn it had become more meritocratic. We were able to empirically investigate these issues through the construction of a unique tailor-made dataset based on the aggregation of twelve surveys collected between 1975

37 Understand : Under the same star

and 2009. This study design allowed us to gain a large sample size representative of the Swiss population born between the early 1910s and the late 1970s, which we divided into several birth-cohorts to undertake our analysis in order to correctly assess the extent of change in the Swiss social mobility regime. Through the thorough recoding of each dataset into comparative measures and the use of adequate statistical models in addition to systematic robustness checks, our study is unique in Switzerland. It constitutes serious grounds for the description of substantial social mobility dynamics in Switzerland.

Our research was particularly concerned with the impact of the changing social stratification structure on social mobility opportunities. This is the reason why we argued that rather than seeing the social mobility process as climbing a ladder, it could be envisaged as climbing a mountain. In fact, between other things, mountains display the unique feature of being capable of taking a new shape over time. The mountain metaphor can therefore account for social changes in the social stratification that Swiss society, like other Western societies, has undergone since the last century, unlike the ladder metaphor. In fact, with processes of educational expansion and tertiarisation, the social stratification structure has been considerably modified in these societies. Therefore, these changes are likely to have impacted social mobility chances, and in turn, equality of opportunity and meritocracy.

With the data we constructed, we were indeed able to observe changes in the Swiss social stratification mountain. First, the educational structure expanded, and as a result, almost everybody today attains at least secondary education in Switzerland. Furthermore, an increasing share of the Swiss population has also attained a tertiary educational level. Yet the Swiss educational system did not expand as much as in other European countries, since educational expansion has been relatively moderate. Switzerland indeed remains one of the core countries in Europe whose educational system is vocationally oriented: about 40% of the total population attains secondary vocational education, whereas only 20% of the population in the youngest generations attains tertiary general education. In addition to educational expansion, the Swiss social stratification mountain has tertiarised as a consequence of the development of the service economy. The structure of occupations underwent an upward shift as the semi-/unskilled and farmer classes shrank significantly, whereas the salariat and intermediate employee classes grew. Finally, in both the educational and occupational structures, the Swiss social stratification mountain feminised considerably. While gender inequality is still significant in Switzerland in many respects, it decreased significantly in terms of access to education and the labour market. As a consequence, we would have expected that all these structural changes would have considerably modified social

mobility opportunities in Switzerland in the sense of greater social mobility. However, our empirical analysis leads us to reject such claims. While we do find some changes in the structure of opportunity, they did not create more intergenerational social mobility.

We do indeed observe that changes in the social stratification structure had some consequences affecting the dynamic of inequality, particularly since we find that the role of education in the social mobility process changed. As in other European countries, educational inequalities reduced in Switzerland over time. Thus, educational opportunities have equalised to a certain extent. This trend is particularly more pronounced among men and holds essentially for people born prior to 1965. Nonetheless, in the youngest birth-cohort, educational inequalities tend to have reinforced, being for men or women. In other words, while there has been some educational equalisation over time in Switzerland, which was certainly fostered by educational expansion, this trend seems to have reversed in recent years. In other words, non-persistent educational inequality does not persist over time in Switzerland.

In the meantime, we observe that the value of education did not decrease, unlike in other European countries. Education in Switzerland remained as rewarded on the labour market as it used to be, if not more. For men, the level of return to education stayed mostly the same over birth-cohorts and even increased considerably within the youngest one. As for women, return to education increased during the whole period and, interestingly, increased linearly. Thus, in Switzerland the occupational advantage afforded by education for women constantly increased. This Swiss idiosyncrasy in this trend in return to education could be attributed to the gap between the educational and occupational structure – in other words, between processes of educational expansion and tertiarisation. Since the former developed later than the latter, education has become increasingly determinant over time in allocating individuals into social positions, while it was probably not as crucial in earlier times.

This trend towards increasing return to education has certainly been intensified over recent years by the changing profile of the foreign population, which accounts for more than one-fifth of the total population in Switzerland. Indeed, while the migrant population traditionally concentrated on poorly qualified occupational segments of the Swiss labour market, thus enabling Swiss citizens to enjoy good occupational prospects even with only low qualifications, recently Switzerland has witnessed the emergence of highly qualified migrants. As a consequence, within the youngest cohort we observe that foreigners today are more likely to hold a tertiary general educational level and occupy a higher salariat class than Swiss citizens.

Altogether, it is noteworthy that these two findings, respectively decreasing educational inequality while stabilizing and even increasing return to education, are in line with expectations of an

education-based meritocracy, as they were put notably by the liberal theory of industrialism. It is indeed very often acknowledged that progress towards an education-based meritocracy requires three main processes of change (Goldthorpe and Jackson 2008): (1) that the association between social origin and educational attainment decreases, implying that educational opportunities equalise; (2) that the association between educational attainment and social destination increases, so that education becomes the main determinant of individuals' social position; and (3) that the association between social origin and social destination is weaker in the highest levels of education, suggesting that highly educated people are likely to be selected only according to achieved characteristics, rather than ascribed ones. Yet as with educational expansion, an increasing share of people attain higher education, it is likely that more and more people will become selected on meritocratic assets. This is what is called a compositional effect.

Since we also find evidence of this latter effect for both men and women in Switzerland, we are very much tempted to conclude that an education-based meritocracy is actually present in this country: (1) education has become less dependent on social origin, (2) social position attained is importantly conditioned on education, and (3) highly educated people are selected primarily according to their educational attainment. However, one very important piece of the puzzle is missing. Logically, if an education-based meritocracy did hold in Switzerland, we should observe that the direct association between social origin and social destination would have also decreased, but we do not observe this trend in this country. Both measures of relative and absolute social mobility indicate that social mobility has remained constant over time in Switzerland. While we observe some variations in relative social mobility opportunities, they are not substantial enough and do not point in any consistent direction towards increasing social fluidity for men or women. Therefore, rather than naively concluding that Switzerland is an education-based meritocracy, we would prefer to underline that the Swiss configuration is rather peculiar: while educational inequality overall declined and return to education tended to increase, social mobility remained constant. In other words, Switzerland provides a unique example of what we could term a “non-meritocratic meritocracy”.

To understand this unique configuration of the Swiss social mobility regime, more pieces of the puzzle are required. We were able to identify five main reasons to explain this Swiss idiosyncrasy. First, in regard to educational equalisation, we notice that equalisation happened mostly at *secondary vocational* educational levels, and to a lower extent, *tertiary vocational* tracks as well. Children of the working class have increasingly attained these educational levels. Yet important barriers persist in the attainment of *general* education for children of lower class backgrounds. In

fact, educational equality in access to *general* education tracks, and importantly, at the *tertiary general* level, did not increase.

Second, the lowest educational equalisation effect that we found among women stems from the fact that these are women from the salariat class background who were more likely to enjoy the benefits of educational expansion. Women who attained tertiary education were indeed more likely to come from this social background than men were. Thus, while an increasing share of women attained higher education and saw their educational opportunities converging with those of men overall, those who primarily enjoyed change were most likely to be positively selected on a higher social class background.

Third, we notice that education has become increasingly important to the occupational process allocation. While tertiary education and, particularly, *tertiary general* education, significantly prevents one from attaining any position outside the salariat class, *secondary vocational* education has increasingly become a working-class educational level. Indeed, while some people with secondary vocational education used to succeed in reaching the salariat class, this opportunity decreased over birth-cohorts, whereas in the meantime, the number of opportunities in the salariat class increased. From this standpoint, social class inequalities seem to have polarised. on the one hand, while working-class children have become more likely to attain secondary vocational education, those who reached a working-class position during their adulthood have become more likely to be graduates of this educational level. On the other hand, an increasing share of salariat class children reached tertiary general education and later occupied a salariat class position. Thus, the effect we observe is very much an offset, rather than a trend towards increasing meritocracy.

This observation brings us to our fourth point: barriers in social mobility in Switzerland are high. In our last empirical chapter, we were concerned with assessing the extent of commonality and variation of the Swiss pattern of social mobility by fitting the *core model of social fluidity*, a model designed by Erikson and Goldthorpe (1992b) that describes the mobility pattern of industrial societies. While our analysis reveals many commonalities with the general *core pattern*, we were able to identify a certain number of deviations from it. In the end, the final representation at which we arrived at deviates more than what was found for Germany, the country that deviated the most from other countries in the original analysis of Erikson and Goldthorpe. Deviation essentially stems from the barriers faced by children from the semi-/unskilled workers and farmer classes to move upwardly to other classes, and by children of the salariat and white-collar classes (also the petite-bourgeoisie to some extent) to move downwardly to the lowest social classes. Thus, important obstacles remain between the well-off and less privileged in the Swiss society, which from this

perspective looks extremely rigid.

Our fifth and last point regards the evolution of the Swiss social structure in the salariat class. The constant and even increasing return to education trend that we observed in the Swiss context could be attributed to some compositional effect in the social structure, since the occupational segments which developed the most over time in the salariat class are those of a professional kind, which rely more on educational credentials. Yet since the Swiss educational system trains fewer people than the social structure requires, the value of education in Switzerland did not lose its significance. This observation is particularly true for women whose occupational opportunities developed more rapidly than their educational opportunities. We further observed that different service class fractions depict heterogeneous social mobility dynamics to some extent. Some segments display more intergenerational social mobility, whereas others, more immobility: on the one hand, the traditional bourgeoisie and the socio-cultural specialists are more immobile, whereas on the other hand the technical specialists and the managers are more mobile. Thus, depending on which occupational segment develops the most in the service class, social mobility might either decrease or increase.

To summarise, it appears that the social stratification mountain in Switzerland is in fact too big to climb – either up or down. While the shape of this mountain changed with both the educational and occupational structures rising up, changes that we observed did not result in the substantial reduction of class-based inequality of opportunity. It is true that educational inequalities have been reduced when compared to older birth-cohorts. It is also true that the value of education has not been altered and even increased to some respect. It is further true that those who reached tertiary education were recruited according to their individual talent and merit, regardless of their social origin. But concluding that Switzerland is an education-based meritocracy would prove totally misleading, since social origin has remained an important predictor of social position throughout all birth-cohorts. To describe this peculiar configuration, we provocatively qualified Switzerland as a “non-meritocratic meritocracy”. Indeed, changes observed in the social structure in the end did not modify social mobility chances overall, nor equality of opportunity. In this sense, our findings corroborate Jacot's (2013) claims that social origin remains an important predictor of social position in Switzerland and that the mediating effect of education in the social mobility process should not be too overstated. While education can certainly be a way to open new opportunities to individuals, it can also hinder their prospects with selection into highly segmented and oriented tracks. We shall now discuss the implications of our findings.

8.2 . Switzerland, the "non-meritocratic meritocracy": implications of our findings

Our findings of a "non-meritocratic meritocracy" in Switzerland have implications at different levels, notably at the theoretical level and at the political level.

At the theoretical level, these findings demonstrate that theoretical statements of the liberal theory of industrialism are clearly misleading. The structure of inequalities does not evolve as logically as a basic mathematic calculation would suggest. The Swiss configuration enlightens us to the fact that changes in the social mobility process are much more subtle than classical theoretical formulations in the field would have expected. If we would follow the theoretical expectations of the liberal theory of industrialism, we could have reached the naïve interpretation that Switzerland is an extremely meritocratic country, which would have been a rather unique situation in Europe. Yet when looking into greater detail on what our findings of a decreasing educational inequality trend and of an increasing return to education trend actually mean, we arrive at opposing conclusions.

This thus suggests that we should be extremely careful in interpreting any decreasing inequality trend that any empirical research documents. We should question what this finding means and implies. While it is indeed important to underline that the social world in which we live changes and that new opportunities might arise for some people, these trends should be more systematically contextualised according to the macro-structural circumstances under which they occurred. In fact, the non-persistent educational inequality trend documented recently by Breen, Luijkx, Müller and Pollak (2009, 2010 henceforth BLMP) has been received as a rather important finding. Not only was this a rather important revolution into the field of social stratification research since it rejected the old claims of the persistent educational inequality thesis (Shavit and Blossfeld 1993), but also at a more substantial level, it lent support to the idea that our present-day Western societies are finally not as unequal as they used to be. While it is certainly true that we enjoy more equality today in many respects as compared to, say, one hundred years ago, this decreasing inequality trend must be understood in the specific context in which it happened. As BLMP accurately underline, the trend that they documented actually happened mostly at the secondary educational level, while the attainment of tertiary education remained hardly unchanged. Furthermore, these increasing educational opportunities primarily benefited children from working-class and farmer backgrounds, two class positions that happened to shrink over time. Last but not least, this trend actually happened during a relatively short period of time, between 1950 and 1975.

In other words, what we would like to highlight here through the findings of the present research, as well as through the example of the non-persistent educational inequality trend, is that scholars

should more systematically underscore the context in which such findings happen to occur. Understanding and documenting the context in which social change happens is, in fact, crucial, since it would be extremely damaging to social stratification research that some post-modern theorists understand the non-persistent educational inequality trend as evidence of the weakening salience of social inequalities. Significant social inequality persists in our present-day society in many respects, since the social stratification has not been turned upside down. Empirical research even documents that in countries where social stratification has been quite considerably modified over a short period of time, notably in Hungary, social inequalities did not disappear, but rather adapted and transformed according to the new social order (Róbert and Bukodi 2004). Therefore, we see our findings supporting the trendless fluctuations hypothesis, in line with Sorokin (1927) and more recently with Erikson and Goldthorpe (1992b). In fact, our finding of a "non-meritocratic meritocracy" constitutes a brilliant demonstration of how inequality actually transforms and only very little decreases. We can now discuss the political implications of these findings.

To correctly understand what our findings imply at the political level, we would like to more thoroughly emphasise women's particular fate over time in regard to their social mobility opportunities. At first sight, we could be very much tempted to conclude that women have been the great winners of macro-structural changes in terms of life chances, since they experienced a high increase in terms of access to highest levels of education and in terms of upward mobility chances. Furthermore, gender differences in the structure of occupation decreased constantly and still do within the youngest birth-cohort. Yet when we look more thoroughly into the specific profile of **these** women whose situation has improved, we actually observe that they were more likely than men to be positively selected from a higher social class background. In fact, one of the main reasons why we do not find clear decreasing educational inequality among women in Switzerland pertains to the fact that these women who reached higher education happened to come predominantly from the salariat class. In other words, we observe to some extent a perverse effect of gender equality: while gender inequality faded to a certain degree, social background inequalities seem to have become more crucial.

Our point here, however, is not to undermine the importance of gender equality, since a lot still needs to be done in Switzerland in this respect. Gender equality policies are indeed important since Switzerland still remains a highly gender-traditional country. Women in Switzerland are indeed significantly likely to be employed part-time in female-typed occupations offering few and limited career prospects. Furthermore, at the moment of transition to parenthood, they face important constraints, since very often classical gender roles arise again (if this was not the case before) and

the division of labour within the household becomes extremely gendered. Thus, political efforts to promote gender equality constitute a central pillar for the improvement of equality of opportunities in Switzerland.

But thinking of equality of opportunity in Switzerland only under the gender lens is problematic. To provide a simple and grotesque illustration of this issue, we could argue that if what changed is that gender does not count anymore for children of Kings[38] to pretend to the Throne, the only pretenders to the Throne would still remain children of Kings. Thus, Kings' daughters might get the chance to sit on the Throne, but they would have had this opportunity only because their father was a King.

Therefore, if political efforts to increase equality of opportunity between men and women actually increase class-based inequality in the end, we could wonder how opportunities would have been more equally distributed in Switzerland. Our analysis suggests to us that this trend is indeed taking place, since the difference in the distribution of the occupational structure between the working-class origin and the salariat class origin increased from the 1956 birth-cohort onwards, whereas between men and women, it decreased.

In other words, it is *not enough* to put political emphasis *only* on gender equality, as has mostly been the case up until now. We would like to urge Swiss politicians to think of issues of equality of opportunities *also* from a social background perspective. Indeed, if they are actually concerned with the issue of equality of opportunity *as a whole*, they should also address the issue of class-based inequality, not only gender inequality issues. If not, the only promotion of gender equality could actually increase class-based inequality, which in the long run would be counterproductive since it would invalidate the idea of the promotion of equality of opportunity *as a whole*.

There could be several ways through which Switzerland could reduce class-based inequalities. First, by postponing selection into highly stratified educational tracks, working-class children could actually get more leeway to potentially reach the best and most rewarding educational tracks (Maurin 2007). In fact, the school system would have eventually had more of a possibility to harmonise social class differences in educational success. Additionally, there should be more options to cross the boundaries of each educational track. While such opportunities already exist to some extent, their development and promotion could certainly foster class-based equality of opportunity. Furthermore, the development of quality and accessible childcare facilities and kindergarten schools would contribute to the equalisation of social background differences between children at the crucial moment of child development.

38 When referring to children of Kings, we understand that these could equally be children of Queens, in the case a Queen rather than a King is ruling.

Still, probably the single most effective way to reduce class-based inequality would consist of reducing overall social inequalities in Switzerland through the implementation of more redistributive policies. This political action would not only promote more equality of outcome, but logically increase equality of opportunity overall. Indeed, if inequality of outcome is reduced, then it will become easier to move between different social classes, since the social stratification mountain would be lower, but the possibility to climb or descend it would be higher, so to speak (Dubet 2010). A further reason why increasing equality of outcome would benefit society as a whole would be that greater equality of outcome is good for individual autonomy and social cohesion in that individuals are not always competing, but rather seeking a good quality of life. Although we are aware that this political action is not on the Swiss political agenda, we invite Swiss politicians to think of how to decrease class-based inequalities in Switzerland.

Before that, an extremely straightforward action that both politicians and scholars could very easily implement would consist of systematically reporting social origin indicators in surveys. In fact, as Coradi Vellacott and Wolter (2005:90) correctly underline, information on social background in Switzerland is often missing in surveys and when it exists, it is very often not adequately measured. We noticed in some of the data we used that social origin was measured with some approximations, since we lacked some information. While we understand that this information was not too much of a concern in the oldest surveys we use, we do not understand why in recent datasets, notably the MOSAiCH surveys, some information is still missing for correctly measuring social origin. Similar criticism could also be addressed to the TREE and the COCOON data. These two longitudinal surveys are extremely valuable in many respects and we are certain that they will reveal important findings on the dynamics of social inequality in Switzerland. However, to accurately capture and understand these dynamics, it is absolutely crucial that these surveys correctly measure social origin, since socio-economic index measures available in this data provide a simplified vision of the structure of inequalities. Altogether, we would like to stress that such a central variable as social origin on life chances must not only be measured, but be *adequately* measured. It is with this last point that we wish to finalise the main implications of our findings. Finally, in the last section, we will point out the limitations of our research as well as lay the groundwork for future research.

8.3 . Limitations and future research prospects

One of the main limitations that we identify in our research concerns the way we measured women's social mobility. In several respects, the measurement of women's social position remains problematic. In our data, we did not isolate women who were currently employed at the time of the survey from those who were not. It might be the case that for some women, the social position we

measured was one that they had occupied several years before. But more importantly, among active women, we did not distinguish between those employed in full-time and part-time work. We suspect that this might be an explanation of why the core pattern of social fluidity of Swiss women deviates so significantly from Swiss men. Possibly, when replicating the same analysis exclusively to women employed full-time, we might be able to get a better adjustment of the model. Future research must address these issues, not only in the context of Switzerland but also cross-nationally.

We could indeed expect the social mobility opportunities and pattern of women employed full-time to differ substantially from those employed part-time. While women employed full-time might have a social mobility pattern similar to men's core model of social fluidity, it could be the case that the pattern of social mobility of women employed part-time is extremely specific. Overall, these observations lead us to wonder whether Erikson and Goldthorpe's original core model of social fluidity does not display a *male-bias*. Yet it could also be true that Swiss women depict a substantially different pattern of social fluidity as compared to other countries. Thus, while our findings question the cross-national and cross-temporal validity of the core model of social fluidity, it would be important to more thoroughly address these questions in future research, and if possible, in a comparative framework.

Furthermore, to correctly address issues of women's social mobility, we should consider how to integrate occupational career information to our models. While this would also prove interesting to understand men's social mobility pattern, it would be extremely relevant to the understanding of women's social mobility. In fact, with career interruptions and heterogeneous working-time employment, we could gain new insights regarding which occupational segments offer more or less social mobility and why. We could even consider enlarging the perspective to other life course domains that are likely to impact the occupational career, notably on cohabitation history and family formation issues.

Three further points must be addressed regarding consequences of feminisation in social mobility research. The first point regards the way social origin is measured. In fact, over recent years, the consensual measure of social origin through father's social position has eroded. In particular, some scholars have emphasised the importance of mother resources in the mobility process and thus argued that mothers should be included in the measurement of social origin. For instance, Beller demonstrated that “fathers' class is an increasingly poor proxy for family social class background in the United States, and [that] research conclusions can be distorted when it is used as such” (2009:508). The second point concerns the extent to which educational homogamy increased. Some research, for instance, found that it increased (Blossfeld and Timm 2003). As a consequence, it is

expected that inequalities between households might increase social inequalities overall. The third point regards the role of the partner in the social mobility process. Some research actually argues that the resources of the partner can foster social mobility opportunities (Vallet 1986). Thus, overall, women's new role in society opens the door to many research questions regarding the study of social stratification and inequality of opportunity.

A second, more minor limitation of our research pertains to how we have tried to address the issue of the changing structure of occupations within the salariat class. We were able to demonstrate the existence of heterogeneous social mobility dynamics in the different fractions of the service class that we identified as defined by the Oesch class schema. Furthermore, this approach provided us some clues to explain the increasing return to education trend that we observe in Switzerland. Thus, overall we judge our approach relevant and constructive. However, we must also admit that we were a bit frustrated to not be able to arrive at a more satisfactory model fit. This problem might arise to a considerable extent from the problems we met in operationalising the Oesch class schema to some of our data, in particular when we lacked information on employment relationship. Certainly, a coding procedure accounting for this kind of lacking information could be developed. Moreover, in the context of the present enquiry, we face a major limitation with this class schema since it does not isolate a class of farmers. This pertains to the fact that this class schema was operationalised to describe *post-industrial* societies, not *industrial* ones – yet our data covers a very large time frame. Therefore, the absence of a class of farmers is problematic within the oldest birth-cohorts, since this class displays specific resources and has been one of the most important drivers of social change in class inequality over the last century. That is the reason why it should be isolated. This endeavour could be easily adjusted to this class schema, especially since it provides an interesting tool for the analysis of social mobility. These overall improvements in its implementation would, in turn, certainly serve us to more specifically test how social reproduction evolved over time within each of the different service class fractions it isolates. Additionally, it would provide good grounds for the undertaking of the cross-national analysis of social mobility in a more disaggregated manner and would enable us to address to what extent the disaggregated pattern of social mobility that we observe in Switzerland displays some commonalities and variations with other countries. It could be the case indeed that, like the core model of social fluidity found by Erikson and Goldthorpe in the context of industrial societies, a disaggregated core model of social fluidity could be uncovered within post-industrial societies.

In addition to that, one point of discussion of our research stems from the way we addressed differences in social mobility opportunities between Swiss citizens and the foreign resident

population. We have tried throughout this research to underline differences in social mobility opportunities between these two populations when possible. This approach proved instructive since we were able to observe, notably, that (1) foreign women are the losers of the social mobility "lottery" in Switzerland while Swiss men are the winners, (2) the foreign population displays lower gender inequality in access to education than the Swiss citizens, (3) the profile of the foreign population over recent years has become more diversified through the emergence of highly qualified migrants in the Swiss territory, (4) foreign women in the youngest cohort are more educated in tertiary general education that the Swiss citizens, (5) highly qualified foreign women are more likely to be selected on the labour market according to their educational background, in contrast to highly qualified Swiss women whose labour market outcome still remains considerably influenced by their social background. Thus, overall we were able to reach interesting substantial insights regarding the specific structure of opportunities that the foreign population faces, particularly since as far as we know, no social mobility study has tried to address these issues in a systematic way, in Switzerland or elsewhere.

However, because the data we use lacks precise information documenting the timing of migration to Switzerland, we were unable to correctly explain why this population displays these specific outcomes. This is problematic, as totally diverging explanations could be put forward. For instance, to explain the lower gender educational inequality and the outnumbering of foreign women graduating with tertiary general education, it could be the case that the foreign population experienced a different educational system abroad that may have offered them better opportunities than the Swiss system. But it could also be the case that the foreign population actually faces different opportunities in the Swiss educational system than Swiss citizens, perhaps because their parents have a different vision of education as parents of Swiss citizens. These could be two very different explanations of the same outcome. on the one hand, foreign educational systems would offer better opportunities than the Swiss educational system; on the other hand, it would offer better opportunities to non-Swiss citizens than Swiss citizens.

Therefore, being able to identify which one of these explanations is correct could have considerable implications with respect to the integration of the foreign population in Switzerland. Since a significant share of non-Swiss residents have lived almost all of their lives – if not all – in Switzerland, this would imply that they integrate quite well to the country. Of course, we could expect to observe differences in this respect in regard to country of origin. Therefore, future research should address the questions of how migration impacts social mobility chances, and of how the presence of foreign nationals can interfere with Swiss institutions and/or benefit the

cohesion of the Swiss society. This point looks particularly crucial. Possibly, other social stratification mountains interfere with the Swiss social stratification mountain. This could indeed constitute at least one explanation of the overall reinforced inequality trend that we observe within the youngest cohort. A further explanation of such reinforced inequality trend could also stem from the recent economic crises. Although Switzerland has only been marginally affected by the turbulent economic fluctuations so far, this aspect is likely to be a major issue in countries where consequences of the economic downturn have been more dramatic. In these countries, it is indeed likely that inequality will increase.

All in all, our research on social mobility in Switzerland has demonstrated that inequality based on social background can remain persistent even when classical expectations defining an education-based meritocracy are in place. This suggest that meritocracy in itself is not desirable if significant barriers persist. From this standpoint, if the objective of democracies is to ensure that everyone is born *sous la même étoile*[39], then the principle of equality should be put on equal footing with the principle of liberty.

39 Understand : Under the same star.

A. Appendix A.

Complementary information on Chapter 4 .:A unique study design to analyse social mobility dynamics in Switzerland: methodological considerations

Table A.1: Detail of data production and quality for each survey used

Survey	Targeted population	Sampling procedure	Data collection mode	Response rate	Final valid sample size (N)
AP75	Swiss citizens aged 16 or more speaking German, French or Italian	Stratified random sample according to municipalities *NB: Two groups were originally oversampled:* *(1) the French speaking population* *(2) the young population (16-19 years old)* *A random sample of these oversampled populations was a posteriori drawn to ensure representativity in the final archived data (Original N=1917).*	face-to-face	82.1%	1392
ISSP87	Switzerland's resident population aged 16 or more speaking German, French or Italian	Stratified random sample according to municipalities	Mail survey with an incentive of 50 CHF	51.3%	987
CH91	Switzerland's resident population aged 20 or more speaking German, French, Italian, Portuguese or Serbo-Croatian	Stratified quotas sample according to municipalities. *NB: Two groups were oversampled:* *(1) 100 seasonal workers selected according to nationality (Portuguese and Serbo-Croatian) and industry sector (building or catering).* *(2) 100 privileged people selected according to income (>80'000 CHF).*	face-to-face	-	2030
SHP99	Switzerland's resident population aged 14 or more speaking German, French or Italian and living in a private household	Stratified random sample according to regions	CATI	64.0%	7799
SHP04				65.0%	3654
ESS02	Switzerland's resident population aged 15 or more speaking German, French or Italian	Stratified random sample according to regions	CAPI	33.5%	2040
ESS04		Stratified random sample according to regions		46.9%	2141
ESS06		Stratified random sample according to regions		51.5%	1804
ESS08		Non-stratified random sample		50.4%	1819
MCH05	Switzerland's resident population aged 18 or more speaking German, French or Italian	Stratified random sample according to regions	CAPI	50.1%	1078
MCH07		Stratified random sample according to regions		46.3%	1003
MCH09		Stratified random sample according to regions		47.8%	1229

Table A.2: Sample detail: surveys by 8 birth-cohort, complete cases only (OED)

	1912–1935	1936–1940	1941–1945	1946–1950	1951–1955	1956–1960	1961–1965	1966–1979	Total	- Of which foreigners % (n)
1975. Attitudes politiques	328	67	97	12	-	-	-	-	504	0 % (0)
1987. International social survey	119	67	82	111	85	32	-	-	496	26.4% (131)
1991. Les Suisses et leur société	82	84	104	145	133	111	22	-	681	16.6% (113)
1999. Swiss household panel	20	198	406	543	594	672	689	487	3609	12.0% (433)
2002. European social survey	-	70	124	125	137	145	207	228	1036	11.1% (115)
2004. Swiss household panel	-	17	144	192	255	333	357	494	1792	12.7% (228)
2004. European social survey	-	24	161	168	144	138	208	373	1216	14.1% (172)
2005. MOSAiCH	-	-	72	91	96	86	103	191	639	13.6% (87)
2006. European social survey	-	-	127	126	133	157	167	330	1040	13.4% (139)
2007. MOSAiCH	-	-	45	60	74	87	87	202	555	14.6% (81)
2008. European social survey	-	-	41	136	103	140	154	382	956	16.9% (162)
2009. MOSAiCH	-	-	13	90	93	104	105	287	692	15.3% (106)
Total (n)	549	527	1416	1799	1847	2005	2099	2974	13216	
- of which foreigners % (n)	6.9% (38)	11.0% (58)	8.6% (122)	10.6% (191)	9.7% (179)	12.0% (240)	15.8% (332)	20.4% (607)		13.4% (1767)
Mean age	55.0	55.7	55.8	52.9	48.3	44.0	39.9	34.6	45.2	

Note: unweighted data

	1912–1941	1942-1949	1950-1957	1958-1965	1966-1979	Total	- Of which foreigners % (n)
1975. Attitudes politiques	414	90	-	-	-	504	0 % (0)
1987. International social survey	201	158	137	-	-	496	26.4% (131)
1991. Les Suisses et leur société	185	207	203	86	-	681	16.6% (113)
1999. Swiss household panel	292	749	983	1098	487	3609	12.0% (433)
2002. European social survey	96	195	218	299	228	1036	11.1% (115)
2004. Swiss household panel	33	275	419	571	494	1792	12.7% (228)
2004. European social survey	53	268	222	300	373	1216	14.1% (172)
2005. MOSAiCH	14	132	146	156	191	639	13.6% (87)
2006. European social survey	-	222	219	269	330	1040	13.4% (139)
2007. MOSAiCH	-	89	126	138	202	555	14.6% (81)
2008. European social survey	-	146	193	235	382	956	16.9% (162)
2009. MOSAiCH	-	84	156	165	287	692	15.3% (106)
Total (n)	1288	2615	3022	3317	2974	13216	
- of which foreigners % (n)	9.2% (119)	9.4% (246)	10.4% (314)	14.5% (481)	20.4% (607)		13.4% (1767)
Mean age	55.5	54.4	47.9	41.1	34.6	45.2	

Note: unweighted data

Table A.4: Detail of information available within each survey for the coding of respondent's father social position

Survey	Occupation (ISCO)		Employment relationship (self-employed)		Number of employees for self-employed		Supervisory tasks for employees	
	variable	coding	variable	coding	variable	coding	variable	coding
AP75	v209	ISCO68 3 digits	NA	NA	NA	NA	NA	NA
ISSP87	v104	ISCO68 3 digits	NA	NA	NA	NA	NA	NA
CH91	V29 (v23=1)	Occupation list (conversion grid with ISCO88 in the documentation of the survey)	v28	2. indépendant	v29	1. zéro 2. 1 à 4 3. 5 à 9 4. 10 à 24 5. 25 à 49 6. 50 à 99 7. 100 et plus	v32	1. fonction dirigeante 2. fonction d'encadrement (enseignant)
SHP99 SHP04	ls4faj..	ISCO88 4 digits	p..013	3. self-employed	p..o14	1. zéro 2. 1 à 4 3. 5 à 9 4. 10 à 24 5. 25 à 49 6. 50 à 99 7. 100 et plus	p..o16	1. management position 2. training position / teacher
ESS02 ESS04 ESS06 ESS08	iscocof	ISCO88 4 digits	emprf14	2. self-employed	emplnof	1. aucun 2. de 1 à 24 3. 25 ou plus	jbspvf	1. oui
MCH05 MCH07	D1eisco isco4_per	ISCO88 4 digits	d1d	2. self-employed	NA	NA	NA	NA
MCH09	si15br	ISCO88 4 digits	si15a	4. indépendant ou propre entreprise	NA	NA	NA	NA

Table A.5: Detail of information available within each survey for the coding of respondent's social position

Survey	Occupation (ISCO)		Employment relationship (self-employed)		Number of employees for self-employed		Supervisory tasks for employees	
	variable	coding	variable	coding	variable	coding	variable	coding
AP75	v361	ISCO68 3 digits	v368	2. à mon compte	v369	continuous	v370	1. oui
ISSP87	v75	ISCO68 3 digits	v77	1. self-employed 2. self employed with (paid) employees) 3. workrs self-employed at someone's other account	NA	NA	v78	1. supervises others at work
CH91	isco-88	ISCO88 4 digits	v147	2. indépendant	v148	1. zéro 2. 1 à 4 3. 5 à 9 4. 10 à 24 5. 25 à 49 6. 50 à 99 7. 100 et plus	v151a	1. fonction dirigeante 2.fonction d'encadrement (enseignant)
SHP99 SHP04	Is4maj99 is4maj04	ISCO88 4 digits	P99w29 p04w29a	1. self-employed	P99w31 p04w31	1. zéro 2. 1 à 4 3. 5 à 9 4. 10 à 24 5. 25 à 49 6. 50 à 99 7. 100 et plus	P99w34 p04w34a	1. management position 2. training position
ESS02 ESS04 ESS06 ESS08	iscoco	ISCO88 4 digits	emplrel	2. seelf-employed	emplno	continuous	jbspv	1. oui
MCH05 MCH07	d24aisco & d21bisco	ISCO88 4 digits	d22a	3. indépendant	d23	continuous	d26	1. oui
MCH09	d21abr	ISCO88 4 digits	si19a	4. indépendant ou propre entreprise	d23	continuous	d26	1. oui

Table A.6: Distribution of the father's social position measured with the ESeC class schema according to surveys.

EseC Father	AP75	ISSP87	CH91	SHP99	ESS02	SHP04	ESS04	MCH05	ESS06	MCH07	ESS08	MCH09	Total
1. Higher salariat	2.0	7.7	13.4	13.1	16.1	15.7	10.7	10.5	11.3	11.2	11.8	11.9	12.4
	15	*42*	*104*	*605*	*171*	*408*	*131*	*66*	*118*	*61*	*119*	*91*	*1932*
2. Lower salariat	10.1	13.8	12.8	11.8	10.8	9.9	12.1	9.2	10.8	8.1	10.7	7.3	10.9
	76	*75*	*99*	*546*	*115*	*258*	*148*	*58*	*113*	*44*	*108*	*56*	*1696*
3. Higher white collar	3.4	8.1	7.1	5.2	5.3	6.5	3.9	8.1	5.3	9.0	6.7	9.0	6.0
	26	*44*	*55*	*241*	*56*	*170*	*48*	*51*	*55*	*49*	*67*	*69*	*932*
4. Petite bourgeois	8.1	6.1	12.1	10.7	12.6	10.7	11.6	15.4	12.0	17.1	13.9	11.0	11.4
	61	*33*	*94*	*494*	*134*	*279*	*142*	*97*	*125*	*93*	*140*	*84*	*1776*
5. Small farmers	24.3	16.4	14.7	12.0	14.7	11.2	16.9	16.8	14.9	14.0	13.2	17.4	14.1
	184	*89*	*114*	*556*	*156*	*291*	*206*	*106*	*156*	*76*	*133*	*133*	*2200*
6. Higher-grade blue collar	2.1	1.7	8.5	13.8	12.1	7.8	14.4	1.3	13.4	1.7	12.4	2.0	9.8
	16	*9*	*66*	*637*	*129*	*202*	*176*	*8*	*140*	*9*	*125*	*15*	*1532*
7. Lower white-collar	3.8	6.6	4.0	3.7	3.9	4.2	4.8	7.1	3.6	6.6	2.3	3.8	4.2
	29	*36*	*31*	*173*	*41*	*110*	*59*	*45*	*38*	*36*	*23*	*29*	*650*
8. Skilled manual	27.0	21.2	18.5	16.6	14.6	20.1	14.8	19.5	15.9	21.1	17.4	20.9	18.2
	204	*115*	*143*	*766*	*155*	*523*	*181*	*123*	*166*	*115*	*175*	*160*	*2826*
9. Semi-/un skilled	19.2	18.3	8.9	12.9	10.1	13.7	10.7	12.2	12.7	11.2	11.6	16.7	13.0
	145	*99*	*69*	*597*	*107*	*355*	*131*	*77*	*133*	*61*	*117*	*128*	*2021*
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	756	*542*	*775*	*4615*	*1064*	*2596*	*1222*	*631*	*1044*	*544*	*1007*	*765*	*15561*

Table A.7: Distribution of the respondent's social position measured with the ESeC class schema according to surveys.

EseC Respondent	AP75	ISSP87	CH91	SHP99	ESS02	SHP04	ESS04	MCH05	ESS06	MCH07	ESS08	MCH09	Total
1. Higher salariat	7.3	15.5	13.8	15.7	15.6	17.4	12.7	12.0	12.0	14.2	13.7	11.9	14.4
	39	*84*	*103*	*569*	*199*	*393*	*166*	*80*	*134*	*86*	*146*	*90*	*2089*
2. Lower salariat	22.7	33.8	22.5	28.8	27.3	25.8	26.4	28.9	27.6	26.5	29.3	25.2	27.3
	122	*183*	*168*	*1044*	*348*	*585*	*344*	*192*	*308*	*160*	*312*	*191*	*3957*
3. Higher white collar	5.2	12.8	13.7	12.5	13.9	12.3	12.7	14.0	14.4	16.9	13.4	12.9	12.9
	28	*69*	*102*	*455*	*177*	*279*	*165*	*93*	*161*	*102*	*143*	*98*	*1872*
4. Petite bourgeois	11.9	2.4	5.9	6.9	6.8	5.8	7.3	1.2	7.8	1.0	7.5	2.4	6.1
	64	*13*	*44*	*252*	*87*	*131*	*95*	*8*	*87*	*6*	*80*	*18*	*885*
5. Small farmers	5.8	3.1	0.8	1.7	2.4	2.2	3.1	2.7	2.7	2.3	1.7	4.4	2.4
	31	*17*	*6*	*61*	*31*	*50*	*40*	*18*	*30*	*14*	*18*	*33*	*349*
6. Higher-grade blue collar	12.8	11.1	7.0	7.7	11.4	8.4	12.4	14.3	9.3	8.9	9.8	15.6	9.9
	69	*60*	*52*	*279*	*145*	*190*	*162*	*95*	*104*	*54*	*104*	*118*	*1432*
7. Lower white-collar	7.1	5.0	10.5	9.5	8.4	8.1	9.5	9.0	8.2	11.6	7.5	9.5	8.8
	38	*27*	*78*	*346*	*107*	*183*	*124*	*60*	*91*	*70*	*80*	*72*	*1276*
8. Skilled manual	12.7	6.8	10.7	6.9	6.4	9.0	5.7	7.1	4.5	7.1	5.2	6.1	7.1
	68	*37*	*80*	*249*	*81*	*204*	*74*	*47*	*50*	*43*	*55*	*46*	*1034*
9. Semi-/un skilled	14.5	9.4	15.1	10.3	7.8	11.0	10.3	10.7	13.5	11.4	11.9	12.1	11.1
	78	*51*	*113*	*374*	*99*	*250*	*134*	*71*	*151*	*69*	*127*	*92*	*1609*
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	537	*541*	*746*	*3629*	*1274*	*2265*	*1304*	*664*	*1116*	*604*	*1065*	*758*	*14503*

Table A.8: Distribution of the father's social position measured with the Oesch class schema according to surveys.

Oesch Father	AP75	ISSP87	CH91	SHP99	ESS02	SHP04	ESS04	MCH05	ESS06	MCH07	ESS08	MCH09	Total
1. Large employers (>9)	0.0	0.0	4.1	2.8	1.1	7.4	1.3	0.0	1.4	0.0	1.0	0.0	2.6
	0	*0*	*28*	*119*	*11*	*184*	*15*	*0*	*14*	*0*	*9*	*0*	*380*
2. Self-employed professionals	0.0	0.0	2.6	2.9	4.3	3.4	2.3	0.0	2.2	0.0	1.5	0.0	2.3
	0	*0*	*18*	*122*	*43*	*85*	*27*	*0*	*22*	*0*	*14*	*0*	*331*
3. Small proprietors, artisans, with employees (<9)	0.0	0.0	11.0	12.4	14.6	12.5	13.8	0.0	13.8	0.0	16.0	0.0	10.2
	0	*0*	*76*	*525*	*146*	*309*	*161*	*0*	*136*	*0*	*147*	*0*	*1500*
4. Small proprietors, artisans, without employees	21.4	15.6	5.2	12.7	14.1	10.5	16.2	0.0	15.2	0.0	14.1	0.0	11.5
	162	*85*	*36*	*538*	*141*	*260*	*189*	*0*	*150*	*0*	*130*	*0*	*1691*
5. Technical experts	0.8	4.6	1.6	3.4	3.6	4.2	3.2	5.1	2.3	4.4	2.4	4.6	3.4
	6	*25*	*11*	*145*	*36*	*105*	*37*	*32*	*23*	*23*	*22*	*33*	*498*
6. Technicians	1.7	1.8	3.6	3.1	3.4	3.1	3.8	5.0	4.6	3.9	3.0	5.0	3.4
	13	*10*	*25*	*132*	*34*	*77*	*44*	*31*	*45*	*20*	*28*	*36*	*495*
7. Skilled crafts	31.6	23.0	42.7	30.0	26.0	27.5	26.4	43.0	25.6	46.4	30.7	48.0	31.2
	239	*125*	*295*	*1276*	*259*	*682*	*308*	*268*	*252*	*241*	*283*	*345*	*4573*
8. Routine operative	14.4	15.3	6.4	6.5	4.8	6.4	8.5	10.4	8.7	7.3	7.5	10.0	7.8
	109	*83*	*44*	*278*	*48*	*159*	*99*	*65*	*86*	*38*	*69*	*72*	*1150*
9. Routine agriculture	0.9	0.4	2.0	0.3	0.4	0.1	0.0	0.2	0.1	0.6	0.0	0.3	0.3
	7	*2*	*14*	*13*	*4*	*2*	*0*	*1*	*1*	*3*	*0*	*2*	*49*
10. Higher-grade managers	5.7	7.5	5.9	5.4	8.2	6.0	4.6	4.7	5.8	10.8	6.9	9.7	6.2
	43	*41*	*41*	*229*	*82*	*149*	*54*	*29*	*57*	*56*	*64*	*70*	*915*
11. Associate managers	11.9	13.8	2.7	6.1	5.4	5.5	6.7	12.7	3.9	8.9	5.3	7.4	6.7
	90	*75*	*19*	*259*	*54*	*136*	*78*	*79*	*38*	*46*	*49*	*53*	*976*
12. Skilled office	5.7	7.7	5.6	7.2	6.5	5.7	7.0	9.8	7.0	7.3	3.7	5.1	6.6
	43	*42*	*39*	*308*	*65*	*142*	*82*	*61*	*69*	*38*	*34*	*37*	*960*
13. Routine office	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1
	0	*0*	*0*	*5*	*0*	*3*	*2*	*0*	*0*	*0*	*0*	*0*	*10*
14. Socio-cultural professionals	1.1	3.1	2.9	2.4	2.2	2.1	1.6	3.5	3.1	3.9	2.6	3.1	2.4
	8	*17*	*20*	*100*	*22*	*53*	*19*	*22*	*31*	*20*	*24*	*22*	*358*
15. Socio-cultural semi-professionals	2.2	2.4	1.6	2.1	2.4	2.1	1.7	2.6	2.1	3.1	2.3	2.5	2.2
	17	*13*	*11*	*89*	*24*	*52*	*20*	*16*	*21*	*16*	*21*	*18*	*318*
16. Skilled service	0.7	2.8	1.2	1.6	1.6	1.9	2.0	1.8	3.2	2.9	1.8	2.8	1.9
	5	*15*	*8*	*66*	*16*	*46*	*23*	*11*	*32*	*15*	*17*	*20*	*274*
17. Routine service	1.9	2.0	0.9	1.1	1.3	1.4	0.9	1.3	0.8	0.6	1.1	1.5	1.2
	14	*11*	*6*	*45*	*13*	*34*	*10*	*8*	*8*	*3*	*10*	*11*	*173*
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	756	*544*	*691*	*4249*	*998*	*2478*	*1168*	*623*	*985*	*519*	*921*	*719*	*14651*

Table A.9: Distribution of the respondent's social position measured with the Oesch class schema according to surveys.

Oesch Respondent	AP75	ISSP87	CH91	SHP99	ESS02	SHP04	ESS04	MCH05	ESS06	MCH07	ESS08	MCH09	Total
1. Large employers (>9)	1.1	0.0	1.2	1.0	1.3	11.9	0.7	0.6	0.5	0.7	0.7	0.7	2.6
	6	*0*	*7*	*34*	*16*	*258*	*9*	*4*	*5*	*4*	*7*	*5*	*355*
2. Self-employed professionals	1.7	0.0	2.0	3.9	3.9	7.4	2.8	2.5	2.8	2.7	2.6	2.0	3.7
	9	*0*	*12*	*135*	*47*	*161*	*35*	*16*	*30*	*15*	*25*	*14*	*499*
3. Small proprietors, artisans, with employees (<9)	8.4	0.0	6.0	4.1	4.2	7.2	5.2	4.8	4.0	4.6	4.6	8.7	5.1
	45	*0*	*36*	*142*	*50*	*155*	*65*	*31*	*42*	*26*	*44*	*60*	*696*
4. Small proprietors, artisans, without employees	10.4	3.1	2.3	8.1	6.9	7.2	6.6	2.8	8.8	5.0	6.9	3.0	6.7
	56	*17*	*14*	*279*	*82*	*157*	*82*	*18*	*94*	*28*	*66*	*21*	*914*
5. Technical experts	1.5	5.7	3.6	5.6	5.0	3.5	3.6	5.2	2.9	5.0	2.6	2.0	4.1
	8	*31*	*22*	*191*	*60*	*75*	*45*	*34*	*31*	*28*	*25*	*14*	*564*
6. Technicians	4.8	5.7	4.3	4.6	4.4	2.7	5.2	4.3	5.3	3.4	5.4	4.3	4.4
	26	*31*	*26*	*157*	*53*	*58*	*65*	*28*	*56*	*19*	*52*	*30*	*601*
7. Skilled crafts	20.3	10.5	21.1	11.4	11.8	9.5	11.7	12.6	8.2	12.5	10.5	13.9	11.8
	109	*57*	*127*	*389*	*141*	*206*	*146*	*82*	*87*	*70*	*101*	*96*	*1611*
8. Routine operative	8.8	6.8	5.3	3.2	2.6	2.6	4.1	4.3	5.6	3.2	3.7	3.5	3.9
	47	*37*	*32*	*108*	*31*	*57*	*51*	*28*	*60*	*18*	*35*	*24*	*528*
9. Routine agriculture	0.2	0.4	0.0	0.1	0.0	0.3	0.3	0.3	0.4	0.0	0.1	0.0	0.2
	1	*2*	*0*	*3*	*0*	*6*	*4*	*2*	*4*	*0*	*1*	*0*	*23*
10. Higher-grade managers	7.1	13.3	8.6	10.1	12.4	6.3	8.7	6.8	7.1	7.5	10.3	5.9	8.8
	38	*72*	*52*	*346*	*148*	*136*	*108*	*44*	*75*	*42*	*99*	*41*	*1201*
11. Associate managers	7.8	11.8	3.3	6.9	4.9	4.7	8.9	11.7	8.8	8.4	7.7	6.9	7.1
	42	*64*	*20*	*235*	*58*	*101*	*111*	*76*	*94*	*47*	*74*	*48*	*970*
12. Skilled office	14.5	15.9	4.8	10.0	10.7	8.8	9.2	10.9	12.3	10.4	7.6	8.5	10.0
	78	*86*	*29*	*342*	*128*	*190*	*115*	*71*	*131*	*58*	*73*	*59*	*1360*
13. Routine office	0.0	0.0	1.2	0.8	1.2	1.1	1.0	1.1	0.9	0.4	0.5	1.0	0.9
	0	*0*	*7*	*29*	*14*	*23*	*13*	*7*	*10*	*2*	*5*	*7*	*117*
14. Socio-cultural professionals	4.1	10.0	9.8	6.4	5.2	5.8	4.2	5.2	6.2	5.7	6.7	6.9	6.1
	22	*54*	*59*	*218*	*62*	*126*	*52*	*34*	*66*	*32*	*64*	*48*	*837*
15. Socio-cultural semi-professionals	2.6	8.3	4.5	9.8	10.7	8.6	9.4	9.4	10.7	12.5	12.1	9.8	9.4
	14	*45*	*27*	*334*	*128*	*187*	*117*	*61*	*114*	*70*	*116*	*68*	*1281*
16. Skilled service	2.4	4.1	14.4	9.6	11.6	8.1	13.0	12.8	9.9	14.4	11.4	16.2	10.4
	13	*22*	*87*	*328*	*139*	*176*	*162*	*83*	*105*	*79*	*109*	*112*	*1415*
17. Routine service	4.3	4.3	7.6	4.5	3.1	4.4	5.1	4.8	5.6	3.9	6.5	6.4	4.9
	23	*23*	*46*	*155*	*37*	*95*	*64*	*31*	*59*	*22*	*62*	*44*	*661*
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	537	*541*	*603*	*3425*	*1194*	*2167*	*1244*	*650*	*1063*	*560*	*958*	*691*	*13633*

Table A.10: Detail of information available within each survey for the coding of respondent's education

Survey	Variable	Education 1: Compulsory education	Education 2: Secondary general without maturity	Education 3: Secondary general with maturity	Education 4: Secondary professional	Education 5: Post- secondary & tertiary vocational	Education 6: Tertiary general (University)
AP75	v292	2. école primaire non terminée 3. école primaire terminée 5. école secondaire inférieure	6. école secondaire sans maturité	8. école secondaire avec maturité 9. école normale	4. études pendant apprentissage	7. école technique	10. université ou polytechnique fédérale (sans licence) 11. université ou polytechnique fédérale (avec licence)
ISSP87	v88	1. None. still at school 2. Primary school 3. Secondary school	4. Incomplete middle school	6. Complete middle school 7. Teachers training		5. Technical qualification. higher Fachschule	8. Incomplete university 9. Complete university
CH91	v18	1. école primaire 2. école secondaire, collège cycle		5. gymnase (école secondaire supérieure)	3. apprentissage	4. école professionnelle supérieure 6. technicum	7. universités, hautes écoles
SHP99 SHP04	edcat99 edcat04	0. incomplete compulsory school 1. compulsory school 2. elementary vocational training	4. general training school	7. vocational maturity 8. teacher training college 9. bachelor/maturity (high school)	3. domestic science course, 1 year school of commerce 5. apprenticeship (CFC, EFZ) 6. full-time vocational school	10. vocational high school with master certificate, federal certificate 11. technical or vocational school 12. vocational high school ETS, HTL etc. 13. university of teacher education HEP, PH 14. university of applied sciences HES, FH	15. university, academic high school, EPF, ETH 16. PhD
ESS02 ESS04	edlvch edlvach	1. Incomplete compulsory school 2. Compulsory school 6. 1 year: school of commerce/domestic science school	8. 2 to 3 years: general training school	4. Secondary school (Maturity) 5. Graduation diploma school (Maturity professional)	3. Elementary vocational training (enterprise + school) 7. Apprenticeship 9. 2 to 3 years: full time vocational school	10. Vocational higher education (with special degree) 11. Technical or vocational school (2 yrs full/ 3 yrs part time) 12. Technical or vocational high school (specialized)	13. University (3years, short bachelor's degree) 14. University (4years and more, bachelor's degree) 15. University (masters, post-grade)

Survey	Variable	Education 1 Compulsory education	Education 2 Secondary general without maturity	Education 3 Secondary general with maturity	Education 4 Secondary professional	Education 5 Post- secondary & tertiary vocational	Education 6 Tertiary general (University)
MCH05	d14a	1. Ecole obligatoire inachevée 2. Ecole obligatoire (école secondaire) 6. 1 an: école commerciale/de formation générale/stage ménager	8. 2 à 3 ans: Ecole de formation générale	4. Gymnase/collège, baccalauréat, école normale... 5. Maturité professionnelle	3. Formation professionnelle élémentaire (entreprise + école) 7. Apprentissage (niveau CFC) 9. 2 à 3 ans: Ecole prof./métiers à plein temps	10. Formation prof. supérieure avec maîtrise, brevet fédéral 11. Ecole technique ou prof. (2ans plein temps/3ans temps part.) 12. Ecole prof. sup./technicum/ ETS, haute école spécialisée	13. Université (3 ans, bachelor) 14. Université, haute école (4 ans et plus, master 15. Université, haute école (doctorat, post-grade)
ESS06	edlvbch	1. Incomplete primary school 2. Primary school 3. Secondary education, first stage	6. General training school (3years)	7. School preparing for university, vocational baccalaureate 9. School for univ. for adults and baccal. after voc. training	4. Initial vocational training (1-2years) 5. Apprenticeship (vocational training, dual system)	8. Vocational training (second) 10. Higher vocational training 11. Pedagogical and applied university	12. University diploma and post-graduate (including technical) 13. University doctorate
MCH07	d14a	1. Ecole primaire inachevée 2. Ecole primaire 3. Cycle d orientation, école secondaire	6. Ecoles de culture générale (ECG)	7. Ecoles de maturité 9. Ecoles pour maturié après apprentissage et pour adulte	4. Formation professionnelle initiale 5. Apprentissage	8. Formation professionnelle (deuxième formation) 10. Formation professionnelle supérieure 11. Hautes écoles spécialisées (HES), Hautes écoles pédagogiques	12. Hautes écoles universitaires, Ecoles polytechniques fédérales 13. Doctorat, PhD
ESS08 MCH09	edlvcch d14a	1. Incomplete compulsory school 2. Primary school 3. Secondary education (first stage)	6. General training school (2-3 years)	7. Vocational baccalaureate 8. School preparing for university 10. Vocational baccalaureate after vocational training 11. School for adult preparing for university	4. Elementary vocational training (enterprise and school, 1-2 year) 5. Apprenticeship (vocational training, dual system)	9. Vocational training (second education) 12. Higher vocational training 13. University of applied science and pedagogical university (Bachelor) 14. University of applied science and pedagogical university (Master)	15. University diploma and post-graduate (including technical) (Bachelor) 16. University diploma and post-graduate (including technical) (Master) 17. University doctorate

Table A.11: Distribution of the respondent's education measured with the BHJM grid according to surveys.

Education Respondent	AP75	ISSP87	CH91	SHP99	ESS02	SHP04	ESS04	MCH05	ESS06	MCH07	ESS08	MCH09	Total
1. Compulsory education	52.8	51.7	27.4	13.3	13.1	12.1	13.1	9.6	11.3	11.1	10.2	16.5	16.5
	402	*306*	*237*	*647*	*171*	*335*	*174*	*64*	*129*	*68*	*113*	*133*	*2779*
2. Secondary general education without maturity	9.1	10.3	0.0	1.1	1.1	1.1	1.8	1.6	4.9	3.7	4.8	2.0	2.4
	69	*61*	*0*	*51*	*14*	*30*	*24*	*11*	*56*	*23*	*53*	*16*	*408*
3Secondary general education with maturity	4.1	5.1	9.6	8.7	10.3	6.5	5.9	5.2	5.8	6.8	7.3	4.9	7.3
	31	*30*	*83*	*421*	*134*	*181*	*78*	*35*	*66*	*42*	*80*	*39*	*1220*
4. Secondary professional education	25.3	0.0	28.9	50.0	43.6	48.3	48.4	50.6	45.6	47.7	45.1	45.1	44.2
	193	*0*	*250*	*2430*	*568*	*1336*	*644*	*339*	*519*	*293*	*497*	*363*	*7432*
5. Post-secondary / tertiary vocational education	3.7	20.4	20.1	14.6	19.9	17.5	20.4	22.2	20.8	17.4	20.9	18.0	17.4
	28	*121*	*174*	*710*	*260*	*485*	*271*	*149*	*237*	*107*	*230*	*145*	*2917*
6. Tertiary general education (University)	5.1	12.5	14.0	12.3	12.0	14.4	10.5	10.7	11.6	13.2	11.8	13.4	12.2
	39	*74*	*121*	*597*	*157*	*399*	*140*	*72*	*132*	*81*	*130*	*108*	*2050*
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	762	*592*	*865*	*4856*	*1304*	*2766*	*1331*	*670*	*1139*	*614*	*1103*	*804*	*16806*

Table A.12: Cross-tabulation of ESeC and Oesch class schemas.

	1. Large employers (>9)	2. Self-emeployed professionals	3. Small proprietors, artisans with employees (<9)	4. Small proprietors, artisans, without employees	5. Technical experts	6. Technicians	7. Skilled crafts	8. Routine operative	9.Routine agriculture	10. Higher-grade managers	11. Associate managers	12. Skilled office	13. Routine office	14. Socio-cultural professionals	15. Socio-cultural semi-professionals	16. Skilled service	17. Routine service
Father																	
1. Salariat (1+2)	72.7	100.0	1.9	2.4	100.0	90.0	0.0	0.0	0.0	95.2	37.8	8.0	0.0	100.0	62.1	1.6	0.0
2. White collar (3+7)	7.4	0.0	0.6	1.2	0.0	0.0	0.0	0.0	0.0	0.0	44.4	63.5	63.6	0.0	35.5	48.8	3.0
3. Petite bourgeois (4)	0.0	0.0	67.3	24.4	0.0	0.6	2.4	1.0	2.2	4.9	17.9	0.1	0.0	0.0	2.4	2.3	3.0
4. Small farmers (5)	0.3	0.0	29.1	67.1	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5. Skilled manual (6+8)	13.0	0.0	0.7	2.5	0.0	9.4	80.1	16.9	4.4	0.0	0.0	22.5	36.4	0.0	0.0	24.4	9.5
6. Semi- /unskilled (9)	6.6	0.0	0.5	2.2	0.0	0.0	5.1	82.1	93.5	0.0	0.0	5.9	0.0	0.0	0.0	20.9	84.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Respondent																	
1. Salariat (1+2)	57.8	100.0	10.7	16.6	99.8	88.5	0.0	0.0	0.0	100.0	54.5	12.0	0.9	100.0	76.8	5.0	0.0
2. White collar (3+7)	17.9	0.0	6.4	7.2	0.0	0.2	0.0	0.0	0.0	0.0	43.9	70.4	89.2	0.0	23.1	57.1	2.3
3. Petite bourgeois (4)	0.3	0.0	59.3	52.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.1	0.0	0.0
4. Small farmers (5)	0.0	0.0	17.5	20.2	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5. Skilled manual (6+8)	16.0	0.0	4.4	2.4	0.2	11.4	93.1	24.9	19.1	0.0	0.0	12.5	9.9	0.0	0.0	21.7	12.0
6. Semi- /unskilled (9)	8.0	0.0	1.8	1.7	0.0	0.0	6.0	75.1	81.0	0.0	0.0	5.2	0.0	0.0	0.0	16.3	85.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

B. Appendix B.

Data quality assessment: disentangling age and survey effects from cohort effects

What is at stake?

Our research is based on a birth-cohort analysis constructed from twelve data sources collected at different points in time. While this analytical design substantially constitutes a strength rather than a weakness for the analysis of social mobility, it relies *per se* on two strong assumptions: that social mobility is exempt of age and survey/period effects. The first assumption, age effect, pertains to the fact that our birth-cohorts are not distributed evenly according to age. It is possible that youngest cohorts will display different social mobility trends because they are on average much younger than the oldest cohorts and might still have not yet reached their occupational maturity – in other words, that their career mobility process might still be ongoing. The second assumption, survey/period effect, stems from the use of multiple cross-sections. It might be the case that some of the surveys we use provide different measures of social mobility because of the lack of information for the construction of some indicators, or because of the way the data was collected, or simply due to some sampling frame vagaries. In this case, we would acknowledge a survey effect. In contrast, a substantial cohort trend could also mask a period effect. In this case, we would not observe random fluctuations between surveys but a general trend across the time at which data was collected.

Therefore, if we do not control for these two strong assumptions, our substantial conclusions might be biased. By applying two sets of analysis, we test the extent to which our birth-cohort analysis is systematically distorted by age and/or survey/period effects on the three main associations which are of great concern in this PhD thesis: (1) the association between social origin and social destination; (2) that between social origin and educational attainment; and finally, (3) that between educational attainment and social destination. Our tests address (1) whether birth-cohort effects observed in our substantial analysis still hold when both age and survey/period effects are controlled and, (2) whether each survey provides the same measure of our variables within each birth-cohort.

Are our substantive conclusions on birth-cohorts distorted by age and/or survey/period effects?

As can be seen in Table B.1, our substantive analysis on birth-cohorts points out that for men and women, the association between social origin and social position attained remained relatively stable, that educational inequalities (OE) decreased for men but remained quite stable for women, and that return to education (ED) increased for both men and women. If these effects are not concealed by age and/or survey/period effects, then these conclusions should still hold true. However, how could our conclusions be biased by one or both of these effects?

Table B.1: Summary of our substantive conclusions

Association:	**Men**	**Women**
OD	Stable	Stable
OE	Decrease	Stable
ED	Increase	Increase

Regarding age effect, it is most likely to happen on social position attained (D) because of career mobility effect, whereas educational attainment (E) and even more social origin (O) are more unlikely to change with age. Thus, no significant age effect should be expected on the OE association, while some age effect might exist on OD and ED. In particular, we could expect consequential age effect on ED, since research highlights that the association between education and employment is particularly pronounced during the early career stage (Pollak and Müller 2013), whereas during later employment stage, factors other than education gain importance, such as experience or performance in preceding jobs (Müller 2009). As a consequence, the ED association might be stronger among younger cohorts because of age effect. Conversely, on the OD association, we should expect an increase in this association with age when we do not control for cohort, because of the potential influence of counter mobility people might experience during their early occupational career – i.e. the fact to move back to one's original class origin after some time during one's career in other class positions.

As far as survey effects are concerned, while we have put much effort to render the twelve surveys we use highly comparable – at least as much as possible – it still remains possible that our surveys might play a role in our birth-cohort estimates. If we detect true survey effects, it is likely to happen at random according to survey specificity (construction of indicators, sample design etc.), or according to survey group (SHP, ESS and MCH). Alternatively, since controlling for survey effect implies that we control for period effect, we might as well detect some period effects, when survey variations happen systematically in a specific period of time. If this is the case, this should be less problematic for our substantive conclusions since cohorts are embedded in periods and as a consequence a specific period context will logically influence cohorts as it reflects the conditions in which the cohorts live their life.

To test for such age and survey/period effects, we fitted different sets of log-linear models on three five-way tables with OD, OE and ED variables respectively[40]. Additionally, each of these tables contain survey, age and cohort variables. Here age is defined in three categories (30-39; 40-49; 50-

40 Given that this five-way table is extremely large, we only test age and survey effects here using the ESeC class schema. Repeating the same models with the Oesch class schema would certainly return very similar estimates, but would be problematic as it is distributed on more categories than ESeC – precisely, it uses two more categories for the collapsed version we use – which in the case of such a large table is likely to make a difference in term a significance threshold, given the sample size of our data.

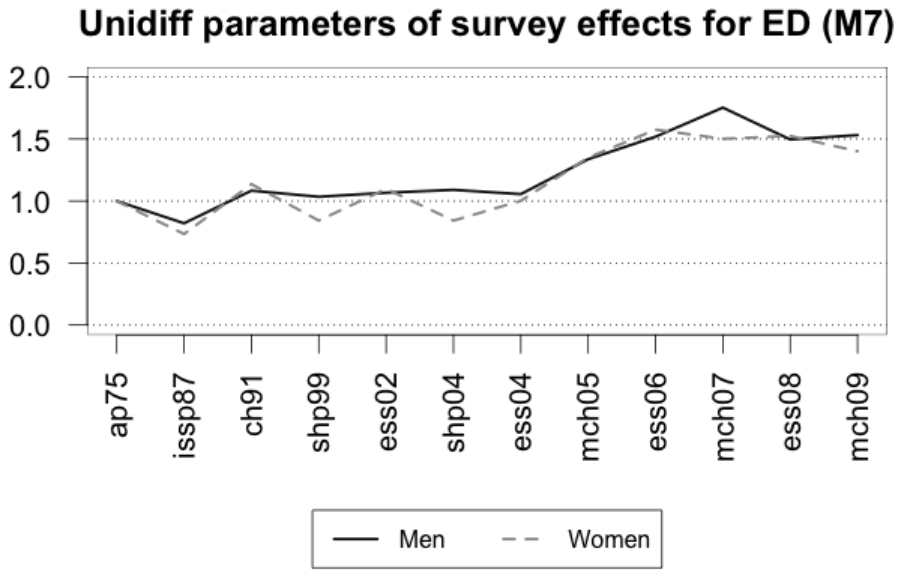

Figure B.1: Unidiff parameters for survey/period effect on ED for men and women

64) and cohort using our synthesised variable in five categories, because such a large five-way table imposes so.

The modelling procedure implemented is very straightforward. It consists of starting with the constant association model, controlling for survey and age effect (M1), then testing whether a Unidiff effect on survey (M2), on age (M3) or on cohort (M4) describes the data more adequately. A further set of model tests whether the association, for instance between OD, varies log-multiplicatively according to two effects, either by cohort and age (M5), by survey and age (M6), or by survey and cohort (M7). Finally, in a last model, we test whether a Unidiff effect can be found simultaneously on survey, cohort and age (M8). Our main interest will consist of analysing for associations in which we find a Unidiff trend whether it accounts for additional variation across survey/period and/or across age (i.e. M5, M7 and M8, compared to M4). For associations where constant social fluidity is found, we will be interested in assessing the extent to which this association varies by age and/or by survey (i.e. M2, M3 and M6, compared to M1).

Models fitted on the OD association are displayed in Table B.2. For men, on all the models fitted, none of them provides a significant improvement over the constant association model (M1). This suggests that OD is constant not only across cohorts but also across survey/period and age groups. For women, we find some evidence of survey/period variation in the OD association but no age

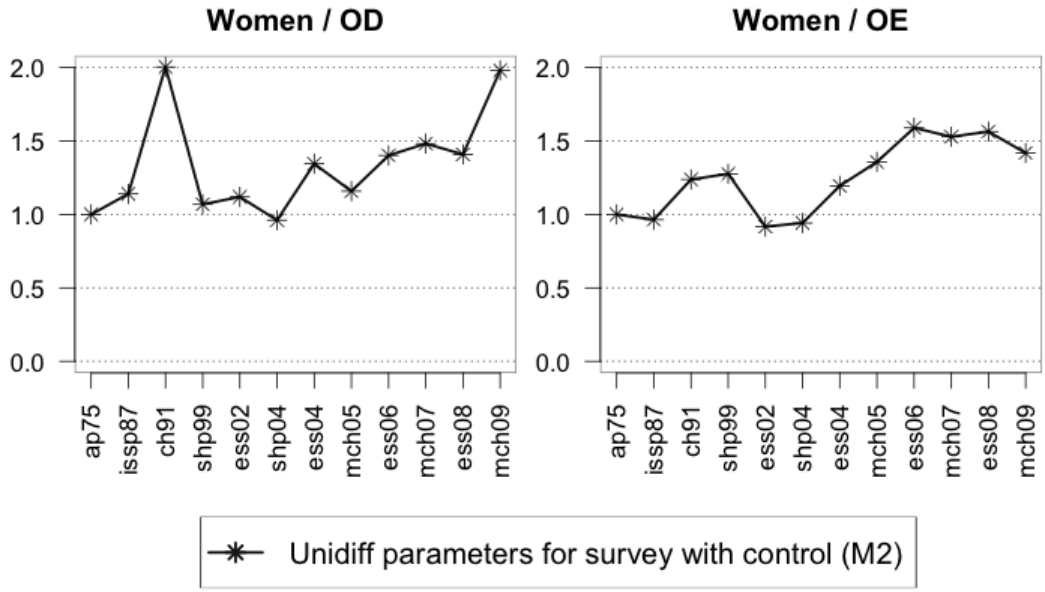

Figure B.2: Unidiff parameters for survey/period effect on OD and OE for women

effect. From parameters plotted in Figure B.2, we are tempted to conclude that two surveys depict strong but random fluctuations in the OD association (namely surveys CH91 and MCH09). However, between the ESS04 and ESS08 surveys, the OD association reached a higher level. Therefore, it seems to be the case that this survey effect in OD actually reflects some period effect. This reinforced trend in OD in recent years is visible in Unidiff parameters of the youngest cohort, being with or without control for survey and age effects (see Figure B.3). Therefore, this survey effect does not distort our substantive conclusions significantly. It just seems that for women, the OD association strengthened in recent years, which from a cohort perspective leads us to conclude an overall stable trend.

Concerning the OE association (Table B.3), for men we observe that model M3, allowing OE to vary across age groups, and model M4, across cohorts, should be preferred over the constant association model (M1). However, variation across age groups erases when this effect is put together with variation across cohorts (see M4-M5). Therefore, our substantive conclusions on OE are not distorted by age and survey effect for men. For women, we find a significant survey/period effect once again. The inspection of Unidiff parameters in Figure B.2 again indicates a trend toward period effect rather than survey effect. In fact, the OE association is particularly strong within the four more recent surveys that we use. This period effect certainly explains why we do not find a

clear decreasing OE trend across birth-cohorts in our data, as in recent years, the OE association reinforced, which can be seen as well in the youngest birth-cohort (see Figure B.3).

Finally, we were particularly concerned with potential age effects imposed on the ED association as we use a rather large age boundary threshold (30 years old). Models displayed in Table B.4 enable us to reject this age effect on ED for both men or women. However, while cohort variation remains significant, we also find a considerable survey/period effect for both men and women (see M4-M7). Interestingly, Unidiff parameters for survey effects (see Figure B.1) point here again in the direction of period effect rather than random survey variations. It does seem that the ED association strengthened significantly from the mid-2000s onwards. Yet even when controlling for survey variations, parameters for birth-cohorts, while depicting a flatter trend, still remain on the increasing slope (see Figure B.3). This confirms the Swiss idiosyncrasy of no decrease in return to education.

Altogether, our substantive conclusions are not significantly distorted by age and survey effects.If any distortion can be identified, it essentially stems from period effect. In fact, in recent years some of the associations we analyse tended to reinforce. This is particularly true among women, as we observe a period effect on the three associations of interest, whereas for men this essentially holds with respect to return to education. Yet since these period effects are systematically reflected in the youngest birth-cohorts in the form of reinforced association in the Unidiff parameters, these effects are *de facto* integrated in our substantive conclusions.

We can now turn to the second set of tests on our data by assessing how and to which extent our measures of social origin, educational attainment and social position attained vary across birth-cohorts.

Does each survey provide the same measure within each birth-cohort?

In order to go even further in the assessment of the quality of our data, we now address whether each survey measures the same way our main variables of interest within each birth-cohort. In other words, we are concerned by the fact that the same cohort might display some measurement heterogeneity through survey effect. Therefore, we imposed a second set of tests on our data.

We follow the same procedure as proposed by Breen, Luijkx, Müller and Pollak (2009). The basic idea is to control whether the marginal distribution and the association between social origin and educational attainment – in the case of their research – do not vary too significantly between surveys within the same birth-cohorts. To do so, they fit log-linear models in order "to check (a) whether the marginal distributions of education and class origins remain constant, within the limits

of sampling variability; and (more important from [their] point of view) (b) whether the association between these variables is also constant" (2009:1488).

They precisely specified four log-linear models on a four-way table cross-classifying social origin (O), educational attainment (E), cohort (C) and survey period (S). These models "allow the origin – education association to vary over cohorts (they all include the COE term) and also allow the distribution of cohorts to vary over surveys (the CS term). [Their] interest is in whether the CO, CE, and OE relationships vary over surveys. In model 1 none of them does; in model 2 the distribution of class origins in each cohort, CO, is allowed to differ over surveys, yielding the term CSO; in model 3, so is the distribution of education (CE), giving CSE; and in model 4 [they] allow the association between origins and education (OE) to vary over surveys (SOE)." (2009:1488).

Like them, we assess the goodness of fit using the likelihood ratio test as measured by the deviance (G2). Yet since these models involve the cross-tabulation of four variables, and because our sample size, though large, is not so big, some of the models estimated returned some empty estimated cells. Therefore, we had to readjust the number of degrees of freedom into our models to account for these estimation problems. Following the procedure proposed by Bishop, Fienberg and Holland (1975:115), we adjusted the number of degrees of freedom of our models with the formula:

$$V' = V - z_e + z_v$$

where V corresponds to the initial number of degrees of freedom calculated from the model, z_e to the number of elementary cells with zero estimates (empty estimated cells), and z_v to the number of log-linear parameters that could not be estimated. By subtracting the original number of degrees of freedom, the number of zero estimated cells, and the number of non-estimated log-linear parameters, we get our adjusted number of degrees of freedom V'.

Finally, unlike BLMP, we did not only fit these models specifically for the association between social origin and educational attainment, but also for the the two other associations existing in the OED triangle, namely origin-destination and education-destination. Furthermore, we systematically fitted these models on our two-birth cohorts variables and our two social class classifications, ESeC and Oesch for robustness check assessments.

As can be easily observed in Tables B.5 and B.6, which display models fitted for all the combinations we tested, systematically, this is the fourth model that must be accepted, since it provides a significant improvement over the previous ones. In other words, this means that we do have some survey effects within birth-cohorts to some extent, as in the case of the origin-education table, "the marginal distributions of both class origin and education, and also the origin-education

association, are not constant over surveys within cohorts" (Breen et al. 2009:190). Eventually, these survey effects could stem from the fact that the samples of the surveys we use are not drawn from the same population. BLMP (2009, see particularly footnote 8) highlighted two possible explanations for this survey effect in sampling frame design that might be of relevance in the context of the present enquiry. First, since we use data from different survey series, we have a high risk that each survey does not sample the population in the same way; second, since over the time frame of the surveys we use, the share of the immigrant population in the total population in Switzerland increased roughly 10 percentage points, accounting today for about 23%, it is fairly likely that each survey did not draw its sample from the same population. Thus, these survey effects we observe could actually stem not only from each survey's idiosyncratic sampling frame, but also from *substantial change in the composition of the Swiss population*.

Yet in order to fully assess the quality of our data and identify whether our data displays systematic measurement issues, we carried on our data quality assessment by further following BLMP's second step procedure, which consists of looking within each cohort to see whether the constant association model (CnSF) across surveys fits the data. In other words, if the model adjusts well enough to the data, this implies that survey variations within each birth-cohorts are insignificant.

These models are reported in Tables B.7 and B.8. We observe that our data overall adjusts quite well to the constant association model, if we take as significance threshold for model adjustment a p-value bigger than 0.001. Some cohorts exhibit important survey effects, but we do not observe these effects systematically for each set of analysis being on the origin-destination, origin-education and education-destination tables or on the two social class classifications and birth-cohorts variables we use.

Conclusion

Our data quality assessment leads us to conclude that (1) our substantial conclusions are not distorted by age and survey/period effects, and that (2) each birth-cohort displays some limited non-systematic measurement heterogeneity, according to survey. Stated differently, while the quality of our data is not perfect, these weaknesses do not undermine our substantial conclusions. We would like one more time to underscore that eventually we envisage the use of multiple cross-sections as a strength rather than a weakness, as even though our data does not enable us to measure the exact reality we would like to measure, we would have probably had a greater source of error if we had only used one cross-section. Indeed, measuring the same phenomenon with multiple sources of data might actually increase the reliability of our findings, in addition to the robustness of statistical

estimations. Last but not least, in line with Erikson and Goldthorpe we would like to reiterate that we do not want to take the risk of "throwing out the sociological baby with the statistical bath-water".(1992a:292). Therefore, we judge the quality of our data to be good enough to undertake a serious analysis of the dynamics of social mobility in Switzerland.

Table B.2: Log-linear models tested on the SCAOD table to assess whether OD display age and/or survey/period effect, fitted on men and women mobility tables.

Model	Men (N=6983)				Women (N=6380)			
	DF	L2	P	BIC	DF	L2	P	BIC
M1.CSAO CSAD OD	**2171**	**2043.6**	**0.9751**	**-6301.79**	2171	2060.7	0.9547	-6199.55
M2.CSAO CSAD βsOD	2160	2030.9	0.9770	-6172.27	**2160**	**2039.0**	**0.9690**	**-6179.41**
M3.CSAO CSAD βaOD	2169	2041.8	0.9750	-6295.96	2169	2060.5	0.9520	-6192.11
M4.CSAO CSAD βcOD	2167	2038.6	0.9761	-6291.42	2167	2052.9	0.9603	-6192.12
M5.CSAO CSAD βcβaOD	2165	2038.1	0.9748	-6284.25	2165	2051.5	0.9596	-6185.95
M6.CSAO CSAD βsβaOD	2158	2029.0	0.9769	-6266.46	2158	2038.7	0.9671	-6172.09
M7.CSAO CSAD βsβcOD	2156	2026.3	0.9776	-6261.44	2156	2032.0	0.9722	-6171.15
M8.CSAO CSAD βsβaβcOD	2154	2024.9	0.9771	-6255.18	2154	2026.8	0.9754	-6168.76
Models comparison								
M1-M2	11	12.7	0.3094		11	21.7	0.0267	
M1-M3	2	1.8	0.3962		2	0.2	0.9187	
M1-M4	4	5.0	0.2873		4	7.8	0.0996	
M2-M6	2	1.9	0.3902		2	0.3	0.8626	
M2-M7	4	4.6	0.3371		4	7.0	0.1379	
M3-M5	4	3.7	0.4525		4	9.0	0.0597	
M3-M6	11	12.8	0.3073		11	21.8	0.0256	
M4-M5	2	0.5	0.7705		2	1.4	0.4869	
M4-M7	11	12.3	0.3412		11	20.9	0.0346	
M5-M8	11	13.2	0.2795		11	24.7	0.0102	
M6-M8	4	4.1	0.3932		4	11.9	0.0182	
M7-M8	2	1.4	0.4888		2	5.2	0.0736	
Parameters								
βsOD	**M2**	**M6**	**M7**	**M8**	**M2**	**M6**	**M7**	**M8**
AP75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ISSP87	0.70	0.71	0.67	0.65	1.14	1.13	1.33	1.42
CH91	0.69	0.70	0.65	0.61	2.00	1.97	2.20	2.11
SHP99	0.59	0.60	0.55	0.46	1.07	1.07	1.42	1.72
ESS02	0.57	0.58	0.52	0.44	1.12	1.11	1.42	1.78
SHP04	0.61	0.62	0.54	0.45	0.96	0.95	1.27	1.72
ESS04	0.67	0.68	0.59	0.51	1.34	1.32	1.66	2.01
MCH05	0.72	0.72	0.67	0.56	1.16	1.15	1.48	1.92
ESS06	0.67	0.68	0.61	0.50	1.40	1.38	1.73	2.14
MCH07	0.64	0.64	0.59	0.47	1.48	1.46	1.79	2.20
ESS08	0.58	0.59	0.52	0.41	1.41	1.38	1.70	2.15
MCH09	0.78	0.77	0.72	0.61	1.98	1.93	2.29	2.60
βaOD	**M3**	**M5**	**M6**	**M8**	**M3**	**M5**	**M6**	**M8**
35-44	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
45-54	0.92	0.92	0.94	0.98	0.96	1.12	0.94	0.92
55-64	1.03	0.95	1.01	1.09	0.99	0.98	0.93	0.41
βcOD	**M4**	**M5**	**M7**	**M8**	**M4**	**M5**	**M7**	**M8**
1912-1941	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1942-1949	0.99	0.99	1.12	1.16	0.85	0.85	0.66	0.59
1950-1957	0.79	0.81	0.98	1.08	0.85	0.78	0.65	0.25
1958-1965	0.92	0.92	1.08	1.21	0.69	0.61	0.46	-0.10
1966-1979	0.91	0.87	1.07	1.19	0.98	0.97	0.84	0.09

Notes: CSAO CSAD OD= constant association model; each model with a β indicates a Unidiff effect (i.e. a change in the concerned association). G2=deviance, Df=degree of freedom, P=p-value, BIC=Bayesian information criterion. *To be significant, each new effect added into a model is compared to previous nested model and should exhibit a p-value below 0.05 (see models comparison panels)*

Table B.3: Log-linear models tested on the SCAOE table to assess whether OE display age and/or survey/period effect, fitted on men and women mobility tables.

Model	Men (N=7512)				Women (N=7996)			
	DF	L2	P	BIC	DF	L2	P	BIC
M1.CSAO CSAE OE	1393	1511.4	0.0141	-3887.50	1393	1466.3	0.0841	-3970.38
M2.CSAO CSAE βsOE	1382	1498.6	0.0150	-3857.71	**1382**	**1442.4**	**0.1260**	**-3951.35**
M3.CSAO CSAE βaOE	1391	1500.9	0.0205	-3890.27	1391	1460.9	0.0941	-3968.02
M4.CSAO CSAE βcOE	**1389**	**1501.3**	**0.0183**	**-3882.08**	1389	1461.7	0.0856	-3959.39
M5.CSAO CSAE βcβaOE	1387	1498.2	0.0193	-3877.50	1387	1457.9	0.0906	-3955.36
M6.CSAO CSAE βsβaOE	1380	1487.3	0.0226	-3861.28	1380	1439.3	0.1300	-3946.62
M7.CSAO CSAE βsβcOE	1378	1486.7	0.0212	-3854.14	1378	1436.1	0.1349	-3942.08
M8.CSAO CSAE βsβaβcOE	1376	1481.5	0.0242	-3851.59	1376	11.28.5	1.0000	-4241.85
Models comparison								
M1-M2	11	12.8	0.3032		11	23.9	0.0131	
M1-M3	2	10.5	0.0052		2	5.4	0.0655	
M1-M4	4	10.1	0.0391		4	4.6	0.3274	
M2-M6	2	11.3	0.0035		2	3.1	0.2153	
M2-M7	4	11.9	0.0179		4	6.3	0.1749	
M3-M5	4	2.7	0.6029		4	3.0	0.5667	
M3-M6	11	13.6	0.2530		11	21.6	0.0283	
M4-M5	2	3.1	0.2042		2	3.8	0.1518	
M4-M7	11	14.6	0.1969		11	25.6	0.0074	
M5-M8	11	16.7	0.1164		11	1457.9	0.0000	
M6-M8	4	5.8	0.2140		4	1439.3	0.0000	
M7-M8	2	5.2	0.0742		2	1436.1	0.0000	
Parameters								
βsOE	**M2**	**M6**	**M7**	**M8**	**M2**	**M6**	**M7**	**M8**
AP75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ISSP87	0.82	0.89	0.94	0.93	0.96	1.02	0.98	0.77
CH91	0.87	0.92	0.98	1.00	1.24	1.29	1.26	1.14
SHP99	0.77	0.79	0.98	1.01	1.28	1.32	1.40	0.94
ESS02	0.89	0.93	1.11	1.15	0.92	0.94	1.04	1.17
SHP04	0.84	0.89	1.10	1.18	0.94	0.99	1.11	1.00
ESS04	1.00	1.09	1.27	1.34	1.19	1.26	1.35	1.12
MCH05	0.90	0.95	1.17	1.25	1.36	1.42	1.51	1.43
ESS06	0.87	0.89	1.12	1.21	1.59	1.68	1.75	1.62
MCH07	0.49	0.49	0.76	0.90	1.53	1.62	1.70	1.56
ESS08	0.95	0.97	1.20	1.27	1.56	1.67	1.74	1.58
MCH09	1.03	1.09	1.31	1.37	1.42	1.51	1.61	1.48
βaOE	**M3**	**M5**	**M6**	**M8**	**M3**	**M5**	**M6**	**M8**
35-44	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
45-54	0.90	0.92	0.91	0.79	1.12	1.28	1.12	0.82
55-64	1.18	1.10	1.17	0.82	1.23	1.41	1.22	0.78
βcOE	**M4**	**M5**	**M7**	**M8**	**M4**	**M5**	**M7**	**M8**
1912-1941	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1942-1949	0.91	0.92	0.86	0.86	1.13	1.16	1.03	0.92
1950-1957	0.84	0.93	0.80	0.79	1.02	1.12	0.83	0.91
1958-1965	0.71	0.81	0.63	0.57	0.89	1.07	0.70	0.90
1966-1979	0.85	0.92	0.72	0.51	0.96	1.32	0.82	0.80

Notes: CSAO CSAE OE= constant association model; each model with a β indicates a Unidiff effect (i.e. a change in the concerned association). G2=deviance, Df=degree of freedom, P=p-value, BIC=Bayesian information criterion. *To be significant, each new effect added into a model is compared to previous nested model and should exhibit a p-value below 0.05 (see models comparison panels)*

Table B.4: Log-linear models tested on the SCAED table to assess whether ED display age and/or survey/period effect, fitted on men and women mobility tables.

Model	Men (N=7528)				Women (N=6921)			
	DF	L2	P	BIC	DF	L2	P	BIC
M1.CSAE CSAD ED	1393	1706.0	0.0000	-3694.19	1393	1235.1	0.9990	-4114.30
M2.CSAE CSAD βsED	1382	1348.8	0.7337	-4008.77	1382	1135.7	1.0000	-4171.44
M3.CSAE CSAD βaED	1391	1414.4	0.3251	-3978.08	1391	1230.0	0.9992	-4111.65
M4.CSAE CSAD βcED	1389	1401.4	0.4024	-3983.31	1389	1220.3	0.9996	-4113.69
M5.CSAE CSAD βcβaED	1387	1386.3	0.5002	-3990.65	1387	1211.1	0.9997	-4115.26
M6.CSAE CSAD βsβaED	1380	1348.1	0.7252	-4001.68	1380	1129.8	1.0000	-4169.60
M7.CSAE CSAD βsβcED	**1378**	**1340.7**	**0.7591**	**-4001.32**	**1378**	**1131.9**	**1.0000**	**-4159.88**
M8.CSAE CSAD βsβaβcED	1376	1340.3	0.7500	-3994.04	1376	1128.5	1.0000	-4155.57
Models comparison								
M1-M2	11	357.2	0.0000		11	99.4	0.0000	
M1-M3	2	291.6	0.0000		2	5.1	0.0806	
M1-M4	4	304.6	0.0000		4	14.8	0.0052	
M2-M6	2	0.7	0.7189		2	5.9	0.0539	
M2-M7	4	8.1	0.0898		4	3.8	0.4343	
M3-M5	4	28.1	0.0000		4	18.9	0.0008	
M3-M6	11	66.3	0.0000		11	100.2	0.0000	
M4-M5	2	15.1	0.0005		2	9.2	0.0098	
M4-M7	11	60.7	0.0000		11	88.4	0.0000	
M5-M8	11	46.0	0.0000		11	82.6	0.0000	
M6-M8	4	7.8	0.0965		4	1.3	0.8572	
M7-M8	2	0.4	0.7875		2	3.4	0.1853	
Parameters								
βsED	**M2**	**M6**	**M7**	**M8**	**M2**	**M6**	**M7**	**M8**
AP75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ISSP87	0.71	0.71	0.82	0.84	0.72	0.72	0.73	0.77
CH91	0.95	0.95	1.08	1.09	1.11	1.10	1.14	1.14
SHP99	0.88	0.88	1.03	1.08	0.84	0.86	0.84	0.94
ESS02	0.95	0.94	1.07	1.11	1.12	1.09	1.10	0.83
SHP04	'.964	0.96	1.09	1.14	0.90	0.88	0.84	1.00
ESS04	0.93	0.92	1.06	1.10	1.05	1.02	1.00	1.12
MCH05	1.21	1.19	1.34	1.39	1.39	1.34	1.35	1.43
ESS06	1.38	1.36	1.52	1.56	1.61	1.54	1.58	1.62
MCH07	1.62	1.60	1.75	1.80	1.54	1.48	1.50	1.56
ESS08	1.36	1.34	1.50	1.54	1.57	1.50	1.53	1.58
MCH09	1.39	1.38	1.53	1.58	1.45	1.39	1.40	1.48
βaED	**M3**	**M5**	**M6**	**M8**	**M3**	**M5**	**M6**	**M8**
35-44	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
45-54	0.96	1.30	0.96	1.00	0.88	1.08	0.88	0.82
55-64	0.99	1.57	0.95	0.93	0.90	1.49	0.86	0.78
βcED	**M4**	**M5**	**M7**	**M8**	**M4**	**M5**	**M7**	**M8**
1912-1941	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1942-1949	0.89	0.83	0.78	0.77	1.07	1.09	0.96	0.92
1950-1957	0.99	1.16	0.84	0.79	1.15	1.43	1.00	0.91
1958-1965	1.00	1.35	0.84	0.76	1.23	1.70	1.08	0.90
1966-1979	1.18	1.79	0.96	0.88	1.35	1.92	1.12	0.80

Notes: CSAE CSAD ED= constant association model; each model with a β indicates a Unidiff effect (i.e. a change in the concerned association). G2=deviance, Df=degree of freedom, P=p-value, BIC=Bayesian information criterion. *To be significant, each new effect added into a model is compared to previous nested model and should exhibit a p-value below 0.05 (see models comparison panels)*

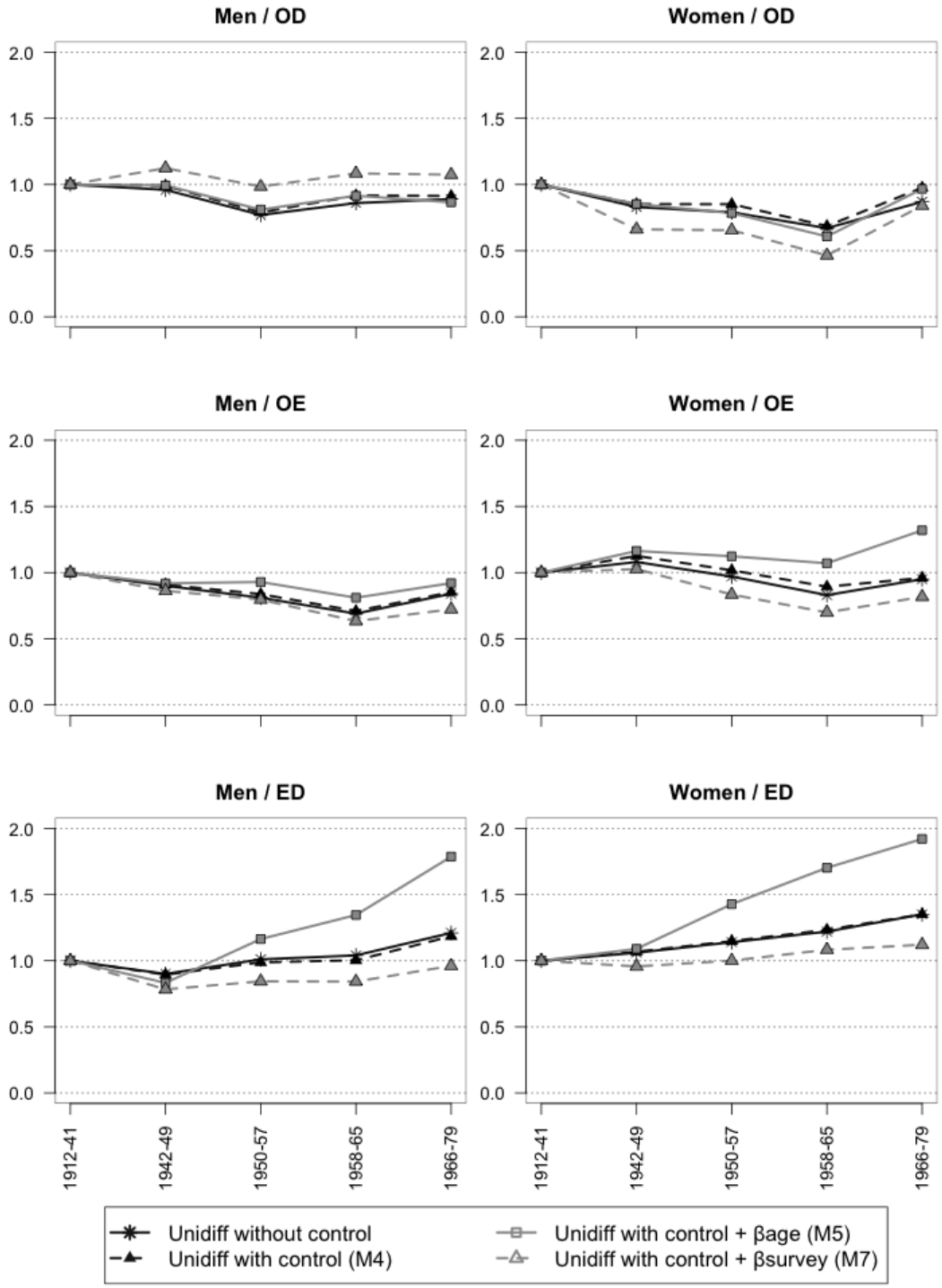

Figure B.3: Unidiff parameters for birth cohorts for each set of association with different controls

Table B.5: Test of homogeneity within cohorts with the ESeC class schema.

	G2	*df*	*P*	*DI*	*Models*	*G2*	*df*	*P*
8 birth-cohorts								
Origin - Destination								
M1. COD CS SO SD	3809.3	3132	0.000	17.46				
M2. COD CSO SD	3428.9	2790	0.000	16.39	M1-M2	380.3	342	0.075
M3. COD CSO CSD	2987.4	2448	0.000	14.98	M2-M3	441.6	342	0.000
M4. COD CSO CSD SOD	**2439.7**	**2052**	**0.000**	**13.22**	**M3-M4**	**547.6**	**395**	**0.000**
Origin - Education								
M1. COE CS SO SE	2647.2	2202	0.000	12.93				
M2. COE CSO SE	2262.8	1860	0.000	11.39	M1-M2	384.4	342	0.057
M3. COE CSO CSE	1973.5	1632	0.000	10.37	M2-M3	289.4	228	0.004
M4. COE CSO CSE SOE	**1625.4**	**1368**	**0.000**	**9.24**	**M3-M4**	**348.0**	**264**	**0.000**
Education - Destination								
M1. CED CS SE SD	2577.8	2202	0.000	13.27				
M2. CED CSE SD	2290.5	1974	0.000	12.19	M1-M2	287.3	228	0.005
M3. CED CSE CSD	1847.8	1632	0.000	10.28	M2-M3	442.7	342	0.000
M4. CED CSE CSD SED	**1279.0**	**1368**	**0.958**	**8.10**	**M3-M4**	**568.9**	**264**	**0.000**
5 birth-cohorts								
Origin - Destination								
M1. COD CS SO SD	2627.7	2028	0.000	14.57				
M2. COD CSO SD	2402.1	1824	0.000	13.73	M1-M2	225.6	204	0.143
M3. COD CSO CSD	2113.0	1620	0.000	12.56	M2-M3	289.1	204	0.000
M4. COD CSO CSD SOD	**1548.2**	**1224**	**0.000**	**10.36**	**M3-M4**	**564.7**	**396**	**0.000**
Origin - Education								
M1. COE CS SO SE	1817.6	1420	0.000	10.65				
M2. COE CSO SE	1615.2	1216	0.000	9.59	M1-M2	202.5	204	0.517
M3. COE CSO CSE	1402.6	1080	0.000	8.82	M2-M3	212.5	136	0.000
M4. COE CSO CSE SOE	**1050.6**	**816**	**0.000**	**7.32**	**M3-M4**	**352.1**	**264**	**0.000**
Education - Destination								
M1. CED CS SE SD	1896.9	1420	0.000	11.16				
M2. CED CSE SD	1678.8	1284	0.000	10.42	M1-M2	218.1	136	0.000
M3. CED CSE CSD	1399.2	1080	0.000	8.92	M2-M3	279.7	204	0.000
M4. CED CSE CSD SED	**829.1**	**816**	**0.367**	**6.22**	**M3-M4**	**570.0**	**264**	**0.000**

Notes: G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index.

Table B.6: Test of homogeneity within cohorts with the Oesch class schema.

	G2	*df*	*P*	*DI*	*Models*	*G2*	*df*	*P*
8 birth-cohorts								
Origin - Destination								
M1. COD CS SO SD	5160.3	5264	0.844	21.35				
M2. COD CSO SD	4642.3	4808	0.956	19.90	M1-M2	517.9	456	0.024
M3. COD CSO CSD	4045.7	4352	1.000	18.12	M2-M3	596.7	456	0.000
M4. COD CSO CSD SOD	**3163.9**	**3648**	**1.000**	**15.39**	**M3-M4**	**881.7**	**704**	**0.000**
Origin - Education								
M1. COE CS SO SE	3086.4	2860	0.002	14.09				
M2. COE CSO SE	2624.1	2404	0.001	12.48	M1-M2	462.3	456	0.409
M3. COE CSO CSE	2323.7	2176	0.014	11.24	M2-M3	300.4	228	0.001
M4. COE CSO CSE SOE	**1869.3**	**1824**	**0.225**	**9.96**	**M3-M4**	**454.4**	**352**	**0.000**
Education - Destination								
M1. CED CS SE SD	3390.6	2860	0.000	15.78				
M2. CED CSE SD	3088.3	2632	0.000	14.68	M1-M2	302.3	228	0.001
M3. CED CSE CSD	2502.7	2176	0.000	12.73	M2-M3	585.6	456	0.000
M4. CED CSE CSD SED	**1759.6**	**1824**	**0.857**	**9.92**	**M3-M4**	**743.1**	**352**	**0.000**
5 birth-cohorts								
Origin - Destination								
M1. COD CS SO SD	3674.6	3424	0.002	17.92				
M2. COD CSO SD	3398.3	3152	0.001	16.97	M1-M2	276.3	272	0.416
M3. COD CSO CSD	3005.2	2880	0.051	15.46	M2-M3	393.1	272	0.000
M4. COD CSO CSD SOD	**2110.2**	**2176**	**0.841**	**12.26**	**M3-M4**	**895.1**	**704**	**0.000**
Origin - Education								
M1. COE CS SO SE	2038.4	1848	0.001	11.19				
M2. COE CSO SE	1781.6	1576	0.000	10.13	M1-M2	256.9	272	0.736
M3. COE CSO CSE	1566.7	1440	0.011	9.16	M2-M3	214.9	136	0.000
M4. COE CSO CSE SOE	**1116.6**	**1088**	**0.267**	**7.45**	**M3-M4**	**450.1**	**352**	**0.000**
Education - Destination								
M1. CED CS SE SD	2467.3	1848	0.000	13.62				
M2. CED CSE SD	2249.0	1712	0.000	12.63	M1-M2	218.3	136	0.000
M3. CED CSE CSD	1895.1	1440	0.000	10.97	M2-M3	353.8	272	0.001
M4. CED CSE CSD SED	**1153.7**	**1088**	**0.081**	**7.82**	**M3-M4**	**741.4**	**352**	**0.000**

Notes: G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index.

Table B.7: Goodness of fit of model of constant association across surveys within birth cohorts for tables constructed with the ESeC class schema

	Origin-Destination			***Origin-Education***			***Education-Destination***		
	G2	*df*	*P*	*G2*	*df*	*P*	*G2*	*df*	*P*
8 birth-cohorts									
1912-1935	126.8	102	0.049	85.5	66	0.053	61.4	66	0.636
1936-1940	188.0	188	0.486	167.9	138	0.042	125.3	113	0.601
1941-1945	435.2	374	0.016	297.6	250	0.021	283.4	254	0.099
1946-1950	413.2	385	0.266	328.7	254	0.001	284.9	250	0.266
1951-1955	*506.3*	*360*	*0.000*	272.5	234	0.043	266.0	234	0.074
1956-1960	*499.3*	*360*	*0.000*	295.8	234	0.004	298.7	234	0.003
1961-1965	*429.9*	*318*	*0.000*	*295.7*	*212*	*0.000*	227.2	216	0.287
1966-1979	*388.6*	*288*	*0.000*	229.7	192	0.033	*301.0*	*192*	*0.000*
5 birth-cohorts									
1912-1941	270.9	235	0.054	216.9	162	0.003	187.0	154	0.036
1942-1949	465.0	396	0.010	*352.6*	*258*	*0.000*	311.3	258	0.013
1950-1957	*500.6*	*360*	*0.000*	*319.4*	*234*	*0.000*	*326.0*	*234*	*0.000*
1958-1965	*487.8*	*324*	*0.000*	284.1	216	0.001	273.8	216	0.005
1966-1979	*388.6*	*288*	*0.000*	229.7	192	0.033	*301.0*	*192*	*0.000*

Note: Problematic models emphasised (P > 0.001)

Table B.8: Goodness of fit of model of constant association across surveys within birth cohorts for tables constructed with the Oesch class schema

	Origin-Destinaton			***Origin-Education***			***Education-Destination***		
	G2	*df*	*P*	*G2*	*df*	*P*	*G2*	*df*	*P*
8 birth-cohorts									
1912-1935	132.0	133	0.508	71.0	77	0.671	83.3	77	0.291
1936-1940	278.0	282	0.556	196.2	157	0.018	165.4	165	0.477
1941-1945	598.9	546	0.058	353.3	289	0.006	388.2	318	0.004
1946-1950	552.4	494	0.035	*403.9*	*309*	*0.000*	400.5	333	0.007
1951-1955	*688.6*	*556*	*0.000*	355.4	285	0.003	*415.7*	*309*	*0.000*
1956-1960	587.5	554	0.157	336.3	281	0.013	381.0	306	0.002
1961-1965	617.7	599	0.290	*337.7*	*252*	*0.000*	330.6	284	0.030
1966-1979	*590.5*	*464*	*0.000*	269.9	232	0.044	*337.2*	*256*	*0.001*
5 birth-cohorts									
1912-1941	430.7	373	0.021	215.9	189	0.087	257.4	205	0.008
1942-1949	688.4	625	0.040	389.2	313	0.002	*447.9*	*341*	*0.000*
1950-1957	677.0	569	0.001	*372.2*	*285*	*0.000*	*469.1*	*309*	*0.000*
1958-1965	618.6	520	0.002	319.5	264	0.011	*383.4*	*288*	*0.000*
1966-1979	*590.5*	*464*	*0.000*	269.9	232	0.044	*337.2*	*256*	*0.001*

Note: Problematic models emphasised (P > 0.001)

C. Appendix C.

Complementary information on Chapter 5 .:From origin to destination: analysing trends in social mobility in Switzerland

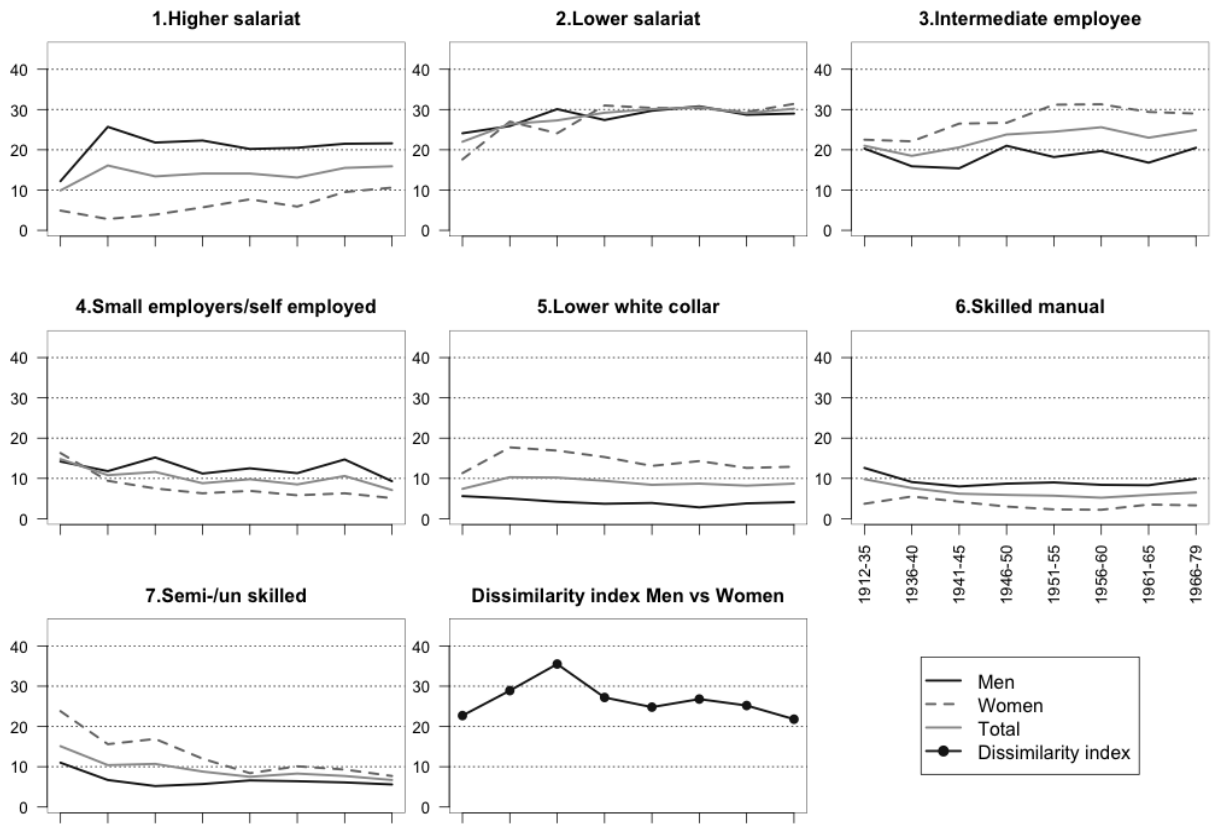

Figure C.1: Marginal distributions of class destination by gender over birth-cohorts in percentages for Swiss citizens only

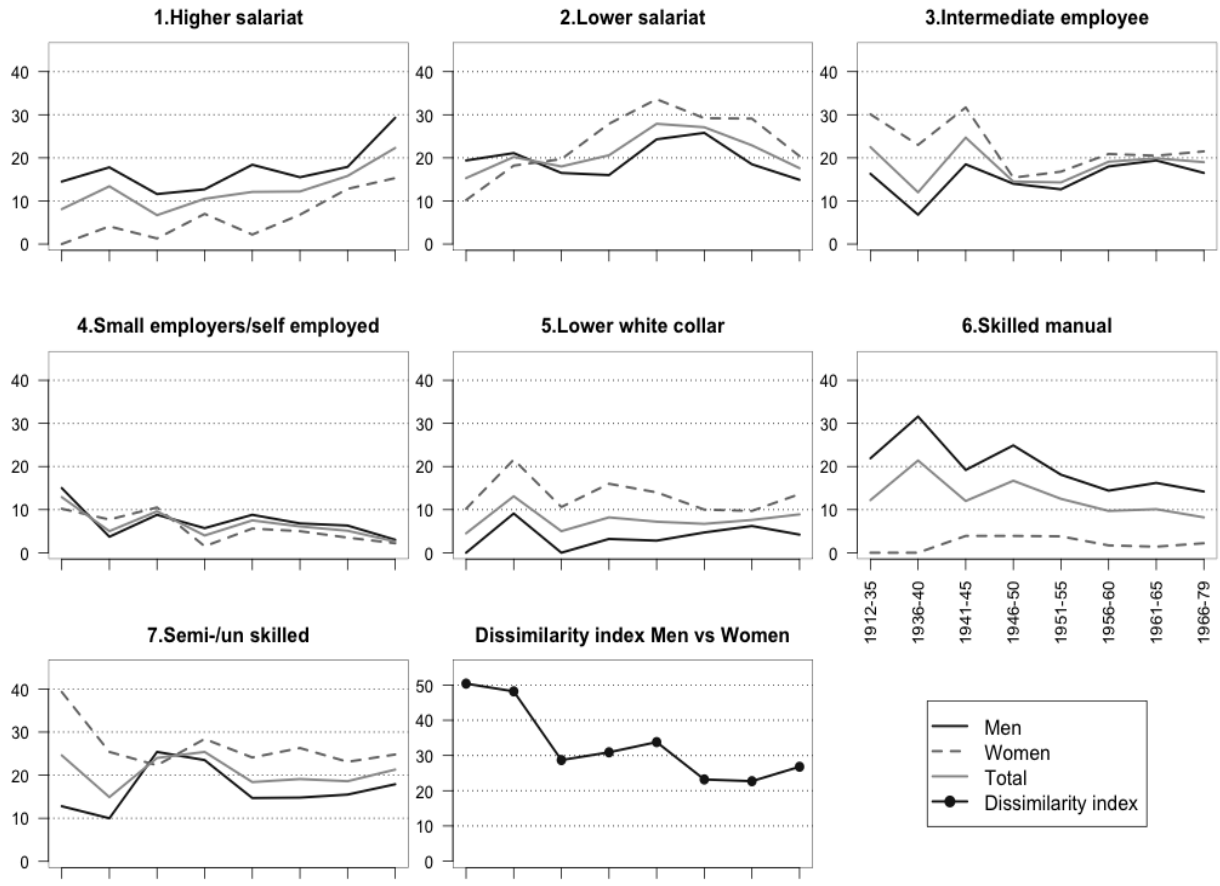

Figure C.2: Marginal distributions of class destination by gender over birth-cohorts in percentages for foreign residents only

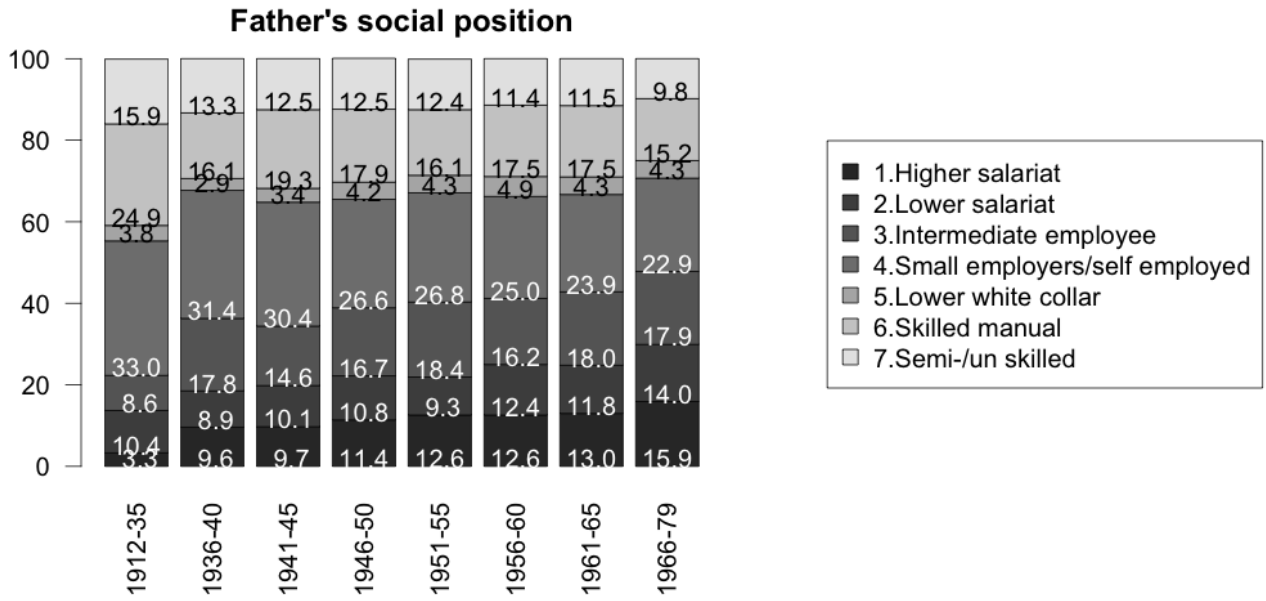

Figure C.3: Marginal distributions of father's social position over birth-cohorts in percentages for Swiss citizens only

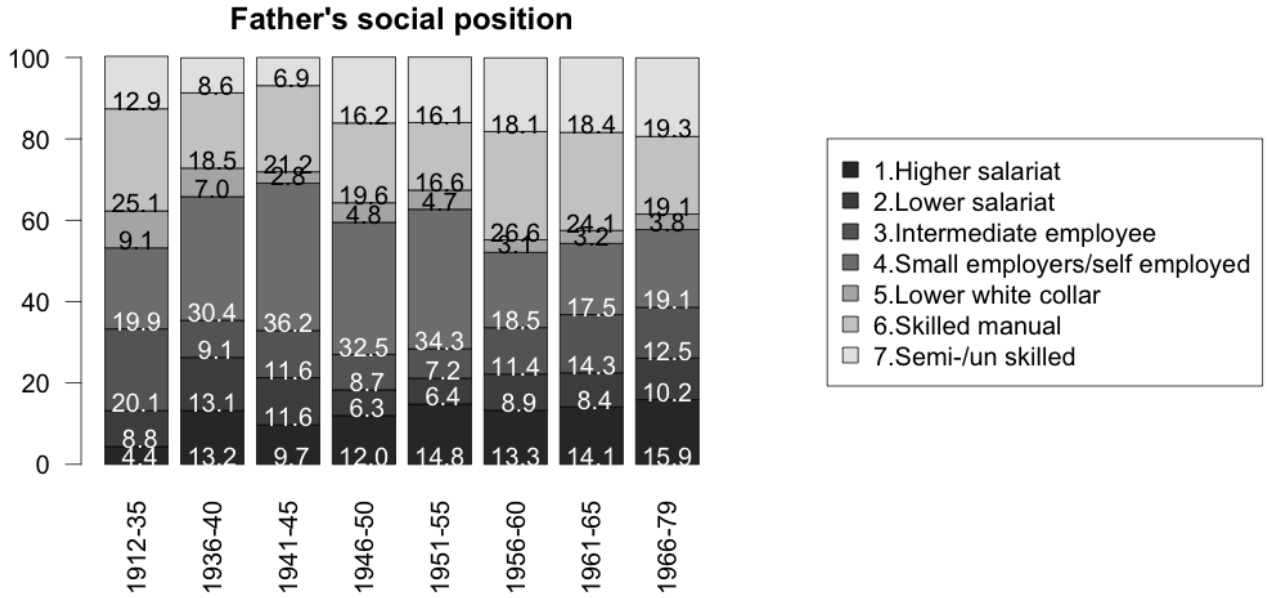

Figure C.4: Marginal distributions of father's social position over birth-cohorts in percentages for foreign residents only

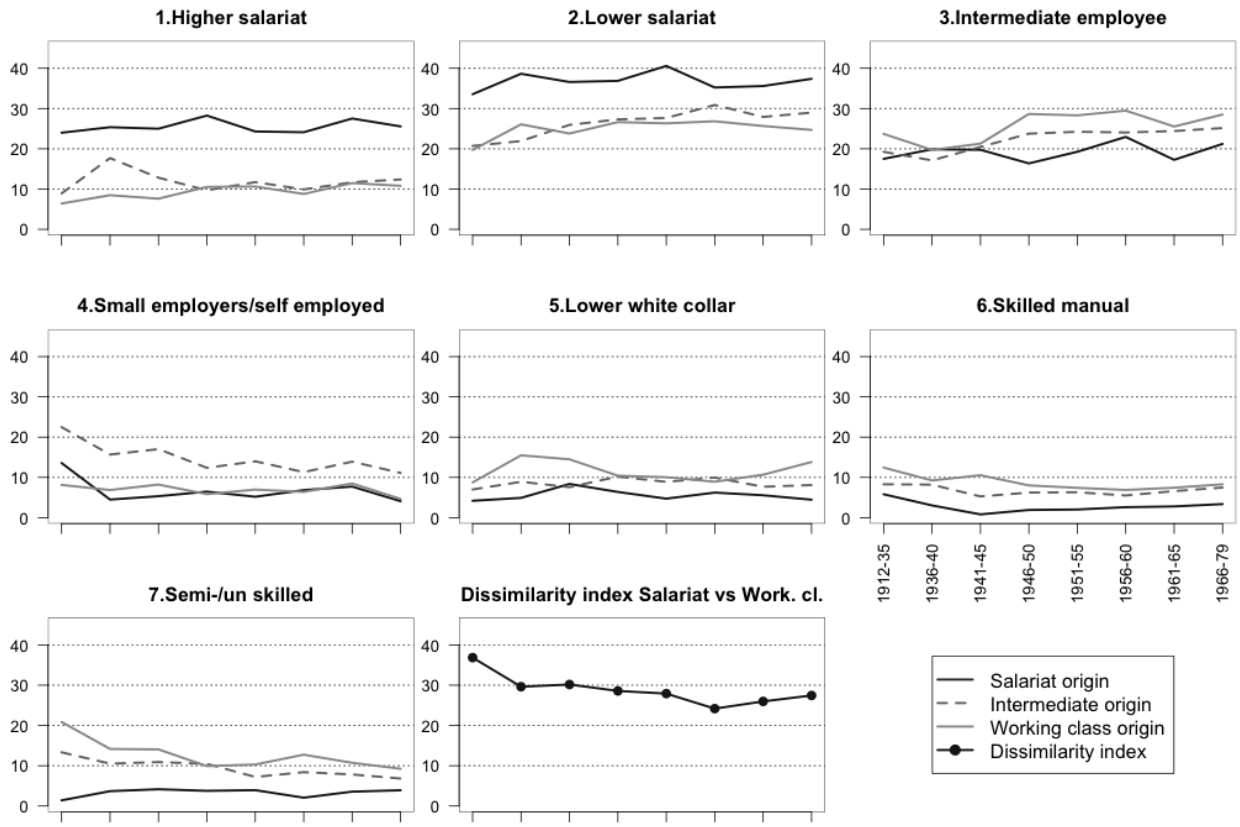

Figure C.5: Marginal distributions of class destination by social origin over birth-cohorts in percentages for Swiss citizens only

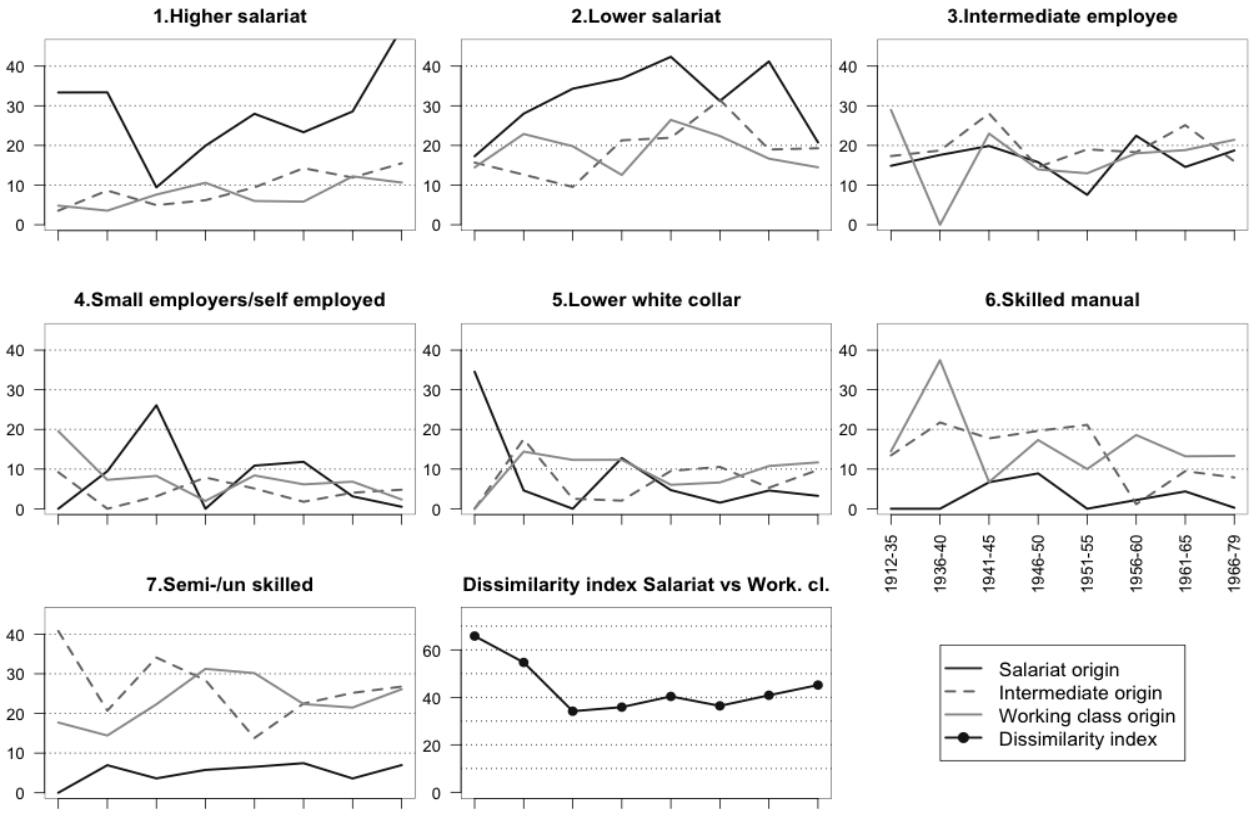

Figure C.6: Marginal distributions of class destination by social origin over birth-cohorts in percentages for foreign residents only

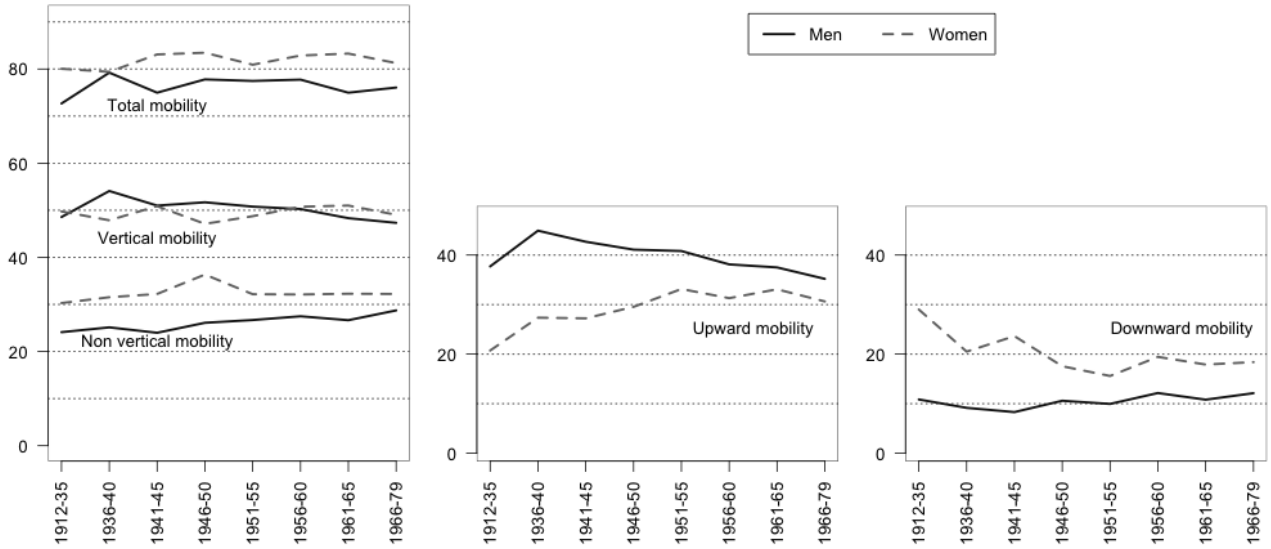

Figure C.7: Absolute social mobility for men and women aged 30–64 by birth-cohort in percentages for Swiss citizens only

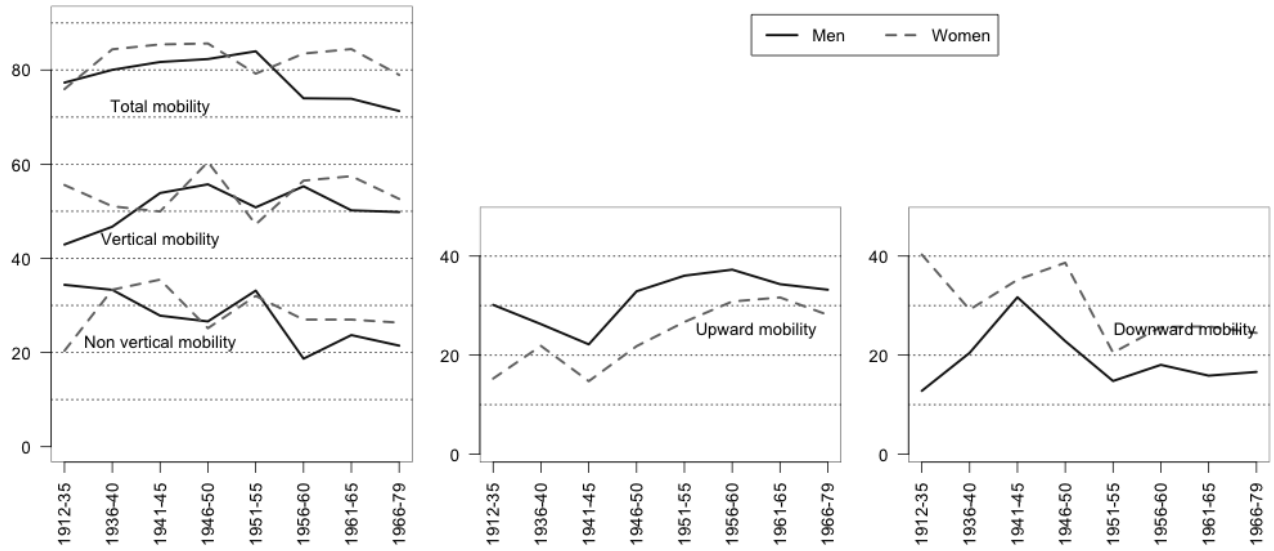

Figure C.8: Absolute social mobility for men and women aged 30–64 by birth-cohort in percentages for foreign residents only

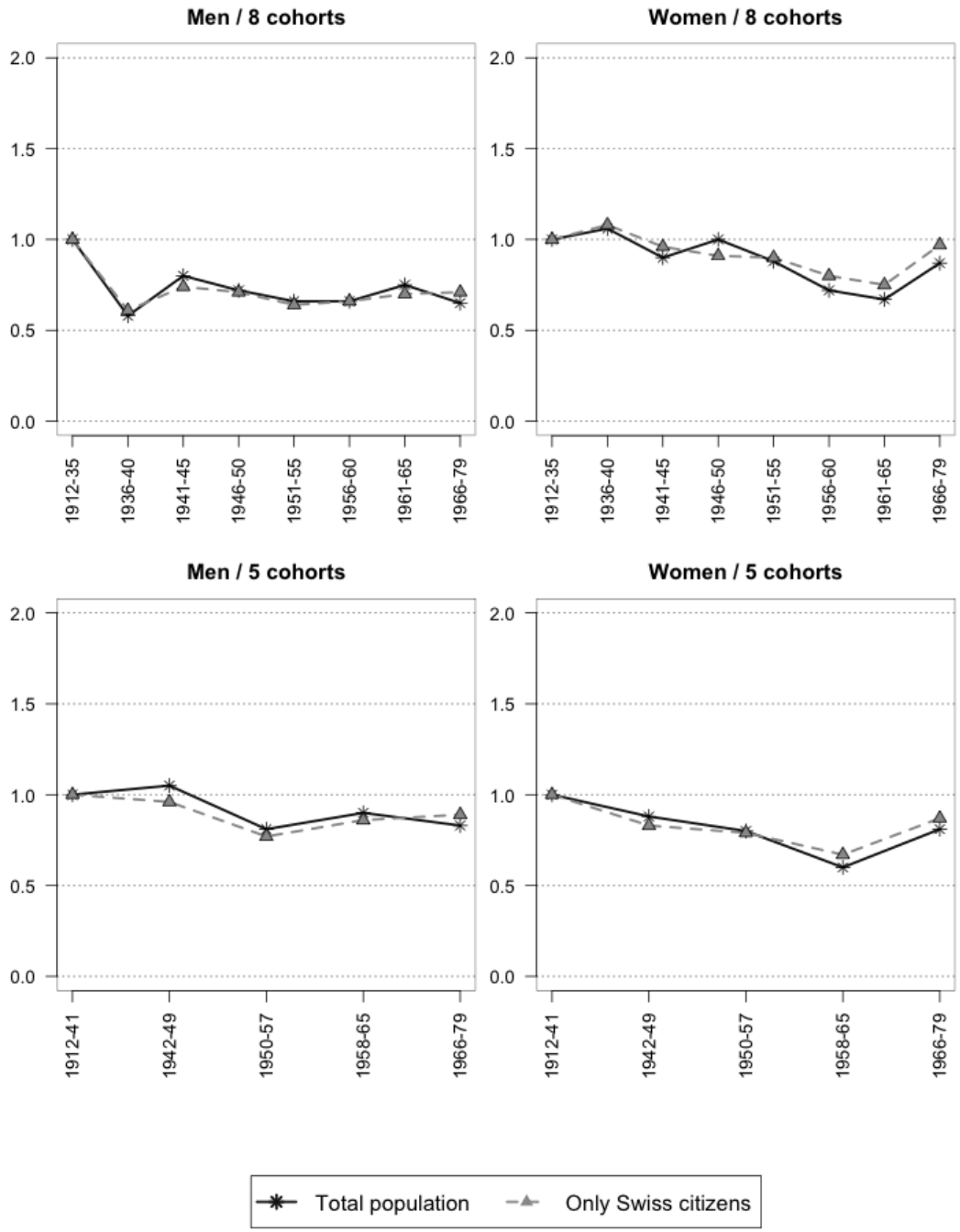

Figure C.9: Plots of parameters of the different Unidiff models fitted on men and women mobility tables, divided into eight cohorts and five cohorts, on the total population and only on Swiss citizens.

Table C.1: Parameters detail of best log-linear models fitted expressed in exp beta scale.

	Men						
	1	2	3	4	5	6	7
Father	*Model M1 (CnSF)*						
1. Higher salariat	26.4	9.8	3.4	9.0	2.8	1.4	1.0
2. Lower salariat	11.4	6.9	2.6	5.8	1.3	1.0	1.0
3. Intermediate employee	5.3	4.5	2.8	4.2	1.9	1.5	1.0
4. Small employers / self-employed	2.0	1.6	1.2	7.1	0.8	1.3	1.0
5. Lower white collar	3.3	3.7	2.1	4.1	1.9	2.0	1.0
6. Skilled manual	2.0	1.6	1.3	2.2	0.8	1.4	1.0
7. Semi-/unskilled	1.0	1.0	1.0	1.0	1.0	1.0	1.0

	Women						
	1	2	3	4	5	6	7
Father	*Model M5 (Unidiff Constrained)*						
1. Higher salariat	91.4	25.6	7.7	5.8	3.0	2.9	1.0
2. Lower salariat	29.6	13.0	5.8	5.4	2.0	2.0	1.0
3. Intermediate employee	8.2	5.5	3.2	1.9	1.4	1.5	1.0
4. Small employers / self-employed	3.2	2.1	1.3	2.4	1.0	1.9	1.0
5. Lower white collar	6.7	3.3	2.7	1.9	1.7	1.2	1.0
6. Skilled manual	3.4	2.9	2.0	1.7	1.6	1.6	1.0
7. Semi-/unskilled	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Notes: parameters for models M1 and M5 respectively on men and women mobility tables according to their father's social position divided into five cohorts.

D. Appendix D.

Complementary information on Chapter 6 .:When education reproduces social inequalities: explaining how education mediates constant social mobility in Switzerland

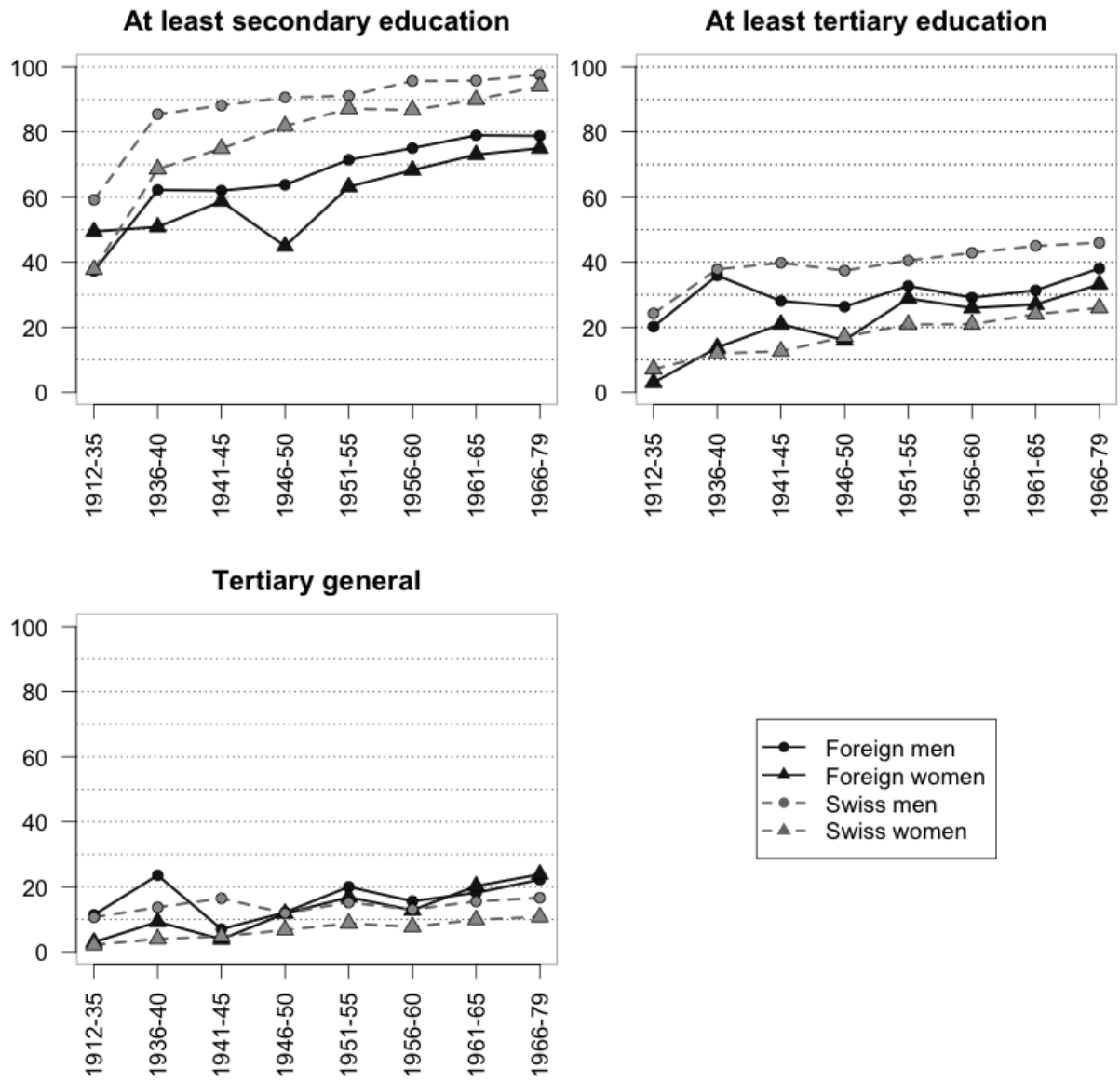

Figure D.1: Trends over birth-cohorts in educational distribution by gender and citizenship

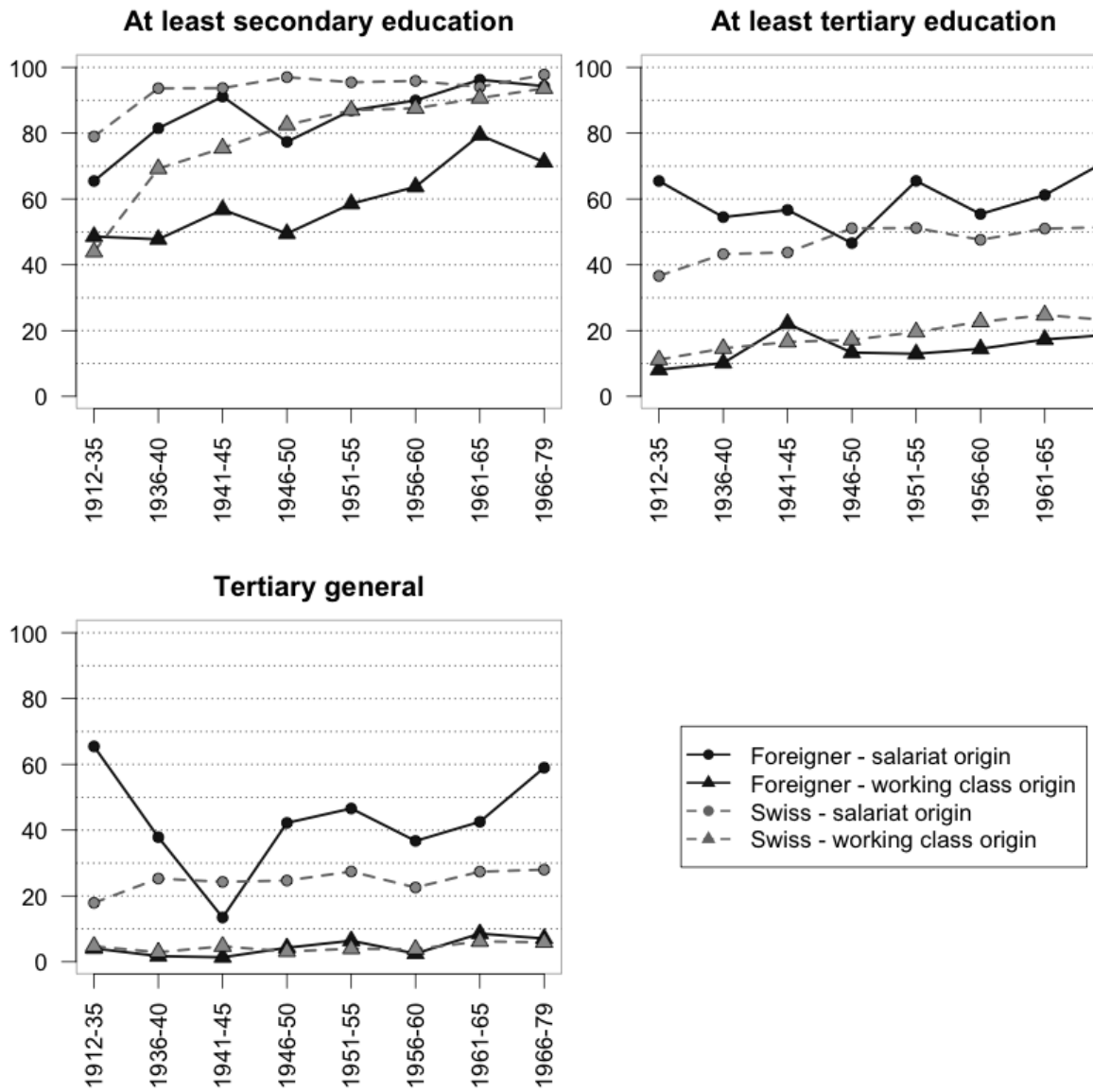

Figure D.2: Trends over birth-cohorts in educational distribution by social origin and by citizenship

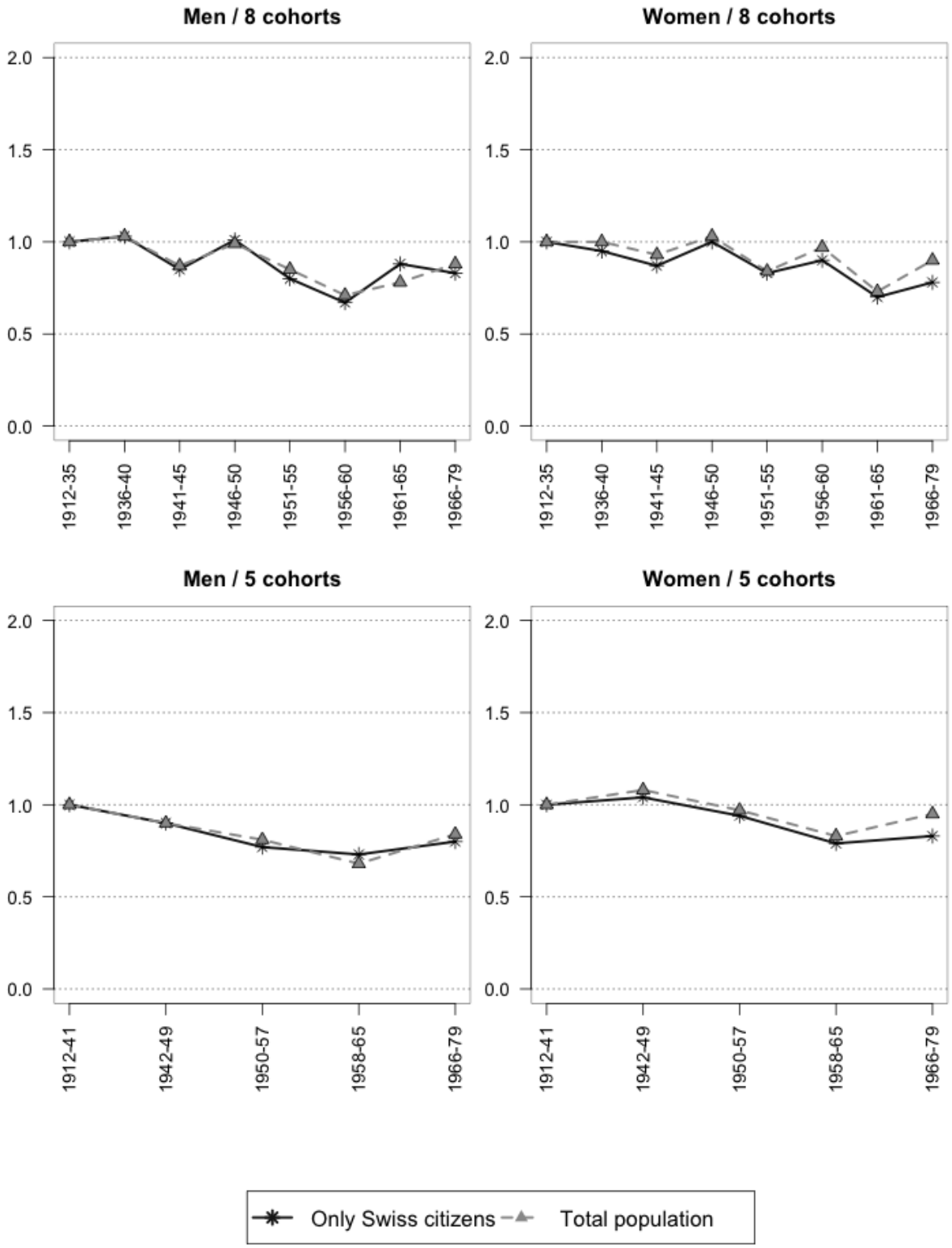

Figure D.3: Plots of parameters of the different Unidiff models fitted on men and women educational mobility tables, divided into eight cohorts and five cohorts, on the total population and only on Swiss citizens.

Table D.1: Parameters detail of best log-linear models fitted for the educational mobility tables expressed in exp beta scale.

	Men					Women				
	E1	E2	E3	E4	E5	E1	E2	E3	E4	E5
Father	*Model M2 (Unidiff)*					*Model M1 (CnSF)*				
1. Higher salariat	1.0	12.6	2.6	15.8	155.3	1.0	14.7	3.5	13.6	66.7
2. Lower salariat	1.0	7.7	2.6	12.7	54.2	1.0	11.2	2.9	9.0	33.4
3. Intermediate employee	1.0	5.3	3.5	7.4	21.2	1.0	6.4	2.8	4.6	10.7
4. Small employers / self-employed	1.0	1.1	1.0	1.7	2.7	1.0	2.2	1.2	2.4	4.1
5. Lower white collar	1.0	1.8	1.2	2.3	4.1	1.0	3.8	2.1	2.7	5.9
6. Skilled manual	1.0	1.3	1.5	2.2	2.9	1.0	2.1	1.7	2.0	2.3
7. Semi-/unskilled	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Notes: E1=compulsory education; E2=secondary general education; E3=secondary professional education; E4=tertiary vocational education; E5=tertiary general education

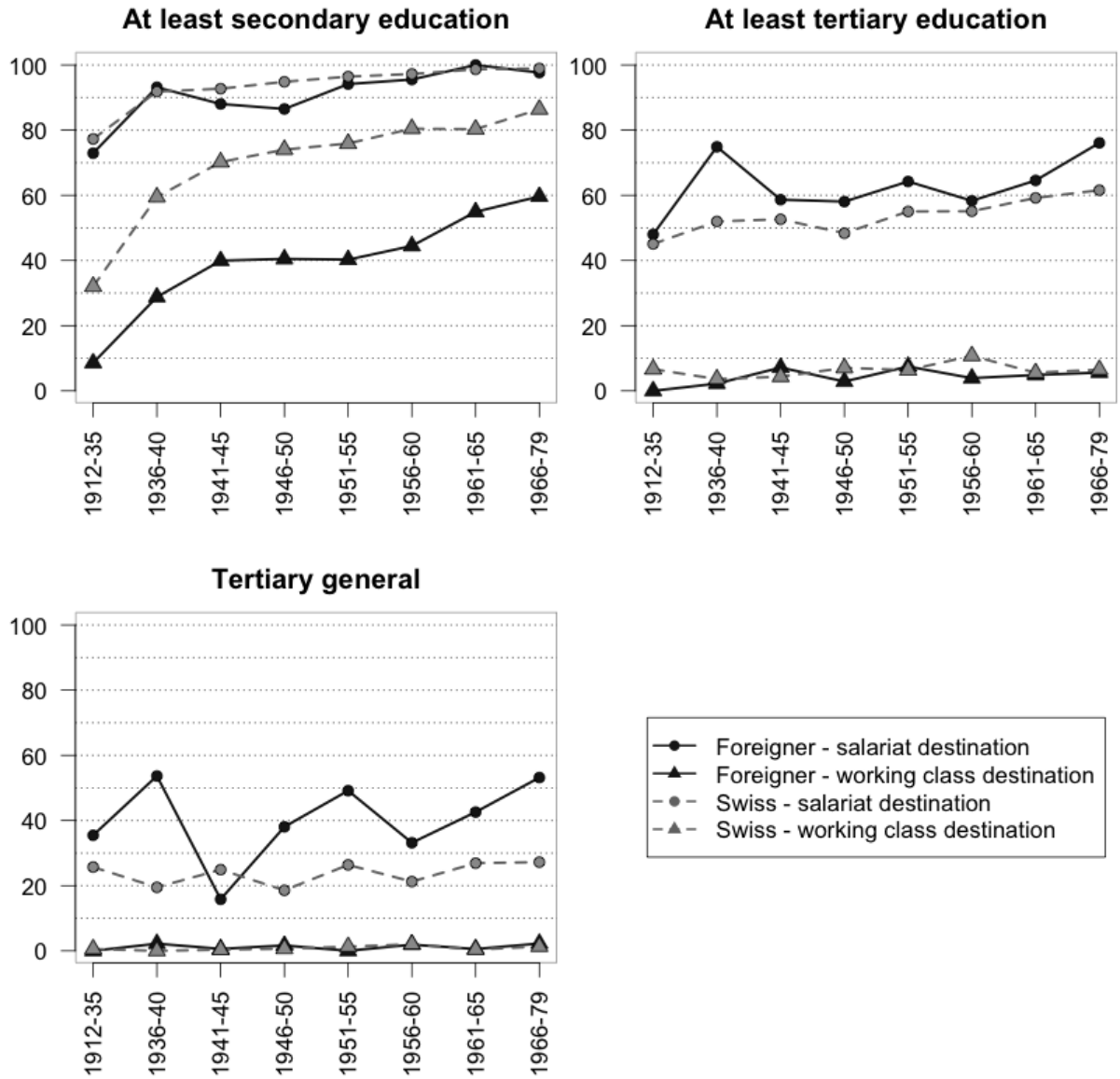

Figure D.4: Trends over birth-cohorts in educational distribution by social class destination and by citizenship

Table D.2: Results of fitting the log-linear models to men return to education tables, divided into eight cohorts and five cohorts (men aged 30–64)*, excluding self-employed and small employers (i.e. ESeC = 4).*

Models ED	G2	Df	P	DI	%G2	BIC
* Men, 8 cohorts return to education table N=6719						
M0. Cond. Ind.	3127.3	160	0.000	21.17	-	1717.3
M1. CnSF	200.7	140	0.001	4.98	93.58	-1033.1
M2. Unidiff	183.7	133	0.002	4.68	94.13	-988.4
Parameters M2	*c1 = 1; c2 = 1.06; c3 = 0.99; c4 = 0.95; c5 = 1.12; c6 = 1.04; c7 = 1.11; c8= 1.27*					
M3. Unidiff Linear trend	**190.4**	**139**	**0.003**	**4.76**	**93.91**	**-1034.6**
Parameters M3	***0.0072***					
Models comparison						
M0 - M1	2926.60	20	0.000			
M1 - M2	17.00	7	0.018			
M1 - M3	10.30	1	0.001			
M3 - M2	6.70	6	0.349			
* Men, 5 cohorts return to education table N=6719						
M0. Cond. Ind.	3075.4	100	0.000	27.08	-	2194.1
M1. CnSF	133.6	80	0.000	4.24	95.65	-571.4
M2. Unidiff	118.8	76	0.001	3.82	96.14	-551
Parameters M2	*c1 = 1; c2 = 0.92; c3 = 1; c4 = 1.04 ; c5= 1.21*					
M3. Unidiff Linear trend	**126.0**	**79**	**0.001**	**4.01**	**95.9**	**-570.2**
Parameters M3	***0.0054***					
Models comparison						
M0 - M1	2941.80	20	0.000			
M1 - M2	14.80	4	0.005			
M1 - M3	7.60	1	0.006			
M3 - M2	7.20	3	0.066			

Notes: Cond Ind=conditional independence model; CnSF=constant social fluidity model (the model which assumes the ED association to be constant); Unidiff=uniform difference model (the model which assumes the ED association changed). G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index, %G2=proportion of reduction of deviance, BIC=Bayesian information criterion. On the parameters lines, c1 to c5/c8 refer to corresponding birth-cohorts. *To be significant, each new effect added into a model is compared to previous nested model and should exhibit a p-value below 0.05 (see models comparison panels)*

Table D.3: Results of fitting the log-linear models to women return to education tables, divided into eight cohorts and five cohorts (women aged 30–*64), excluding self-employed and small employers (i.e. ESeC = 4).*

Models ED	G2	Df	P	DI	%G2	BIC
* Women, 8 cohorts return to education table N=6504						
M0. Cond. Ind.	2594.9	160	0.000	22.33	-	1090
M1. CnSF	182.3	140	0.009	4.43	92.97	-1046.9
M2. Unidiff	163.3	133	0.038	4.18	93.71	-1004.5
Parameters M2	*c1 = 1; c2 = 1.29; c3 = 1.20; c4 = 1.31; c5 = 1.42; c6 = 1.31; c7 = 1.50; c8= 1.59*					
M3. Unidiff Linear trend	**165.8**	**139**	**0.060**	**4.15**	**93.61**	**-1054.6**
Parameters M3	***0.0112***					
Models comparison						
M0 - M1	2412.60	20	0.000			
M1 - M2	19.00	7	0.008			
M1 - M3	16.50	1	0.000			
M3 - M2	2.50	6	0.862			
* Women, 5 cohorts mobility table N=6504						
M0. Cond. Ind.	2537.4	100	0.000	22.31	-	1659.4
M1. CnSF	111.8	80	0.011	3.92	95.59	-590.6
M2. Unidiff	98.4	76	0.043	3.65	96.12	-568.9
Parameters M2	*c1 = 1; c2 = 1.04; c3 = 1.12; c4 = 1.18; c5= 1.31*					
M3. Unidiff Linear trend	**99.7**	**79**	**0.058**	**3.67**	**96.07**	**-594**
Parameters M3	***0.0080***					
Models comparison						
M0 - M1	2425.60	20	0.000			
M1 - M2	13.40	4	0.009			
M1 - M3	12.10	1	0.000			
M3 - M2	1.30	3	0.745			

Notes: Cond Ind=conditional independence model; CnSF=constant social fluidity model (the model which assumes the ED association to be constant); Unidiff=uniform difference model (the model which assumes the ED association changed). G2=deviance, Df=degree of freedom, P=p-value, DI=dissimilarity index, %G2=proportion of reduction of deviance, BIC=Bayesian information criterion. On the parameters lines, c1 to c5/c8 refer to corresponding birth-cohorts. *To be significant, each new effect added into a model is compared to previous nested model and should exhibit a p-value below 0.05 (see models comparison panels)*

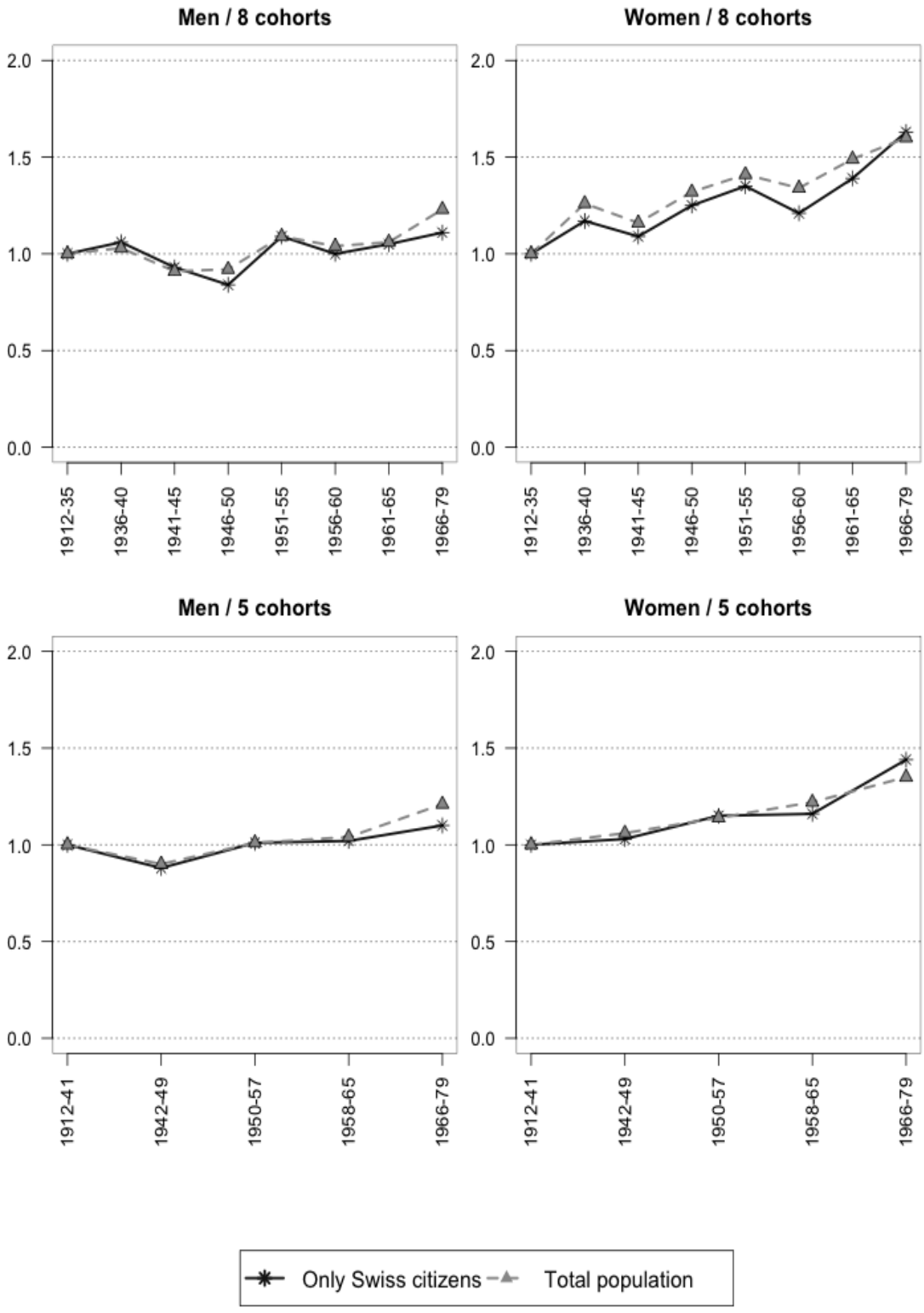

Figure D.5: Plots of parameters of the different Unidiff models fitted on men and women return to education tables, divided into eight cohorts and five cohorts on the total population and only on Swiss citizens.

Table D.4: Parameters detail of best log-linear models fitted for the return to education tables expressed in exp beta scale.

	Men							Women						
	D1	D2	D3	D4	D5	D6	D7	D1	D2	D3	D4	D5	D6	D7
Return to education	*Model M2 (Unidiff)*							*Model M3 (Unidiff linear trend)*						
1. Compulsory education	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2. Secondary general education	13.2	12.7	4.3	2.9	1.6	0.7	1.0	13.8	19.5	9.9	3.4	2.5	2.5	1.0
3. Secondary professional education	5.2	5.1	3.5	3.1	2.1	2.0	1.0	4.6	6.8	4.1	3.3	2.7	2.8	1.0
4. Tertiary vocational education	104.2	57.2	11.6	11.8	2.7	2.3	1.0	49.5	41.9	11.9	8.1	3.8	1.4	1.0
5. Tertiary general education	556.4	140.9	9.9	7.4	3.6	0.3	1.0	152.3	45.7	6.0	6.7	1.8	1.5	1.0
Return to education (excluding D4)	*Model M3 (Unidiff linear trend)*							*Model M3 (Unidiff linear trend)*						
1. Compulsory education	1.0	1.0	1.0	-	1.0	1.0	1.0	1.0	1.0	1.0	-	1.0	1.0	1.0
2. Secondary general education	10.0	9.7	3.6	-	1.5	0.8	1.0	14.5	20.7	10.4	-	2.5	2.5	1.0
3. Secondary professional education	4.3	4.3	3.1	-	2.0	1.8	1.0	4.7	7.1	4.2	-	2.8	2.8	1.0
4. Tertiary vocational education	64.7	38.4	9.1	-	2.5	2.2	1.0	53.3	45.2	12.6	-	3.9	1.4	1.0
5. Tertiary general education	295.7	88.0	8.0	-	3.0	0.3	1.0	169.9	49.6	6.3	-	1.8	1.5	1.0

Notes: D1=Higher salariat; D2=Lower salariat; D3=Intermediate employee; D4=Small employers / self-employed; D5=Lower white collar; D6=Skilled manual; D7=Semi-/unskilled.

Table D.5: Log-linear models tested on the COED table, fitted on men and women mobility tables.

Model	Men (N=6954)				Women (N=6368)			
	DF	L2	P	BIC	DF	L2	P	BIC
M1.COE CD	1020	4495.8	0.0000	-4528.22	1020	3503.9	0.0000	-5430.36
M2.COE CD OD	984	3442.5	0.0000	-5263.05	984	2929.1	0.0000	-5689.76
M3.COE CD ED	996	1656.5	0.0000	-7255.16	996	1247.0	0.0000	-7476.98
M4.COE CD OD ED	960	1210.6	0.0000	-7282.59	960	1081.4	0.0037	-7327.26
M4a.COE CD βcOD ED	956	1204.3	0.0000	-7253.53	956	1071.8	0.0052	-7301.88
M4b.COE CD OD βcED	956	1195.1	0.0000	-7262.71	956	1068.4	0.0064	-7305.26
M4c.COE CD βeOD ED	956	1190.3	0.0000	-7267.46	956	1069.5	0.1271	-7304.17
M5a.COE CD βcOD βcED	952	1188.7	0.0000	-7233.69	952	1059.4	0.0084	-7279.18
M5b.COE CD βeOD βcED	**952**	**1173.7**	**0.0000**	**-7248.68**	**952**	**1056.0**	**0.0103**	**-7282.60**
M5c.COE CD βeβcOD ED	952	1180.8	0.0000	-7241.63	952	1062.3	0.0071	-7276.29
M6.COE CD βeβcOD βcED	948	1164.5	0.0000	-7222.55	948	1049.8	0.0014	-7253.73
Models comparison								
M1-M2	36	1053.3	0.0000		36	574.8	0.0000	
M1-M3	24	2839.3	0.0000		24	2256.9	0.0000	
M2-M4	24	2231.9	0.0000		24	1847.7	0.0000	
M3-M4	36	445.9	0.0000		36	165.6	0.0000	
M4-M4a	4	6.3	0.1754		4	9.6	0.0466	
M4-M4b	4	15.5	0.0038		4	13.0	0.0111	
M4-M4c	4	20.3	0.0004		4	11.9	0.0178	
M4a-M5a	4	15.6	0.0037		4	12.4	0.0150	
M4a-M5c	4	23.5	0.0001		4	9.5	0.0508	
M4b-M5a	4	6.4	0.1733		4	9.0	0.0623	
M4b-M5c	4	21.4	0.0003		4	12.4	0.0148	
M4c-M5b	4	16.6	0.0023		4	13.5	0.0092	
M4c-M5c	4	9.5	0.0494		4	7.2	0.1275	
M5a-M6	4	24.2	0.0001		4	9.6	0.0481	
M5b-M6	4	9.2	0.0549		4	6.2	0.1874	
M5c-M6	4	16.3	0.0026		4	12.5	0.0142	

Notes: COE CD=conditional independence model; each model with a β indicates a Unidiff effect (i.e. a change in the concerned association). G2=deviance, Df=degree of freedom, P=p-value, BIC=Bayesian information criterion. *To be significant, each new effect added into a model is compared to previous nested model and should exhibit a p-value below 0.05 (see models comparison panels)*

Unidiff parameters are displayed next page

Table D.5 continued

	Men (N=6954)				Women (N=6368)			
Parameters								
βcOD	**M4a**	**M5a**	**M5c**	**M6**	**M4a**	**M5a**	**M5c**	**M6**
1912-1941	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1942-1949	1.17	1.19	1.21	1.22	0.52	0.55	0.68	0.70
1950-1957	0.87	0.87	1.03	1.02	0.68	0.68	0.84	0.83
1958-1965	1.21	1.20	1.27	1.27	0.46	0.45	0.66	0.65
1966-1979	1.19	1.15	1.26	1.23	0.88	0.85	0.97	0.94
βcED	**M4b**	**M5a**	**M5b**	**M6**	**M4b**	**M5a**	**M5b**	**M6**
1912-1941	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1942-1949	0.89	0.88	0.90	0.88	1.03	1.06	1.04	1.06
1950-1957	1.02	1.02	1.03	1.03	1.14	1.15	1.15	1.16
1958-1965	1.04	1.03	1.05	1.03	1.17	1.20	1.18	1.20
1966-1979	1.21	1.20	1.24	1.22	1.33	1.34	1.35	1.35
βcOD	**M4c**	**M5b**	**M5c**	**M6**	**M4c**	**M5b**	**M5c**	**M6**
1912-1941	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1942-1949	0.51	0.66	0.56	0.41	0.63	0.60	0.70	0.74
1950-1957	0.65	0.51	0.41	0.57	0.61	0.61	0.76	0.70
1958-1965	0.55	0.55	0.44	0.44	0.82	0.81	0.83	0.84
1966-1979	0.31	0.29	0.14	0.13	0.17	0.16	0.35	0.36

Notes: Unidiff parameters for each model tested.

E. Appendix E

The core model of social fluidity : An overview

As underlined by Hout and DiPrete in their review of the most eminent research from the RC28[41], the finding by Erikson and Goldthorpe (1992b) of a common pattern in social fluidity is acknowledged as being "the major intellectual accomplishment of the RC" (Hout and DiPrete 2006:5). It further brought empirical support on the theoretical ground to the FJH hypothesis of basic cross-national similarity in the patterns of social mobility in industrial societies with a market economy and a nuclear family system (Featherman et al. 1975:340). They were able to reach these conclusions by designing what is known under technical terms as the "model of core social fluidity".

The basic idea of this model is to partition a mobility table into different levels of (net) association between social origin and social destination in order to find a general pattern of social mobility. Some regions of the table are expected to have a positive association, while others, a negative association. This model can be defined as a sophisticated specification of topological log-linear models – models that were introduced to social mobility research in the late 1970s by Hauser (1978). It is a more sophisticated topological log-linear model first in that Erikson and Goldthorpe rely on theoretical rationale to construct the model rather than on *ad hoc* criteria to fit the data, and second in that they define several level matrices rather than a single matrix to capture the different levels of association within the mobility table. This refinement of topological log-linear models enables them to specify each matrices "*in a theoretically informed way, in order to capture a specific effect exerted on the pattern of relative rates*" of social mobility (Erikson and Goldthorpe 1992b:122 emphasis in original).

The theoretical rationale on which they base the design of the matrices of the core model of social fluidity stems from three general considerations:

(1) "the relative desirability of different class positions, considered as destinations,

(2) the relative advantages afforded to individuals by different class origins – in the form of economic, cultural, and social resources;

(3) the relative barriers that face individuals in gaining access to different class positions – which may be thought of in terms of requirements corresponding to the resources indicated under (2): for example, requirement for capital, qualifications, 'knowing people', etc." (Erikson and Goldthorpe 1992b:122–123).

From these considerations, they designed eight matrices capturing different levels of the four following effects to describe social fluidity: hierarchy, inheritance, sector and affinity. *Hierarchy*

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effects represent the most salient hierarchical aspects of the class structure. From the division of the class schema, they define two hierarchy matrices by distinguishing short-range vertical movement (HI1) first and long-range vertical movement (HI2) subsequently. *Inheritance effects* specify the likelihood of individuals to be found in the same class position as that of their father. Three inheritance effects are described: the first effect places all cells of the main diagonal of the mobility table under one single parameter (IN1); the second effect further specifies that inheritance must be more pronounced in certain classes, namely the salariat, the petite bourgeoisie and the farmer classes (IN2). Finally, the third effect further isolates reproduction within the class of farmers, in which inheritance is expected to be particularly high (IN3). The *sector effect* (SE) separates mobility between primary sector classes from other sector classes – namely, in the EGP class schema between the class of farmers (IVc) and the class of routine agricultural workers (VIIb) from other ones. Finally, *affinity* is divided between negative affinity (AF1) and positive affinity (AF2). Within the former, mobility is expected to be particularly unlikely between the salariat class and the routine agricultural worker class. In contrast, in the latter, mobility is expected to be particularly significant between (1) the white collar and the petite bourgeoisie classes, as well as the salariat class; (2) the petite bourgeoisie class and the farmer class; (3) the routine non-agricultural workers class and the skilled-manual workers class; (4) finally, children of skilled-manual workers and of routine agricultural workers are expected to be particularly mobile within the routine non-agricultural class. Details of all these effects can be found in Table F.5 in Appendix F.

In the end, these eight matrices proved to adequately describe the pattern of social mobility in all the countries of their research, although they recognise that "significant cross-national differences in fluidity do occur" (Erikson and Goldthorpe 1992b:173), Germany being the most deviant country from the overall pattern. Yet overall observations led them to claim that their findings did support the FJH hypothesis of basic cross-national similarity in social fluidity patterns.

F. Appendix F

Complementary information on Chapter 7 .:Barriers to social mobility in Switzerland: finding the Swiss pattern of social mobility and disaggregating the big service class in social mobility analysis

Table F.1: Recap of all effects tested for each models of Tables 7.3 and 7.4

model	effects
M2a	HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 + AF2
M2b	HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 G + AF2
M2c	HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 + AF2 G
M2d	HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 G + AF2 G
M2e	HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 S + AF2
M2f	HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 + AF2 S
M2g	HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 S + AF2 S
M3a	HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 Ga + AF2
M3b	HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 Gb + AF2
M3c	HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 Gc + AF2
M3d	HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 Gd + AF2
M3e	HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 Ge + AF2
M3f	HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 Gd + AF2a
M3g	HI1 + HI2 + IN1 + IN2 + IN3 + SE + AF1 Gd + AF2b

Table F.2: Recap of all effects tested for each models of Tables 7.7 and 7.8

model	effects
M2	HI1 + HI2 + IN1 + IN2 + IN3 + AF1 + AF2
M3	HI1 + HI2 + IN1 + IN2 + IN3 + AF1 Gd + AF2a
M4a	HI1 + HI2 + IN1oe + IN2 + IN3 + AF1 Gd + AF2a
M4b	HI1 + HI2 + IN1oe + IN2oe1 + IN3 + AF1 Gd + AF2a
M4c	HI1 + HI2 + IN1oe + IN2oe2 + IN3 + AF1 Gd + AF2a
M4d	HI1 + HI2 + IN1oe + IN2oe2 + IN3oe + AF1 Gd + AF2a
M4e	HI1 + HI2 + IN1oe + IN2oe2 + IN3 + SEoe + AF1 Gd + AF2a
M4f	HI1 + HI2 + IN1oe + IN2oe2 + IN3 + SEoe + AF1 Gd + AF2oe1
M4g	HI1 + HI2 + IN1oe + IN2oe2 + IN3 + SEoe + AF1 Gd + AF2oe2
M4h	HI1 + HI2 + IN1oe + IN2oe2 + IN3 + SEoe + AF1 Gd + AF2oe3
M4i	HI1 + HI2 + IN1oe + IN2oe2 + IN3 + SEoe + AF1 Gd + AF2oe4
M4j	HI1 + HI2 + IN1oe + IN2oe2 + IN3 + SEoe + AF1oe1 + AF2oe4
M4k	HI1 + HI2 + IN1oe + IN2oe2 + IN3 + SEoe + AF1oe2 + AF2oe4
M4l	HI1 + HI2 + IN1oe + IN2oe2 + IN3 + SEoe + AF1oe3 + AF2oe4

Table F.3: Detail and meaning of effects for models fitted on tables 7.3 and 7.4

Effect name	**Meaning of effect**
HI1 – hierarchy 1	Unlikely short range mobility between [the service class] and [the routine non-manual workers + petty bourgeoisie + skilled workers] and [farmers + the non-skilled workers + agricultural labourers]
HI2 – hierarchy 2	Unlikely long range mobility between [the service class] and [farmers + the non-skilled workers + agricultural labourers]
IN1 – inheritance 1	Immobility in all cases of the main diagonal
IN2 – inheritance 2	Immobility in service class, petty bourgeoisie and farmers
IN2 G – inheritance 2 Germany	Immobility in petty bourgeoisie and farmers
IN3 – inheritance 3	Immobility in farmers
SE – sector	Lower propensity for classes from primary sector (farmers and agricultural labourers) to move into other sectors
AF1 – negative affinity	Unlikely mobility between agricultural labourers and the service class (symmetric effect)
AF1 G – negative affinity Germany	Unlikely mobility (i) for children of [skilled workers sons + agricultural labourers] into [the service class + the routine non-manual workers class + the petty bourgeoisie]; (ii) for children of [the service class] to move downwardly into [the agricultural labourers class].
AF1 S – negative affinity Switzerland men (Jacot 2013)	Unlikely mobility (i) for sons of [petty bourgeoisie + farmers] into [the service class]; (ii) for sons of [non-skilled workers + agricultural labourers] into [petty bourgeoisie + farmers]; (iii) for sons of [service class] into [the skilled workers + non-skilled workers + agricultural labourers]
AF1 S – negative affinity Switzerland women (Jacot 2013)	Unlikely mobility (i) for daughters of [skilled workers] into [the service class]; (ii) for daughters of [non-skilled workers + agricultural labourers] into [petty bourgeoisie + farmers]; (iii) for daughters of [service class] into [the skilled workers + non-skilled workers + agricultural labourers]
AF2 – positive affinity	Likely mobility (i) between [routine non-manual workers + petty bourgeoisie] and [the service class] (symmetric effect); (ii) between [petty bourgeoisie] and [farmers] (symmetric effect); (iii) between [skilled workers] and [non-skilled workers] (symmetric effect); (iv) for sons of [farmers + agricultural labourers] into the [non-skilled workers].
AF2 G – positive affinity Germany	Likely mobility in addition to effects specified in AF2 between [petty bourgeoisie] and [routine non-manual workers] (symmetric effect).
AF2 S – positive affinity Switzerland men (Jacot 2013)	Likely mobility (i) for sons of [service class] into [the petty bourgeoisie + farmers], (ii) for sons of [petty bourgeoisie + farmers] into [the non-skilled workers + agricultural labourers]; (iii) for sons of [non-skilled workers + agricultural labourers] into [the skilled workers].
AF2 S – positive affinity Switzerland women (Jacot 2013)	Likely mobility (i) for daughters of [service class] into [the routine non-manual workers]; (ii) daughters of [routine non-manual workers] into [the petty bourgeoisie + farmers]; (iii) daughters of [petty bourgeoisie + farmers] into [the non-skilled workers + agricultural labourers]

Table continued next page

Table F.3 continued

Effect name	**Meaning of effect**
AF1 Ga – negative affinity Germany adaptation "a"	Unlikely mobility between [skilled workers + agricultural labourers] into [the service class + the routine non-manual workers class + the petty bourgeoisie] (symmetric effect).
AF1 Gb – negative affinity Germany adaptation "b"	In addition to AF1 Ga, unlikely mobility for children of [service class] into [the skilled workers].
AF1 Gc – negative affinity Germany adaptation "c"	In addition to AF1 Ga, unlikely mobility between [the service class] and [the skilled workers] (symmetric effect)
AF1 Gd – negative affinity Germany adaptation "d" (*AF1 CH*)	In addition to AF1 Gb, unlikely mobility for children of [farmers] into [the service class + routine non-manual workers]. → *AF1 CH = Unlikely mobility (i) between [skilled workers + agricultural labourers] into [the service class + the routine non-manual workers class + the petty bourgeoisie] (symmetric effect); (ii) for children of [service class] into [the skilled workers]; (iii) for children of [farmers] into the [service class + routine non-manual workers].*
AF1 Gd – negative affinity Germany adaptation "d"	In addition to AF1 Gb, unlikely mobility between [farmers] into [the service class + routine non-manual workers] (symmetric effect)
AF2a – positive affinity adaptation "a" (*AF2 CH*)	In addition to AF2, likely mobility for children of [farmers] into [the skilled workers]. → *AF2 CH = Likely mobility (i) between [routine non-manual workers + petty bourgeoisie] and [the service class] (symmetric effect); (ii) between [petty bourgeoisie] and [farmers] (symmetric effect); (iii) for children of [farmers] into [the skilled workers].*
AF2b – positive affinity adaptation "b"	In addition to AF2, likely mobility between farmers and the skilled workers (symmetric effect)

Table F.4: Detail and meaning of effects for models fitted on tables 7.7 and 7.8

Effect name	**Meaning of effect**
IN1oe – inheritance 1 adaptation "Oesch"	Immobility in all cases of the main diagonal with Oesch classes
IN2oe1 – inheritance 2 adaptation "Oesch 1"	Immobility in each of Oesch's service class, and in the petty bourgeoisie
IN2oe2 – inheritance 2 adaptation "Oesch 2"	Immobility in traditional bourgeoisie, socio-cultural specialists and in the petty bourgeoisie
IN3oe – inheritance 3 adaptation "Oesch"	Immobility in the petty bourgeoisie
SEoe – sector adaptation "Oesch" → independent work logic	Lower propensity for classes with an independent work logic (traditional bourgeoisie and petty bourgeoisie) to move into classes with other work logics
AF2oe1 – positive affinity adaptation "Oesch 1"	Likely mobility for children of [office clerks + service workers + petite bourgeoisie + skilled crafts] into [technical specialists + managers]
AF2oe2 – positive affinity adaptation "Oesch 2"	In addition to AF2oe1, likely mobility (i) for children of [technical specialists + managers] into [traditional bourgeoisie + socio-cultural specialists]; (ii) between managers and technical specialists (symmetric effect).
AF2oe3 – positive affinity adaptation "Oesch 3"	In addition to AF2oe2, likely mobility for children of [traditional bourgeoisie + socio-cultural specialists] into [petty bourgeoisie]
AF2oe4 – positive affinity adaptation "Oesch 4"	In addition to AF2oe3, likely mobility between [traditional bourgeoisie] and [socio-cultural specialists] (symmetric effect)
AF1oe1 – negative affinity adaptation "Oesch 1"	Unlikely mobility (i) between routine class with all other classes except skilled crafts (symmetric effect); (ii) for children of any of the four service class fractions into the skilled crafts; (iii) for children of traditional bourgeoisie into [technical specialists + managers + office clerks + service workers]
AF1oe2 – negative affinity adaptation "Oesch 2"	In addition to AF1oe1, unlikely mobility for children of socio-cultural specialists into [office clerks + service workers].
AF1oe3 – negative affinity adaptation "Oesch 3"	In addition to AF1oe2, unlikely mobility for children of skilled crafts into traditional bourgeoisie

Table F.5: Matrices of topological log-linear models

HI1 effect (Hierarchy 1)

EGP classes

	G1	G2	G3	G4	G5	G6	G7
G1	0	1	1	1	1	1	1
G2	1	0	0	0	0	1	1
G3	1	0	0	0	0	1	1
G4	1	1	1	1	1	0	0
G5	1	0	0	0	0	1	1
G6	1	1	1	1	1	0	0
G7	1	1	1	1	1	0	0

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	0	1	1	1	1	1
E2	1	0	0	0	0	1
E3	1	0	0	0	0	1
E4	1	1	1	1	1	0
E5	1	0	0	0	0	1
E6	1	1	1	1	1	0

Oesch classes

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	0	0	0	0	1	1	1	1	1
Oe2	0	0	0	0	1	1	1	1	1
Oe3	0	0	0	0	1	1	1	1	1
Oe4	0	0	0	0	1	1	1	1	1
Oe5	1	1	1	1	0	0	0	0	1
Oe6	1	1	1	1	0	0	0	0	1
Oe7	1	1	1	1	0	0	0	0	1
Oe8	1	1	1	1	0	0	0	0	1
Oe9	1	1	1	1	1	1	1	1	0

HI2 effect (Hierarchy 2)

EGP classes

	G1	G2	G3	G4	G5	G6	G7
G1	0	0	0	0	0	1	1
G2	0	0	0	0	0	0	0
G3	0	0	0	0	0	0	0
G4	1	0	0	0	0	0	0
G5	0	0	0	0	0	0	0
G6	1	0	0	0	0	0	0
G7	1	0	0	0	0	0	0

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	0	0	0	0	0	1
E2	0	0	0	0	0	0
E3	0	0	0	0	0	0
E4	1	0	0	0	0	0
E5	0	0	0	0	0	0
E6	1	0	0	0	0	0

Oesch classes

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	0	0	0	0	0	0	0	0	1
Oe2	0	0	0	0	0	0	0	0	0
Oe3	0	0	0	0	0	0	0	0	0
Oe4	0	0	0	0	0	0	0	0	0
Oe5	0	0	0	0	0	0	0	0	0
Oe6	0	0	0	0	0	0	0	0	0
Oe7	0	0	0	0	0	0	0	0	0
Oe8	0	0	0	0	0	0	0	0	0
Oe9	1	0	0	0	0	0	0	0	0

Note: EGP classes: G1= I+II. Service class; G2= III. Routine non-manual workers; G3= IVab. Petty bourgeoisie; G4=IVc. Farmers; G5=V+VI. Skilled workers; G6= VIIa. Non-skilled workers; G7=VIIb. Agricultural labourers; ESeC classes: E1=1.Salariat; E2=2.White-collar; E3=3.Petite bourgeoisie; E4=4.Farmers; E5=5.Skilled workers; E6=6.Semi-/unskilled; Oesch classes: Oe1=1.Traditional bourgeoisie; Oe2= 2.Technical specialists; Oe3= 3.Managers; Oe4= 4.Socio-cultural specialists; Oe5= 5.Office clerks; Oe6= 6.Service worker; Oe7= 7.Petite bourgeoisie; Oe8= 8.Skilled crafts; Oe9= 9.Routine.

IN1 effect (Inheritance 1)

EGP classes

	G1	G2	G3	G4	G5	G6	G7
G1	1	0	0	0	0	0	0
G2	0	1	0	0	0	0	0
G3	0	0	1	0	0	0	0
G4	0	0	0	1	0	0	0
G5	0	0	0	0	1	0	0
G6	0	0	0	0	0	1	0
G7	0	0	0	0	0	0	1

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	1	0	0	0	0	0
E2	0	1	0	0	0	0
E3	0	0	1	0	0	0
E4	0	0	0	1	0	0
E5	0	0	0	0	1	0
E6	0	0	0	0	0	1

Oesch classes

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	1	1	1	1	0	0	0	0	0
Oe2	1	1	1	1	0	0	0	0	0
Oe3	1	1	1	1	0	0	0	0	0
Oe4	1	1	1	1	0	0	0	0	0
Oe5	0	0	0	0	1	1	0	0	0
Oe6	0	0	0	0	1	1	0	0	0
Oe7	0	0	0	0	0	0	1	0	0
Oe8	0	0	0	0	0	0	0	1	0
Oe9	0	0	0	0	0	0	0	0	1

IN2 effect (Inheritance 2)

EGP classes

	G1	G2	G3	G4	G5	G6	G7
G1	1	0	0	0	0	0	0
G2	0	0	0	0	0	0	0
G3	0	0	1	0	0	0	0
G4	0	0	0	1	0	0	0
G5	0	0	0	0	0	0	0
G6	0	0	0	0	0	0	0
G7	0	0	0	0	0	0	0

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	1	0	0	0	0	0
E2	0	0	0	0	0	0
E3	0	0	1	0	0	0
E4	0	0	0	1	0	0
E5	0	0	0	0	0	0
E6	0	0	0	0	0	0

Oesch classes

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	1	1	1	1	0	0	0	0	0
Oe2	1	1	1	1	0	0	0	0	0
Oe3	1	1	1	1	0	0	0	0	0
Oe4	1	1	1	1	0	0	0	0	0
Oe5	0	0	0	0	0	0	0	0	0
Oe6	0	0	0	0	0	0	0	0	0
Oe7	0	0	0	0	0	0	1	0	0
Oe8	0	0	0	0	0	0	0	0	0
Oe9	0	0	0	0	0	0	0	0	0

Note: EGP classes: G1= I+II. Service class; G2= III. Routine non-manual workers; G3= IVab. Petty bourgeoisie; G4=IVc. Farmers; G5=V+VI. Skilled workers; G6= VIIa. Non-skilled workers; G7=VIIb. Agricultural labourers; ESeC classes: E1=1.Salariat; E2=2.White-collar; E3=3.Petite bourgeoisie; E4=4.Farmers; E5=5.Skilled workers; E6=6.Semi-/unskilled; Oesch classes: Oe1=1.Traditional bourgeoisie; Oe2= 2.Technical specialists; Oe3= 3.Managers; Oe4= 4.Socio-cultural specialists; Oe5= 5.Office clerks; Oe6= 6.Service worker; Oe7= 7.Petite bourgeoisie; Oe8= 8.Skilled crafts; Oe9= 9.Routine.

IN2 G effect (Inheritance 2 Germany)

EGP classes

	G1	G2	G3	G4	G5	G6	G7
G1	**0**	0	0	0	0	0	0
G2	0	0	0	0	0	0	0
G3	0	0	1	0	0	0	0
G4	0	0	0	1	0	0	0
G5	0	0	0	0	0	0	0
G6	0	0	0	0	0	0	0
G7	0	0	0	0	0	0	0

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	**0**	0	0	0	0	0
E2	0	0	0	0	0	0
E3	0	0	1	0	0	0
E4	0	0	0	1	0	0
E5	0	0	0	0	0	0
E6	0	0	0	0	0	0

IN3 effect (Inheritance 3)

EGP classes

	G1	G2	G3	G4	G5	G6	G7
G1	0	0	0	0	0	0	0
G2	0	0	0	0	0	0	0
G3	0	0	0	0	0	0	0
G4	0	0	0	1	0	0	0
G5	0	0	0	0	0	0	0
G6	0	0	0	0	0	0	0
G7	0	0	0	0	0	0	0

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	0	0	0	0	0	0
E2	0	0	0	0	0	0
E3	0	0	1	0	0	0
E4	0	0	0	0	0	0
E5	0	0	0	0	0	0
E6	0	0	0	0	0	0

Oesch classes

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	0	0	0	0	0	0	0	0	0
Oe2	0	0	0	0	0	0	0	0	0
Oe3	0	0	0	0	0	0	0	0	0
Oe4	0	0	0	0	0	0	0	0	0
Oe5	0	0	0	0	0	0	0	0	0
Oe6	0	0	0	0	0	0	0	0	0
Oe7	0	0	0	0	0	0	1	0	0
Oe8	0	0	0	0	0	0	0	0	0
Oe9	0	0	0	0	0	0	0	0	0

Note: EGP classes: G1= I+II. Service class; G2= III. Routine non-manual workers; G3= IVab. Petty bourgeoisie; G4=IVc. Farmers; G5=V+VI. Skilled workers; G6= VIIa. Non-skilled workers; G7=VIIb. Agricultural labourers; ESeC classes: E1=1.Salariat; E2=2.White-collar; E3=3.Petite bourgeoisie; E4=4.Farmers; E5=5.Skilled workers; E6=6.Semi-/unskilled; Oesch classes: Oe1=1.Traditional bourgeoisie; Oe2= 2.Technical specialists; Oe3= 3.Managers; Oe4= 4.Socio-cultural specialists; Oe5= 5.Office clerks; Oe6= 6.Service worker; Oe7= 7.Petite bourgeoisie; Oe8= 8.Skilled crafts; Oe9= 9.Routine.

SE effect (Sector)

EGP classes

	G1	G2	G3	G4	G5	G6	G7
G1	0	0	0	1	0	0	1
G2	0	0	0	1	0	0	1
G3	0	0	0	1	0	0	1
G4	1	1	1	0	1	1	0
G5	0	0	0	1	0	0	1
G6	0	0	0	1	0	0	1
G7	1	1	1	0	1	1	0

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	0	0	0	1	0	0
E2	0	0	0	1	0	0
E3	0	0	0	1	0	0
E4	1	1	1	0	1	0
E5	0	0	0	1	0	0
E6	0	0	0	0	0	0

Note: here sector effect is only specified for farmers (E4) while no effect is specified within the semi-/unskilled class (E6).

AF1 effect (Affinity 1)

EGP classes

	G1	G2	G3	G4	G5	G6	G7
G1	0	0	0	0	0	0	1
G2	0	0	0	0	0	0	0
G3	0	0	0	0	0	0	0
G4	0	0	0	0	0	0	0
G5	0	0	0	0	0	0	0
G6	0	0	0	0	0	0	0
G7	1	0	0	0	0	0	0

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	0	0	0	0	0	1
E2	0	0	0	0	0	0
E3	0	0	0	0	0	0
E4	0	0	0	0	0	0
E5	0	0	0	0	0	0
E6	1	0	0	0	0	0

Oesch classes

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	0	0	0	0	0	0	0	0	1
Oe2	0	0	0	0	0	0	0	0	0
Oe3	0	0	0	0	0	0	0	0	0
Oe4	0	0	0	0	0	0	0	0	0
Oe5	0	0	0	0	0	0	0	0	0
Oe6	0	0	0	0	0	0	0	0	0
Oe7	0	0	0	0	0	0	0	0	0
Oe8	0	0	0	0	0	0	0	0	0
Oe9	1	0	0	0	0	0	0	0	0

Note: EGP classes: G1= I+II. Service class; G2= III. Routine non-manual workers; G3= IVab. Petty bourgeoisie; G4=IVc. Farmers; G5=V+VI. Skilled workers; G6= VIIa. Non-skilled workers; G7=VIIb. Agricultural labourers; ESeC classes: E1=1.Salariat; E2=2.White-collar; E3=3.Petite bourgeoisie; E4=4.Farmers; E5=5.Skilled workers; E6=6.Semi-/unskilled; Oesch classes: Oe1=1.Traditional bourgeoisie; Oe2= 2.Technical specialists; Oe3= 3.Managers; Oe4= 4.Socio-cultural specialists; Oe5= 5.Office clerks; Oe6= 6.Service worker; Oe7= 7.Petite bourgeoisie; Oe8= 8.Skilled crafts; Oe9= 9.Routine.

AF1 G effect (Affinity 1 Germany)

EGP classes

	G1	G2	G3	G4	G5	G6	G7
G1	0	0	0	0	0	0	1
G2	0	0	0	0	0	0	0
G3	0	0	0	0	0	0	0
G4	0	0	0	0	0	0	0
G5	0	0	0	0	0	0	0
G6	**1**	**1**	**1**	0	0	0	0
G7	1	**1**	**1**	0	0	0	0

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	0	0	0	0	0	1
E2	0	0	0	0	0	0
E3	0	0	0	0	0	0
E4	0	0	0	0	0	0
E5	0	0	0	0	0	0
E6	1	**1**	**1**	0	0	0

AF2 effect (Affinity 2)

EGP classes

	G1	G2	G3	G4	G5	G6	G7
G1	0	1	1	0	0	0	0
G2	1	0	0	0	0	0	0
G3	1	0	0	1	0	0	0
G4	0	0	1	0	0	1	0
G5	0	0	0	0	0	1	0
G6	0	0	0	0	1	0	0
G7	0	0	0	0	0	1	0

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	0	1	1	0	0	0
E2	1	0	0	0	0	0
E3	1	0	0	1	0	0
E4	0	0	1	0	0	0
E5	0	0	0	0	0	0
E6	0	0	0	0	0	0

Note: Semi-/unskilled (E6) converted as "agricultural labourers" (G7).

Oesch classes

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	0	0	0	0	1	1	1	0	0
Oe2	0	0	0	0	1	1	1	0	0
Oe3	0	0	0	0	1	1	1	0	0
Oe4	0	0	0	0	1	1	1	0	0
Oe5	1	1	1	1	0	0	0	0	0
Oe6	1	1	1	1	0	0	0	0	0
Oe7	1	1	1	1	0	0	0	0	0
Oe8	0	0	0	0	0	0	0	0	0
Oe9	0	0	0	0	0	0	0	0	0

Note: EGP classes: G1= I+II. Service class; G2= III. Routine non-manual workers; G3= IVab. Petty bourgeoisie; G4=IVc. Farmers; G5=V+VI. Skilled workers; G6= VIIa. Non-skilled workers; G7=VIIb. Agricultural labourers; ESeC classes: E1=1.Salariat; E2=2.White-collar; E3=3.Petite bourgeoisie; E4=4.Farmers; E5=5.Skilled workers; E6=6.Semi-/unskilled; Oesch classes: Oe1=1.Traditional bourgeoisie; Oe2= 2.Technical specialists; Oe3= 3.Managers; Oe4= 4.Socio-cultural specialists; Oe5= 5.Office clerks; Oe6= 6.Service worker; Oe7= 7.Petite bourgeoisie; Oe8= 8.Skilled crafts; Oe9= 9.Routine.

AF2 G effect (Affinity 2 Germany)

EGP classes

	G1	G2	G3	G4	G5	G6	G7
G1	0	1	1	0	0	0	0
G2	1	0	**1**	0	0	0	0
G3	1	**1**	0	1	0	0	0
G4	0	0	1	0	0	1	0
G5	0	0	0	0	0	1	0
G6	0	0	0	0	1	0	0
G7	0	0	0	0	0	1	0

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	0	1	1	0	0	0
E2	1	0	**1**	0	0	0
E3	1	**1**	0	1	0	0
E4	0	0	1	0	0	0
E5	0	0	0	0	0	0
E6	0	0	0	0	0	0

Note: Semi-/unskilled (E6) converted as "agricultural labourers" (G7).

AF1 S effect (Affinity 1 Switzerland - men)

EGP classes

	G1	G2	G3	G4	G5	G6	G7
G1	0	0	0	0	1	1	1
G2	0	0	0	0	0	0	0
G3	1	0	0	0	0	0	0
G4	1	0	0	0	0	0	0
G5	0	0	0	0	0	0	0
G6	0	0	1	1	0	0	0
G7	0	0	1	1	0	0	0

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	0	0	0	0	1	1
E2	0	0	0	0	0	0
E3	1	0	0	0	0	0
E4	1	0	0	0	0	0
E5	0	0	0	0	0	0
E6	0	0	1	1	0	0

Note: in the original core S model the Petty bourgeoisie and the farmers categories were merged (G3 & G4). We disaggregated them here for sake of comparability.

Note: EGP classes: G1= I+II. Service class; G2= III. Routine non-manual workers; G3= IVab. Petty bourgeoisie; G4=IVc. Farmers; G5=V+VI. Skilled workers; G6= VIIa. Non-skilled workers; G7=VIIb. Agricultural labourers; ESeC classes: E1=1.Salariat; E2=2.White-collar; E3=3.Petite bourgeoisie; E4=4.Farmers; E5=5.Skilled workers; E6=6.Semi-/unskilled; Oesch classes: Oe1=1.Traditional bourgeoisie; Oe2= 2.Technical specialists; Oe3= 3.Managers; Oe4= 4.Socio-cultural specialists; Oe5= 5.Office clerks; Oe6= 6.Service worker; Oe7= 7.Petite bourgeoisie; Oe8= 8.Skilled crafts; Oe9= 9.Routine.

AF1 S effect (Affinity 1 Switzerland - women)

EGP classes

	G1	G2	G3	G4	G5	G6	G7
G1	0	0	0	0	1	1	1
G2	0	0	0	0	0	0	0
G3	0	0	0	0	0	0	0
G4	0	0	0	0	0	0	0
G5	1	0	0	0	0	0	0
G6	0	0	1	1	0	0	0
G7	0	0	1	1	0	0	0

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	0	0	0	0	1	1
E2	0	0	0	0	0	0
E3	0	0	0	0	0	0
E4	0	0	0	0	0	0
E5	1	0	0	0	0	0
E6	0	0	1	1	0	0

Note: in the original core S model the Petty bourgeoisie and the farmers categories were merged (G3 & G4). We disaggregated them here for sake of comparability.

AF2 S effect (Affinity 2 Switzerland - men)

EGP classes

	G1	G2	G3	G4	G5	G6	G7
G1	0	0	1	1	0	0	0
G2	0	0	0	0	0	0	0
G3	0	0	0	0	0	1	1
G4	0	0	0	0	0	1	1
G5	0	0	0	0	0	0	0
G6	0	0	0	0	1	0	0
G7	0	0	0	0	1	0	0

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	0	0	1	1	0	0
E2	0	0	0	0	0	0
E3	0	0	0	0	0	1
E4	0	0	0	0	0	1
E5	0	0	0	0	0	0
E6	0	0	0	0	1	0

Note: in the original core S model the Petty bourgeoisie and the farmers categories were merged (G3 & G4). We disaggregated them here for sake of comparability.

Note: EGP classes: G1= I+II. Service class; G2= III. Routine non-manual workers; G3= IVab. Petty bourgeoisie; G4=IVc. Farmers; G5=V+VI. Skilled workers; G6= VIIa. Non-skilled workers; G7=VIIb. Agricultural labourers; ESeC classes: E1=1.Salariat; E2=2.White-collar; E3=3.Petite bourgeoisie; E4=4.Farmers; E5=5.Skilled workers; E6=6.Semi-/unskilled; Oesch classes: Oe1=1.Traditional bourgeoisie; Oe2= 2.Technical specialists; Oe3= 3.Managers; Oe4= 4.Socio-cultural specialists; Oe5= 5.Office clerks; Oe6= 6.Service worker; Oe7= 7.Petite bourgeoisie; Oe8= 8.Skilled crafts; Oe9= 9.Routine.

AF2 S effect (Affinity 2 Switzerland - women)

EGP classes

	G1	G2	G3	G4	G5	G6	G7
G1	0	1	0	0	0	0	0
G2	0	0	1	1	0	0	0
G3	0	0	0	0	0	1	1
G4	0	0	0	0	0	1	1
G5	0	0	0	0	0	0	0
G6	0	0	0	0	0	0	0
G7	0	0	0	0	0	0	0

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	0	1	0	0	0	0
E2	0	0	1	1	0	0
E3	0	0	0	0	0	1
E4	0	0	0	0	0	1
E5	0	0	0	0	0	0
E6	0	0	0	0	0	0

Note: in the original core S model the Petty bourgeoisie and the farmers categories were merged (G3 & G4). We disaggregated them here for sake of comparability.

AF1 CH effect (affinity 1 Switzerland – corresponding to AF1 Gd in models)

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	0	0	0	0	**1**	1
E2	0	0	0	0	0	**1**
E3	0	0	0	0	0	**1**
E4	**1**	**1**	0	0	0	0
E5	0	0	0	0	0	0
E6	1	**1**	**1**	0	0	0

Oesch classes

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	0	0	0	0	0	0	0	1	1
Oe2	0	0	0	0	0	0	0	1	1
Oe3	0	0	0	0	0	0	0	1	1
Oe4	0	0	0	0	0	0	0	1	1
Oe5	0	0	0	0	0	0	0	0	1
Oe6	0	0	0	0	0	0	0	0	1
Oe7	0	0	0	0	0	0	0	0	1
Oe8	0	0	0	0	0	0	0	0	0
Oe9	1	1	1	1	1	1	1	0	0

Note: EGP classes: G1= I+II. Service class; G2= III. Routine non-manual workers; G3= IVab. Petty bourgeoisie; G4=IVc. Farmers; G5=V+VI. Skilled workers; G6= VIIa. Non-skilled workers; G7=VIIb. Agricultural labourers; ESeC classes: E1=1.Salariat; E2=2.White-collar; E3=3.Petite bourgeoisie; E4=4.Farmers; E5=5.Skilled workers; E6=6.Semi-/unskilled; Oesch classes: Oe1=1.Traditional bourgeoisie; Oe2= 2.Technical specialists; Oe3= 3.Managers; Oe4= 4.Socio-cultural specialists; Oe5= 5.Office clerks; Oe6= 6.Service worker; Oe7= 7.Petite bourgeoisie; Oe8= 8.Skilled crafts; Oe9= 9.Routine.

AF2 CH effect (affinity 2 Switzerland – corresponding to AF2a in models)

ESeC classes

	E1	E2	E3	E4	E5	E6
E1	0	1	1	0	0	0
E2	1	0	0	0	0	0
E3	1	0	0	1	0	0
E4	0	0	1	0	**1**	0
E5	0	0	0	0	0	0
E6	0	0	0	0	0	0

Oesch classes

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	0	0	0	0	1	1	1	0	0
Oe2	0	0	0	0	1	1	1	0	0
Oe3	0	0	0	0	1	1	1	0	0
Oe4	0	0	0	0	1	1	1	0	0
Oe5	1	1	1	1	0	0	0	0	0
Oe6	1	1	1	1	0	0	0	0	0
Oe7	1	1	1	1	0	0	0	0	0
Oe8	0	0	0	0	0	0	0	0	0
Oe9	0	0	0	0	0	0	0	0	0

Intermediate matrices with ESeC classes

AF1 Ga (model M3a)

	E1	E2	E3	E4	E5	E6
E1	0	0	0	0	0	1
E2	0	0	0	0	0	**1**
E3	0	0	0	0	0	**1**
E4	0	0	0	0	0	0
E5	0	0	0	0	0	0
E6	1	**1**	**1**	0	0	0

AF1 Gb (model M3b)

	E1	E2	E3	E4	E5	E6
E1	0	0	0	0	**1**	1
E2	0	0	0	0	0	**1**
E3	0	0	0	0	0	**1**
E4	0	0	0	0	0	0
E5	0	0	0	0	0	0
E6	1	**1**	**1**	0	0	0

AF1 Gc (model M3c)

	E1	E2	E3	E4	E5	E6
E1	0	0	0	0	**1**	1
E2	0	0	0	0	0	**1**
E3	0	0	0	0	0	**1**
E4	0	0	0	0	0	0
E5	**1**	0	0	0	0	0
E6	1	**1**	**1**	0	0	0

Note: EGP classes: G1= I+II. Service class; G2= III. Routine non-manual workers; G3= IVab. Petty bourgeoisie; G4=IVc. Farmers; G5=V+VI. Skilled workers; G6= VIIa. Non-skilled workers; G7=VIIb. Agricultural labourers; ESeC classes: E1=1.Salariat; E2=2.White-collar; E3=3.Petite bourgeoisie; E4=4.Farmers; E5=5.Skilled workers; E6=6.Semi-/unskilled; Oesch classes: Oe1=1.Traditional bourgeoisie; Oe2= 2.Technical specialists; Oe3= 3.Managers; Oe4= 4.Socio-cultural specialists; Oe5= 5.Office clerks; Oe6= 6.Service worker; Oe7= 7.Petite bourgeoisie; Oe8= 8.Skilled crafts; Oe9= 9.Routine.

Intermediate matrices with ESeC classes

AF1 Ge (model M3e)

	E1	E2	E3	E4	E5	E6
E1	0	0	0	**1**	**1**	1
E2	0	0	0	**1**	0	**1**
E3	0	0	0	0	0	**1**
E4	**1**	**1**	0	0	0	0
E5	0	0	0	0	0	0
E6	1	**1**	**1**	0	0	0

AF2b (model M3g)

	E1	E2	E3	E4	E5	E6
E1	0	1	1	0	0	0
E2	1	0	0	0	0	0
E3	1	0	0	1	0	0
E4	0	0	1	0	**1**	0
E5	0	0	0	**1**	0	0
E6	0	0	0	0	0	0

Intermediate matrices with Oesch classes

IN1_oe (model M4a)

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	1	0	0	0	0	0	0	0	0
Oe2	0	1	0	0	0	0	0	0	0
Oe3	0	0	1	0	0	0	0	0	0
Oe4	0	0	0	1	0	0	0	0	0
Oe5	0	0	0	0	1	0	0	0	0
Oe6	0	0	0	0	0	1	0	0	0
Oe7	0	0	0	0	0	0	1	0	0
Oe8	0	0	0	0	0	0	0	1	0
Oe9	0	0	0	0	0	0	0	0	1

IN2_oe1 (model M4b)

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	1	0	0	0	0	0	0	0	0
Oe2	0	1	0	0	0	0	0	0	0
Oe3	0	0	1	0	0	0	0	0	0
Oe4	0	0	0	1	0	0	0	0	0
Oe5	0	0	0	0	0	0	0	0	0
Oe6	0	0	0	0	0	0	0	0	0
Oe7	0	0	0	0	0	0	1	0	0
Oe8	0	0	0	0	0	0	0	0	0
Oe9	0	0	0	0	0	0	0	0	0

Note: EGP classes: G1= I+II. Service class; G2= III. Routine non-manual workers; G3= IVab. Petty bourgeoisie; G4=IVc. Farmers; G5=V+VI. Skilled workers; G6= VIIa. Non-skilled workers; G7=VIIb. Agricultural labourers; ESeC classes: E1=1.Salariat; E2=2.White-collar; E3=3.Petite bourgeoisie; E4=4.Farmers; E5=5.Skilled workers; E6=6.Semi-/unskilled; Oesch classes: Oe1=1.Traditional bourgeoisie; Oe2= 2.Technical specialists; Oe3= 3.Managers; Oe4= 4.Socio-cultural specialists; Oe5= 5.Office clerks; Oe6= 6.Service worker; Oe7= 7.Petite bourgeoisie; Oe8= 8.Skilled crafts; Oe9= 9.Routine

Intermediate matrices with Oesch classes

IN2_oe2 (model M4c)

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	1	0	0	0	0	0	0	0	0
Oe2	0	0	0	0	0	0	0	0	0
Oe3	0	0	0	0	0	0	0	0	0
Oe4	0	0	0	1	0	0	0	0	0
Oe5	0	0	0	0	0	0	0	0	0
Oe6	0	0	0	0	0	0	0	0	0
Oe7	0	0	0	0	0	0	1	0	0
Oe8	0	0	0	0	0	0	0	0	0
Oe9	0	0	0	0	0	0	0	0	0

IN3_oe (model M4d)

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	1	0	0	0	0	0	0	0	0
Oe2	0	0	0	0	0	0	0	0	0
Oe3	0	0	0	0	0	0	0	0	0
Oe4	0	0	0	0	0	0	0	0	0
Oe5	0	0	0	0	0	0	0	0	0
Oe6	0	0	0	0	0	0	0	0	0
Oe7	0	0	0	0	0	0	1	0	0
Oe8	0	0	0	0	0	0	0	0	0
Oe9	0	0	0	0	0	0	0	0	0

Intermediate matrices with Oesch classes

SE_oe (model M4e)

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	0	1	1	1	1	1	0	1	1
Oe2	1	0	0	0	0	0	1	0	0
Oe3	1	0	0	0	0	0	1	0	0
Oe4	1	0	0	0	0	0	1	0	0
Oe5	1	0	0	0	0	0	1	0	0
Oe6	1	0	0	0	0	0	0	0	0
Oe7	0	1	1	1	1	1	0	1	1
Oe8	1	0	0	0	0	0	1	0	0
Oe9	1	0	0	0	0	0	1	0	0

AF2_oe1 (model M4f)

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	0	0	0	0	0	0	0	0	0
Oe2	0	0	0	0	0	0	0	0	0
Oe3	0	0	0	0	0	0	0	0	0
Oe4	0	0	0	0	0	0	0	0	0
Oe5	0	1	1	0	0	0	0	0	0
Oe6	0	1	1	0	0	0	0	0	0
Oe7	0	1	1	0	0	0	0	0	0
Oe8	0	1	1	0	0	0	0	0	0
Oe9	0	0	0	0	0	0	0	0	0

Note: EGP classes: G1= I+II. Service class; G2= III. Routine non-manual workers; G3= IVab. Petty bourgeoisie; G4=IVc. Farmers; G5=V+VI. Skilled workers; G6= VIIa. Non-skilled workers; G7=VIIb. Agricultural labourers; ESeC classes: E1=1.Salariat; E2=2.White-collar; E3=3.Petite bourgeoisie; E4=4.Farmers; E5=5.Skilled workers; E6=6.Semi-/unskilled; Oesch classes: Oe1=1.Traditional bourgeoisie; Oe2= 2.Technical specialists; Oe3= 3.Managers; Oe4= 4.Socio-cultural specialists; Oe5= 5.Office clerks; Oe6= 6.Service worker; Oe7= 7.Petite bourgeoisie; Oe8= 8.Skilled crafts; Oe9= 9.Routine

Intermediate matrices with Oesch classes

AF2_oe2 (model M4g)

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	0	0	0	0	0	0	0	0	0
Oe2	1	0	1	1	0	0	0	0	0
Oe3	1	1	0	1	0	0	0	0	0
Oe4	0	0	0	0	0	0	0	0	0
Oe5	0	1	1	0	0	0	0	0	0
Oe6	0	1	1	0	0	0	0	0	0
Oe7	0	1	1	0	0	0	0	0	0
Oe8	0	1	1	0	0	0	0	0	0
Oe9	0	0	0	0	0	0	0	0	0

AF2_oe3 (model M4h)

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	0	0	0	0	0	0	1	0	0
Oe2	1	0	1	1	0	0	0	0	0
Oe3	1	1	0	1	0	0	0	0	0
Oe4	0	0	0	0	0	0	1	0	0
Oe5	0	1	1	0	0	0	0	0	0
Oe6	0	1	1	0	0	0	0	0	0
Oe7	0	1	1	0	0	0	0	0	0
Oe8	0	1	1	0	0	0	0	0	0
Oe9	0	0	0	0	0	0	0	0	0

Intermediate matrices with Oesch classes

AF2_oe4 (model M4i)

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	0	0	0	1	0	0	1	0	0
Oe2	1	0	1	1	0	0	0	0	0
Oe3	1	1	0	1	0	0	0	0	0
Oe4	1	0	0	0	0	0	1	0	0
Oe5	0	1	1	0	0	0	0	0	0
Oe6	0	1	1	0	0	0	0	0	0
Oe7	0	1	1	0	0	0	0	0	0
Oe8	0	1	1	0	0	0	0	0	0
Oe9	0	0	0	0	0	0	0	0	0

AF1_oe1 (model M4j)

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	0	1	1	0	1	1	0	1	1
Oe2	0	0	0	0	0	0	0	1	1
Oe3	0	0	0	0	0	0	0	1	1
Oe4	0	0	0	0	0	0	0	1	1
Oe5	0	0	0	0	0	0	0	0	1
Oe6	0	0	0	0	0	0	0	0	1
Oe7	0	0	0	0	0	0	0	0	1
Oe8	0	0	0	0	0	0	0	0	0
Oe9	1	1	1	1	1	1	1	0	0

Note: EGP classes: G1= I+II. Service class; G2= III. Routine non-manual workers; G3= IVab. Petty bourgeoisie; G4=IVc. Farmers; G5=V+VI. Skilled workers; G6= VIIa. Non-skilled workers; G7=VIIb. Agricultural labourers; ESeC classes: E1=1.Salariat; E2=2.White-collar; E3=3.Petite bourgeoisie; E4=4.Farmers; E5=5.Skilled workers; E6=6.Semi-/unskilled; Oesch classes: Oe1=1.Traditional bourgeoisie; Oe2= 2.Technical specialists; Oe3= 3.Managers; Oe4= 4.Socio-cultural specialists; Oe5= 5.Office clerks; Oe6= 6.Service worker; Oe7= 7.Petite bourgeoisie; Oe8= 8.Skilled crafts; Oe9= 9.Routine

Intermediate matrices with Oesch classes

AF1_oe2 (model M4k)

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	0	1	1	0	1	1	0	1	1
Oe2	0	0	0	0	0	0	0	1	1
Oe3	0	0	0	0	0	0	0	1	1
Oe4	0	0	0	0	1	1	0	1	1
Oe5	0	0	0	0	0	0	0	0	1
Oe6	0	0	0	0	0	0	0	0	1
Oe7	0	0	0	0	0	0	0	0	1
Oe8	0	0	0	0	0	0	0	0	0
Oe9	1	1	1	1	1	1	1	0	0

AF1_oe3 (model M4l)

	Oe1	Oe2	Oe3	Oe4	Oe5	Oe6	Oe7	Oe8	Oe9
Oe1	0	1	1	0	1	1	0	1	1
Oe2	0	0	0	0	0	0	0	1	1
Oe3	0	0	0	0	0	0	0	1	1
Oe4	0	0	0	0	1	1	0	1	1
Oe5	0	0	0	0	0	0	0	0	1
Oe6	0	0	0	0	0	0	0	0	1
Oe7	0	0	0	0	0	0	0	0	1
Oe8	1	0	0	0	0	0	0	0	0
Oe9	1	1	1	1	1	1	1	0	0

Note: EGP classes: G1= I+II. Service class; G2= III. Routine non-manual workers; G3= IVab. Petty bourgeoisie; G4=IVc. Farmers; G5=V+VI. Skilled workers; G6= VIIa. Non-skilled workers; G7=VIIb. Agricultural labourers; ESeC classes: E1=1.Salariat; E2=2.White-collar; E3=3.Petite bourgeoisie; E4=4.Farmers; E5=5.Skilled workers; E6=6.Semi-/unskilled; Oesch classes: Oe1=1.Traditional bourgeoisie; Oe2= 2.Technical specialists; Oe3= 3.Managers; Oe4= 4.Socio-cultural specialists; Oe5= 5.Office clerks; Oe6= 6.Service worker; Oe7= 7.Petite bourgeoisie; Oe8= 8.Skilled crafts; Oe9= 9.Routine

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