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Advantage 'Finds Its Way': How Privileged Families Exploit Opportunities in Different Systems of Secondary Education

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Abstract

This article discusses key findings from *eduLIFE*, a cross-national project that examined the emergence of social inequalities in 17 countries characterized by different models of secondary education. First, we build upon existing international studies and propose a broader classification of forms of differentiation in secondary education. Second, we elaborate a fourfold typology of secondary education systems. Third, we provide a longitudinal and comparative analysis of how social background, academic performance, and forms of secondary schooling create heterogeneous educational opportunities for recent generations. In particular, we discuss: (1) the allocation of students to different forms of secondary schooling; (2) student mobility among

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different types of education; and (3) the consequences of differentiation in secondary schooling for students' educational careers. Our findings suggest that, on average, more privileged families successfully exploit the opportunities provided by specific institutional configurations of school systems in order to secure the most favourable outcomes for their children.

Keywords

cross-national study, educational attainment, educational opportunities, secondary education, social inequalities, tracking

Introduction

Educational systems in post-industrial societies face an ongoing tension between commonality and differentiation (Gamoran, 2010). Not only must they provide students with the common competencies necessary for full participation in civic and socio-economic life, but they must also sort and select students according to their diverse abilities and life course goals (Van de Werfhorst and Mijs, 2010). Consequently, students eventually pursue different educational tracks, curricula, or subject courses and become separated by school types and ability groups (Dupriez et al., 2008). The existing literature on student sorting emphasizes the differences between secondary education systems based on comprehensive schooling and those based on educational tracking. In recent years, however, these long-standing differences have grown increasingly blurred in many countries as the systems' organizational structures have begun to converge.

On the one hand, countries with traditionally rigid systems of early tracking have introduced reforms to make their education systems more flexible. Since the end of the 1980s, in addition to raising the compulsory school age, countries such as Germany and Switzerland have made educational tracks more permeable while facilitating mobility among tracks and promoting more inclusive school types (Benavot and Resnik, 2006). Performance hurdles limiting access to prestigious academic tracks have also been lowered. Overall, these reforms have intended to make the early track allocation less rigid and consequential, particularly for children from less advantaged social backgrounds (Blossfeld et al., 2015).

On the other hand, nations with comprehensive school systems have been expanding their programmes and introducing new educational options (e.g. types of school, curricula, and subjects), leading to an unprecedented differentiation within their educational landscapes. Many of these transformations have been encouraged by a neoliberal stance on 'school choice', which first gained popularity in the 1990s and is based on principles of freedom of choice (Ascher et al., 1996). These neoliberal arguments not only prioritize parents' freedom in choosing their preferred education for their children but also emphasize schools' autonomy as agents in a quasi-market of educational supply and demand. While such market models may contribute to the overall effectiveness and efficiency of a school system, they can also harm equality of opportunity for children from disadvantaged social backgrounds (Ascher et al., 1996). These changes may have ultimately exacerbated inequities of access to more prestigious and advantageous educational pathways.

These various transformations in secondary education warrant more research on how educational inequality operates in different secondary education systems. In this article, we discuss and elaborate on some of the key findings from *eduLIFE*, an ERC-supported¹ project that examined and compared educational inequality across 17 countries with significant institutional variations in their secondary school systems. In particular, we address the following research questions across these diverse contexts: (1) how has social background recently affected students' initial allocation into various types of secondary education; (2) how consequential is this first allocation, and does mobility among types of secondary education reduce educational inequalities; and (3) what are the short- and long-term consequences of explicit and hidden forms of secondary school differentiation for students' later educational careers?

Unlike the broader aims of the *eduLIFE* project, this discussion focuses more on how higher socio-economic status (SES, hereafter) families secure educational advantages for their children by exploiting opportunities within various kinds of contemporary secondary school systems.² The following section presents this article's conceptual framework and outlines our research hypotheses. Afterwards, we introduce our research design and discuss our main findings. The last section examines policy implications.

Conceptual Framework and Hypotheses

Conceptual Framework

In order to fully address students' diverse experiences with differentiated secondary school systems, we have developed a more precise definition of differentiation. In contrast to earlier comparative research on educational 'tracking', we have taken a more flexible approach by relying on the concepts of 'differentiation in secondary education' and 'types of secondary education'. We examine the institutional and organizational heterogeneity of secondary school systems from a broader perspective by incorporating not only the formal but also the subtler – or 'hidden' – forms of differentiation.

Building upon the existing literature on the organization of secondary education (e.g. Dronkers, 2010; Dupriez et al., 2008; Gamoran, 2010; Van de Werfhorst and Mijs, 2010), we have identified two major dimensions of differentiation in secondary education. The first dimension distinguishes between *external* and *internal differentiation*. External differentiation refers to differences *among* schools, while internal differentiation refers to heterogeneity *within* a school, such as differences across school classes or courses. The second dimension distinguishes between *formal* and *informal differentiation*. Formal differentiation refers to regulated forms of diversity that are recognized by law and evidenced by school certificates and qualifications. Informal differentiation refers to differences between types of education that are not formally recognized but nevertheless can impact the quality of instruction and the levels of students' learning. Table 1 provides examples of these forms of differentiation according to our theoretical framework.

Formal external differentiation sorts students into various types of educational programmes typically divided *among* different types of schools. The classic example is 'school tracking', though formal external differentiation may also happen along the lines of school maintenance (e.g. public vs. private) or specialization (e.g. generalist vs.

Table 1. Classification of various forms of differentiation in secondary education.

	External (among schools)	Internal (within schools)
Formal	• Formal school tracks • School maintenance (public vs. private) • School specialization (generalist vs. denominational)	• Subject specializations • Subject levels
Informal	• School reputation (e.g. ranking) • School resources • Student body composition	• Ability grouping • Classroom composition • Teachers' characteristics in different classes

Source: (Triventi et al. 2016, p. 11)

denominational). The German system, for example, allocates students into the track schools *Hauptschule*, *Realschule*, and *Gymnasium*. In contrast, *formal internal differentiation* refers to curriculum differentiation *within* a school, which typically occurs by placing students into specific subjects and possibly at different levels. Examples include school systems in England and the United States.

Informal external differentiation results from structural heterogeneity *among* schools, which can be observed through differences in school resources (e.g. student–teacher ratio, average class size, teachers' education), instructional quality, learning resources, school organization, and student body composition. Meanwhile, *informal internal differentiation* sorts students *within* a school based on informal decisions by school principals or teachers' boards, such as ability grouping (grouping students into classrooms by their prior educational performance) or assigning teachers to classes based on certain features (e.g. expert teachers to classrooms with more academic potential).

These types of differentiation are not mutually exclusive and can coexist within the same educational system.³ Moreover, not all examples can be easily classified as one or another. For instance, ability grouping can be considered an example of either formal or informal differentiation based on its institutional context, which varies by country.

Research Hypotheses

Our first research question considers the relationship between social inequality and the ways in which different secondary educational systems allocate their students. The *effectively maintained inequality* (EMI) thesis (Lucas, 2001) posits that socio-economically advantaged families will use their resources to secure some degree of educational advantage for their children. In the context of universal secondary education, socio-economically advantaged families will exploit qualitative differences in the available curricula and types of education to give their children greater access to better learning environments and certificates. Consequently, as a general hypothesis, we expect that *students from higher social backgrounds will be more likely to receive the types of education that increase the likelihood of accessing university studies* and improve future labour market prospects (Hyp. 1). As explained by Boudon (1974), differentiation may create social inequality in educational opportunity through both 'primary' and 'secondary effects', as well. Primary (or

indirect) effects refer to the association between class backgrounds and academic performance. Children from more advantaged families tend to perform better in school and to pursue more demanding curricula that correspond to their talent and interest. Consequently, they are more likely to meet the admission standards for higher educational tracks. Secondary (or direct) effects refer to educational inequalities produced not by disparities in academic performance but by the socially conditioned decisions among families from different social classes based on the perceived benefits, costs, and risks of education (Breen and Goldthorpe, 1997). Following previous studies (Jackson, 2013), we expect that *social inequalities in the allocation to secondary school types is only partly due to the social differences generated by previous academic performance* (Hyp. 2).

Understanding the relationship between social background and educational opportunity requires looking beyond the educational system's initial allocations, as well. Thus, our second research question refers to the patterns of mobility between types of education and their role in the (re)production of social inequalities. Recent reforms have increasingly permitted non-standard educational paths, increasing students' mobility among secondary education tracks (Breen and Jonsson, 2000; Jacob and Tieben, 2009), schools (Rumberger and Larson, 1998), and ability groups (Hallinan, 1996). For high-performing students from lower social backgrounds, the possibility of moving to an upper track or better school can represent an opportunity to correct earlier, disadvantageous placements. Hence, despite a socially unequal initial allocation, *educational mobility can reduce those placement inequalities over the course of secondary school careers* (Hyp. 3a). On the other hand, however, increased mobility may primarily benefit more privileged families, who will exploit the system's flexibility and use their resources to support their children after initial allocation through recourse to, for example, private tutoring (Bernardi, 2014). Furthermore, these families may more effectively prevent dropout and intergenerational downward mobility and more effectively correct disadvantageous initial placements. Hence, *educational mobility can also exacerbate placement inequalities following the initial allocation* (Hyp. 3b).

Finally, our third research question addresses the consequences of student sorting. The type of secondary education that students receive can greatly affect their learning levels, subsequent school transitions, and final educational attainment. Favourable learning environments provide students with greater school resources, greater peer quality (high-achieving student bodies from higher social backgrounds), more rigorous teaching standards, and more experienced and motivated teachers – all of which are likely to improve students' learning opportunities (Dronkers, 2010). Therefore, *allocation into a higher academic track, a high-ability group, or a prestigious school may directly lead to improved educational outcomes, such as a lower risk of dropping out from school and a higher probability of attaining a higher education degree* (Hyp. 4).

Research Design

The Cross-National Study

The eduLIFE project conducted and compared case studies of 17 countries with various models of secondary education (see Blossfeld et al., 2016). We have followed the research designs of cross-national researchers in the field of social stratification and

educational inequality, such as Breen (2004), Shavit and Blossfeld (1993), and Shavit et al. (2007). Our project unifies the 17 case studies under a common analytical scheme, applies the same research questions within each country's educational context, and was carried out by experts on the respective school system and country context (see Table A0 in the Online Supplementary Material). Each case study identifies the most significant institutional forms of stratification in educational opportunity within a country's secondary school system; each develops a qualitatively thick description of a system and the major institutional changes it may have undergone over recent decades.

Though we intended to design a comprehensive and comparative study, standardizing the outcomes and variables of different educational systems was neither feasible nor desirable. Educational systems vastly differ across countries, especially in terms of educational differentiation, educational pathways, and outcomes (see Table A0 in the Online Supplementary Material, last three columns). We thus decided to adopt what we might call a 'soft' comparative approach to our quantitative research and elaborate on the conclusions derived from a rigorous, and qualitative comparison of quantitative case studies (Hantrais, 1999).

We also employed recent longitudinal datasets. Unlike studies based on Programme for International Student Assessment (PISA) data (e.g. Duru-Bellat and Suchaut, 2005; Hanushek and Wössmann, 2006; Horn, 2009; Marks, 2005), our case studies did not only observe short-term educational outcomes like achievement in secondary school. Instead, many studies were able to follow up with students and record more long-term outcomes, such as school dropout, mobility between educational tracks, access to tertiary education, and final educational attainment.

Moreover, because all our case studies included measures of students' academic performance prior to their allocation among different types of secondary education, we were able to draw more solid conclusions on differentiation's consequences in terms of inequality of educational opportunity. Indeed, a failure to incorporate prior achievement into statistical models of educational inequality makes impossible the disentangling of different types of education's 'added value' from mere selection effects arising from ability sorting and sorting based on students' social background (Morgan, 2001).

Data, Variables, and Methods

The case studies employed the best available data to address *eduLIFE*'s overall research questions. The guiding criteria for data selection included: the presence of reliable information on the most significant types of secondary education, students' social background, and pre-tracking academic performance; the potential to generalize the results at a national level; the longitudinal information on the time-order of variables; and no major issues with missing values. The case studies ultimately considered: (1) school-based longitudinal data (NELS for the United States, NEPS for Germany, COOL⁵⁻¹⁸ for the Netherlands); (2) school-based longitudinal data integrated with administrative data (LSYPE for England); (3) register data (Denmark and Sweden); and (4) multi-stage survey and administrative data (Italy).

Compared to previous research, the *eduLIFE* project focused on more recent student cohorts – born between the 1980s and the early 2000s – to provide an updated picture of

social inequality in contemporary school systems. Our project examined case studies using the most recently collected data, much of which has not yet been fully analysed or considered from a cross-national perspective.

In each country, researchers identified the most significant forms of differentiation regarding the social stratification of educational opportunity. These include formal tracks (Germany, Switzerland, Italy, Hungary, and Estonia), public versus private schools (Australia), placement into high-ability groups (Sweden), and enrolment in particular subjects (England, France, and the United States). Based on the existing literature on predictors of educational attainment, as well as the availability and comparability of datasets, most case studies recognized parental education as a central indicator of social background (e.g. Bukodi and Goldthorpe, 2013). Depending on the dataset, the studies used by this article measured academic performance either by students' marks as given by teachers or by standardized test scores.

The *eduLIFE* project modelled students' allocation to different types of education using binomial logistic regression for binary outcomes (e.g. allocation into academic vs. non-academic tracks in Italy, private vs. public schools in Australia) or multinomial logistic regression for multiple categories (e.g. tripartite distinction between academic, technical, and vocational schools in Israel). Educational outcomes were analysed using statistical procedures most applicable to the dependent variable and the relevant research question. Most case studies employed linear regressions (e.g. for years of education attained), binomial logistic regressions (e.g. for completion of upper secondary education, enrolment in higher education), and multinomial logistic regressions (e.g. entrance into different types of higher education). Some studies relied on multi-level estimation frameworks to account for their nested data. Researchers using non-linear models later interpreted their results through various metrics to capture absolute inequality between social groups, such as average marginal effects and predicted probabilities, while also using odds ratios to capture relative inequality (Mood, 2010). A number of country studies relied on the KHB (Karlson-Holm-Breen) method (Karlson et al., 2012) to decompose the total association between social background and type of education received by students into a direct and indirect effect that goes through academic performance.

Inequality of Opportunity in Contemporary Secondary Education

Models of Secondary Education

We identified four typical models of secondary education under a theoretical framework that incorporated both the prevailing features of contemporary educational systems and their historical developments. We classified the 17 countries considered by our project within this framework. The 'early tracking model' describes the secondary education systems of Germany, Hungary, the Netherlands, and Switzerland. In this model, formal tracking between schools occurs in lower secondary education, and the initial allocation differentiates students aged 10 to 12 based primarily on their previous scholastic performance. Educational tracks tend to strongly correlate to later opportunities in education and the labour market. For instance, for many years, only students from academic tracks

were allowed to enter university upon completion of their secondary education. Nevertheless, as discussed above, several reforms in the past three decades have reduced the rigidity of these systems (with the exception of the Netherlands, where the distinctions among tracks seem to have been reinforced in recent years).

Three of the countries this article considers can be classified under the 'Nordic inclusive model': Denmark, Finland, and Sweden. Formal external tracking begins comparatively later, when students are around the age of 16. A two-track system differentiates students into an academic track, where most continue their studies into higher education, and a vocational track, where students will more likely enter the labour market immediately after completing their secondary education or receive additional vocational training. Higher education in these countries is relatively open – or 'inclusive' – and offers access to students with no academic degree but with recognizable work experience. The mostly public and state-funded Nordic model demonstrates a high degree of decentralization at the school level, addressing student heterogeneity through various forms of individualized teaching. Furthermore, *eduLIFE*'s case studies indicate that, although formal external differentiation begins later for students, other forms of informal differentiation frequently occur earlier. Examples include Swedish students' subject choices before their formal allocation and informal school rankings in Finland.

The 'individual choice model' fits the secondary educational systems of Australia, England, Ireland, Scotland, and the United States. Though none of these countries practises external formal tracking, other forms of differentiation are nevertheless present in their systems. First, in most of these countries, there is a low degree of standardization across school curricula, and schools vary widely in terms of their offered programmes,⁴ their teachers' qualifications, and their educational resources. Second, there is also a strong level of differentiation within individual schools: students may be grouped into relatively homogeneous classes in terms of prior academic achievement (ability grouping) or be given a choice among different courses or subjects, depending on both prior achievement and personal preference.

The remainder of the countries – Estonia, France, Israel, Italy, and Russia – can be identified by their 'mixed tracking' approach to secondary education. Their systems share a degree of centralization and incorporate formal external tracking in upper secondary education rather than lower secondary education. Compared to the early tracking model, the first allocation happens when students are 14 or 15 years old – still early in contrast to the Nordic inclusive model. Formal external differentiation in these countries mainly involves three categories: an academic track; a higher-level technical track; and a lower-level vocational track. Interestingly, whereas the technical and vocational tracks are primarily designed to prepare students for their transition to the labour market, students who obtain technical or vocational qualifications are still allowed to enter higher education. Beyond this formal tracking, some countries further stratify their educational supply. The *eduLIFE* project shed more light, for example, on how Israel's Ministry of Education formally recognizes two main school sectors – Jewish and Arab – reflecting important ethnic-social cleavages in Israeli society. Similarly, in France, hidden forms of informal differentiation in lower secondary education – such as students' choice of specific non-compulsory subjects of study like German or Latin – contribute to social segregation across schools and classrooms.

The next sections discuss the main research findings related to the three aforementioned research questions. Key findings for each individual study are reported in Table 2.

Table 2. Social inequalities in educational opportunity in secondary education: Summary of key findings from *eduLIFE*.

Country	Country and data	Key findings
Dämmrich and Triventi	<i>Cross-national</i> 15 countries TIMMS, PIRLS, PISA, PIAAC	Social inequalities in competencies tend to persist (reading) or increase (mathematics) over the early life course, from primary education to early adulthood. There is a higher growth of social inequalities over the early life course among highly tracked systems, but differences across systems are rather weak
Holtmann	<i>Cross-national 35 countries</i> PISA (5 editions)	In those education systems in which schools become more socially inclusive, students from disadvantaged families improve their performance, while students from better-off families perform well independent of whether the education system becomes more socially segregated or inclusive
<i>Early tracking model</i> Buchholz, Skopek, Zielonka, Ditton, Wohlkinger, and Schier	<i>Germany</i> NEPS Starting Cohorts 3/4/6, BiKS	Social background strongly predicts allocation to the academic track after primary schooling at age 10. Also, children from lower social origins are less likely to continue secondary schooling after initial secondary degrees, net of achievement. Increased between-track mobility in the current German system is not particularly effective in mitigating social inequality in educational opportunities
Lauterbach and Fend	<i>Germany</i> Life study	Socio-economic inequality in educational outcomes (Abitur in upper secondary education, final educational attainment) and occupational outcomes (level of job training, social class) is similar among individuals who attended secondary education in Germany in the same periods but under different tracking regimes
Buchmann, Kriesi, Koomen, Imdorf, and Basler	<i>Switzerland</i> COCON, TREE	Track allocation in lower secondary schooling, taking place around the age of 12 predicts selection into upper secondary educational tracks, enabling or foreclosing, in turn, access to tertiary-level education
Horn, Keller, and Róbert	<i>Hungary</i> NABC, HLCS	Five main mechanisms contribute to reproduce inequality of opportunity in Hungary: (1) status-segregated schools in primary education; (2) early tracking in lower secondary education; (3) vocational tracking in upper secondary education; (4) the choice of public versus non-public education; (5) within school separation of students
Dronkers and Korthals	<i>The Netherlands</i> COOL ⁵¹⁸ , VOCL89	Students' socio-economic status is strongly related to teacher recommendations for the two main tracks in secondary education, and for the actual track choice

(Continued)

Table 2. (Continued)

Country	Country and data	Key findings
<i>Nordic inclusive model</i>		
Rudolfi and Erikson	Sweden CILS4EU, Register data	There are hidden forms of within school tracking. In the eighth grade (compulsory education), children of parents with a tertiary education attend advanced Math classes more often than children with lower educated parents. Attending advanced Math classes is associated with subsequent higher educational success, net of students' cognitive ability
Kilpi-Jakonen, Erola, and Karhula	Finland Register data	Educational inequalities grow over the eight years following the end of comprehensive education; there are both direct and indirect effects of social origin at each educational transition. The establishment of polytechnics has diverted children of university-educated parents away from universities and into polytechnics
Wahler, Buchholz, and Møllegaard	Denmark Register data	Children with less well-educated parents and male students are less likely to complete any kind of upper secondary education, particularly the general one, and to upgrade from a vocational to a general upper secondary degree
<i>Individual choice model</i>		
McMullin and Kulic	England LSYPE	Students whose parents have higher levels of education are more likely to choose academic subjects, and academic pathways from the start of secondary education. There is evidence of a compensatory effect of social origin on children's attainment and further progression despite their initial choice of subjects
Klein, Iannelli, and Smyth	Scotland and Ireland Scottish and Irish School Leaver Surveys	In Scotland, upper-class parents place children in the key subjects that will facilitate access to the more prestigious higher education programmes and institutions. In Ireland, students from a high social background maintain their educational advantage through higher prior academic achievement
Schührer, Carbonaro, and Grodsky	The United States NELS	Parental education has direct effects on course-taking patterns in secondary school net of student grades and test scores. Parental education and advanced course-taking are both independently related to the likelihood of enrolling in post-secondary schooling (either two or four-year college), as well as the probability of receiving a baccalaureate degree

(Continued)

Table 2. (Continued)

Country	Country and data	Key findings
Chesters and Haynes	<i>Australia</i> LSAY	Young people with university-educated parents are more likely than their counterparts with low-educated parents to attend an independent school, attain high levels of academic achievement at age 15, pursue the university pathway through high school, complete upper secondary school and graduate from university
<i>Mixed tracking model</i>		
Farges, Tenret, Brinbaum, Guégnard, and Murdoch	<i>France</i> Panel 1995 of French Ministry of Education	The choice of German as a first language or Ancient Latin or Greek as an option – which is socially stratified to the advantage of high social background students – increases the chances to succeed in the academic track later on. Social background has also an independent effect on the transition to higher education
Contini and Triventi	<i>Italy</i> INVALSI-SNV, IARD, ISTAT	Social background is strongly associated to enrolment in the three main tracks at age 15 (lyceum, technical, vocational schools). Both track changes and dropout from upper secondary education are socially stratified to the disadvantage of students with lower educated parents. Track placement in upper secondary education drives social inequalities in the transition to university
Kosyakova, Yastrebov, Yanbarisova, and Kurakin	<i>Russian Federation</i> TrEC	Social background affects allocation into different types of schools before tracking (degree of prestige), the track choice itself, the aspirations towards higher education and the chances of admission into high-quality higher education institutions
Täht, Saar, and Kazjulja	<i>Estonia</i> Estonian Social Survey, Estonian Family and Fertility Survey	Expansion of higher education in the 1960s and 1970s increased the opportunities of general secondary graduates to enter universities. However, social origin increasingly differentiates their chances
Blank, Shavit, and Yaish	<i>Israel</i> Register data	The association between students' social origins, their cognitive achievements, track placement, and matriculation outcomes is similarly high to those found in the 1970s and 1980s. Most mobility between tracks after first allocation is upwards, directed towards the academic track

Social Background and Student Sorting

Although school systems vary widely in their organization, the research finds across all 17 countries the presence of a substantial inequality of access to better educational opportunities. Students from higher social backgrounds are more likely to: enrol in academic tracks in Continental, Southern, and Northern European countries; attend prestigious schools in Australia and Russia; be placed in higher ability groups in Sweden and the United States; choose academic and more prestigious subjects within flexible curricula in England, Ireland, Scotland, and the United States. Thus, socio-economically advantaged students tend to receive better scholastic preparation, which is likely to increase their chances of pursuing higher education. This conclusion supports the 'effectively maintained inequality' thesis (Lucas, 2001) discussed earlier: in countries with universal secondary education, highly educated parents seem to rely on qualitative differences within school systems to place their children in the 'right' environments that guarantee better instruction and more successful educational trajectories. The expansion of secondary education enrolment, then, has resulted in only a limited equalization of educational opportunity.

More specifically, in all 17 countries, gaps in previous scholastic performance account for a sizable portion of the differences in allocation by social background. Yet, previous performance encompasses accumulated parental investments in child cognitive development from kindergarten to elementary education, which tend to be stratified by social background (Blossfeld et al., 2017; Bradbury et al., 2015; Conger and Donnellan, 2007; Layte, 2017). Consequently, initial performance differentials actually contribute to the overall social gap in secondary school attainment.

Data for several countries indicated a large share of social background differentials that could not be explained by previous performance differences, however. For instance, the relative share of the secondary effects on placement in the general academic track was estimated to be around 60 per cent in the Italian and Swiss case studies and around 44 per cent in the German case study;⁵ for countries where sorting depends more on students' previous achievement and less on students' choice, though, this share was much lower (e.g. the United States, the Netherlands, and Sweden).

These more recent findings support those reported in Jackson (2013) on older cohorts. Furthermore, we found preliminary evidence of a relationship between the relative size of secondary effects and the rigidity of ability sorting: the relative share of the direct effect of social background appears to be larger in countries in which families enjoy more freedom of choice when placing students into various types of schools or educational programmes as compared to countries in which placement of students is more strictly linked to the school's decisions. Though our research design did not permit a rigorous test of this, we believe it is an interesting hypothesis to be considered in future research.

Educational Mobility, Social Origin, and School Performance

As detailed earlier, many countries practising formal tracking have adopted educational reforms to make less advantageous placements in students' first allocation less consequential for their later educational and labour market pursuits. Is it the children from lower backgrounds, however, who gain most from such increased mobility?

Studying the patterns of mobility within differentiated secondary schooling settings has grown increasingly relevant to research on educational inequality. Several case studies in our project examined students' movement among school tracks and, while noting that track mobility is on the rise, they found that mobility is higher in early tracking countries than in mixed tracking countries. For instance, while the share of students changing tracks amounts to 31 per cent in Germany and 34 percent in Switzerland, it is much smaller in France (14%), Israel (12%), and Italy (5%).⁶ Changes between 'adjacent' tracks – those with more similar content, scope, and level – occur more frequently than those between 'distant' tracks. Some country studies found mobility to occur mainly among curricula or programmes within the same track (e.g. Denmark). Interestingly, in most cases, downward mobility was more frequent than upward mobility.⁷ This could be due to shifts to less demanding schools by low- to medium-ability students who had been assigned to general programmes with more challenging academic curricula. Moving to a lower track may also be a strategy employed by lower-class families to avoid grade retention (a common practice in some countries, such as France and Italy) and to ensure that their children progress in their educational careers, albeit on a less demanding track.

Our case studies demonstrated that previous academic performance is the most important predictor of mobility in secondary education. However, social background also plays a considerable role: children of highly educated parents are more likely to experience upward mobility and less likely to experience downward mobility. For example, in Denmark, students with highly educated parents are more likely to upgrade their qualification in upper secondary education, and their advantage only marginally reduces from 12 to 10 percentage points when accounting for previous academic performance.⁸ In Germany and Italy, children of less educated parents are two to three times more likely to experience downward mobility compared to children from more educated families. While this disadvantage can be attributed to lower prior academic performance in Germany, this mobility pattern is less explained by performance differences in Italy.

Furthermore, as the compensatory advantage model (Bernardi, 2014) predicts, some country studies (e.g. Italy) show that downward movements from academic to technical or vocational tracks are less socially stratified among high-performing children than among lower performers. In other words, students from more advantaged social backgrounds can avoid downward mobility in secondary school despite poor academic performance. Socio-economically advantaged parents might ensure this outcome by employing several strategies, depending on the institutional rules regulating transfers between schools. In cases where families decide on students' mobility, highly educated parents may support their children by motivating them and investing in private tutoring. In cases where schools regulate mobility among tracks based on academic achievement, parents might pressure teachers to give greater attention to their children's learning development or to grade them more leniently. Nevertheless, though these parental strategies seem theoretically plausible, their actual relevance and practice require further study.

The Short- and More Long-Term Consequences of Secondary Education Placement

Several of the *eduLIFE* case studies examined: (1) how students' social background and the type of secondary education they received predicted their later educational careers;

and (2) whether prior academic achievement and social background continued to play a role during these later stages. In all cases, social background strongly correlated to students' educational transitions after their completion of secondary education. The total effect of social background on access to various types of post-secondary education was found to be large even among recent cohorts (students born in the 1980s). Even in Finland, where students are regarded to have exceptionally low inequality in standardized test scores as measured by the PISA survey, children of more highly educated parents are nine times more likely to pursue higher education than children of less educated parents.⁹

Our case studies showed that the type of secondary educational track students pursue strongly relates to their later educational trajectories. This holds true not only in educational systems with formal tracks (e.g. France, Italy, Russia, and Switzerland) but also in systems characterized by informal forms of differentiation (e.g. Australia, Ireland, Scotland, and the United States). In most cases, students placed on an academic or general track in lower and upper secondary education are much more likely to later enter higher education than students on vocational tracks. This holds true even in countries with mixed tracking systems, where all upper secondary tracks formally allow access to higher education. In educational systems marked by informal differentiation, attending private or prestigious schools, undertaking more demanding curricula, or choosing more academic subjects is consistently associated with a higher probability of later pursuing higher education.

These findings may seem to be the result of a selective intake. For example, students following more prestigious and academically demanding tracks might be positively selected in terms of social background and scholastic abilities. These findings remained consistent, however, when we adjusted for social background and prior academic achievement. More educational resources, more qualified teachers, and higher-achieving peers may contribute to more favourable academic environments that better facilitate individual learning (Brunello and Checchi, 2007; Gamoran and Mare, 1989; Van de Werfhorst and Mijs, 2010). More selective environments, in addition, may not only raise students' educational aspirations but also better inform students about higher education options and their occupational prospects (Dronkers, 2010).

In general, various types of institutions and programmes offer higher education that differs in their length, educational purpose, prestige, and standards (Shavit et al., 2007; Triventi 2013). Moreover, in countries with higher rates of participation in higher education, the occupational rewards of such education in the labour market relate not only to having a higher education degree but also to the specific type of degree (Schomburg and Teichler, 2007). Our case studies found that students who complete academic tracks are not only more likely to continue their studies but also more likely to gain access to the most selective, prestigious, and rewarding higher education institutions and programmes. For entrance into higher education and access to university programmes, not only the type of education, but also previous academic performance matters considerably.

Some country studies (e.g. England and Italy) also found evidence for a 'compensatory advantage' mechanism (Bernardi, 2014): that is, less desirable outcomes in the earlier stages of education (e.g. low performance or taking a high number of vocational

courses) appear to be less detrimental to later educational opportunities among students from more privileged family backgrounds.

Finally, once academic achievement and the type of secondary education attended are accounted for, a large part of the social background differentials regarding entry to higher education disappears. In other words, the differentiation processes occurring before and during secondary education mediate much of the relationship between social origin and later educational outcomes. Though the role of social background at later educational stages was relatively modest compared to that of earlier stages, the differences along social lines were still non-negligible. Moreover, the direct effect of social background on access to university was found to be smaller in countries with stronger selection at lower educational levels (e.g. Switzerland) and slightly larger in countries with less selective requirements for secondary education (e.g. Italy and United States).¹⁰

Conclusions

Although the *eduLIFE* project did consider heterogeneous models of secondary education, we found that allocation to different types of secondary education can be regarded as a general mechanism for the intergenerational reproduction of social inequality in contemporary school systems. In line with our first hypothesis, across the 17 countries surveyed, students from more advantaged social backgrounds tend to receive the types of secondary education that provide more scholastic preparation, improve academic performance, and increase chances of later entering more demanding and prestigious university programmes. We found disparities in early academic performance to be key drivers of social background inequality during the allocation process. Social gaps in academic achievement, however, do not tell the whole story: consistent with our second hypothesis, we also found that children of less educated parents are less likely to enrol in more prestigious educational tracks, even if they perform equal to their peers with more highly educated parents.

Differentiation in secondary education systems varies by country and is not limited to systems of formal tracking. Less obvious forms of differentiation – such as school maintenance (e.g. public vs. private, religious vs. non-religious), ability group placements, or flexible curricula – also lead to considerable educational inequality. Such ‘hidden’ forms of differentiation can co-occur with more established and ‘visible’ forms of tracking, and they can also manifest before systems formally allocate children within their organizational structures. In France, for instance, more privileged students are more likely to choose German as a first foreign language, or Latin or Ancient Greek. These choices, in turn, relate to greater chances of success in the academic track. In Russia, allocation into top-tier (*Lyceum* and *Gymnasium*) and ordinary schools is likely to affect students’ subsequent placements in upper secondary education and their chances of success in higher education. Even in seemingly ‘inclusive systems’ like Sweden’s, teaching based on subject-specific ability grouping occurs before students are separated into upper secondary tracks, which contributes to expand inequalities in educational achievement between children from higher and lower social backgrounds. Our findings underscore the need to consider these less visible forms of differentiation when trying to understand how contemporary school systems reproduce educational inequality.

We also observe that individuals' secondary schooling careers are less static than current research suggests. Compared to earlier years, the initial allocation among types of secondary education predicts later educational trajectories to a much lesser extent. Moreover, mobility among the types of secondary education is not as difficult or rare as previously imagined. Nonetheless, mobility patterns continue to be shaped by students' social background and not only by their previous academic performance. The limited upward mobility observed disproportionally occurs among students with more highly educated parents, whereas downward mobility is much more common among students from a less advantaged social background. The inter-track mobility studied by *eduLIFE* appears not to curb but to reinforce the educational inequality among students from different social backgrounds, which lends support to hypothesis 3b.

Furthermore, in agreement with hypothesis 4, the case studies demonstrated that the type of secondary education consistently relates to students' later educational careers and outcomes. Notably, this seemingly universal result held true for all 17 countries surveyed by the *eduLIFE* project, irrespective of the kind of educational differentiation within their secondary school systems. This finding underscores the importance of integrating cross-national analyses of test score inequality with an extended perspective on later educational transitions and attainment.

Given the limitations of our research design, we cannot definitively say to what extent the cross-national differences in levels of inequality of educational attainment relate to the different forms of differentiation. Nevertheless, the comparative findings of the *eduLIFE* project reveal that socio-economically advantaged families tend to successfully secure educational 'pole positions' for their children across different types of school systems. Moreover, our results suggest that upper-class parents tend to successfully exploit various opportunities within school systems to ensure the most favourable outcomes for their children.

Our findings challenge some of the current views on educational inequality and policy. Though a common response to educational inequality involves policies that reduce the degree of differentiation in secondary education or limit the link between the different types of secondary education and access to tertiary education, we question the effectiveness of such strategies.

For instance, Lauterbach and Fend (2016) show that socio-economic inequality in long-term educational and occupational outcomes (from the age of six to 45) is very similar among individuals who received secondary education in Germany during the same period but under different tracking regimes. From another perspective, Klein et al. (2016) and McMullin and Kulic (2016) show that inequality remains an issue in countries with a low level of formal differentiation, such as Ireland, Scotland, or England. In Scotland, where the educational system grants students more freedom in subject choice, upper-class parents try to maintain their children's educational advantage by placing them in subjects necessary for better access to more prestigious higher education programmes and institutions. Similarly, in England, having pursued academic school subjects contributes greatly to privileged students' later educational advantage. In Ireland, however, where the educational system offers comparatively less freedom in subject choice, more privileged students maintain their educational advantage through higher early academic achievement, which is the crucial criterion for a successful transition to

higher education. In other words, despite the lack of early formal differentiation, the ‘hidden’ forms of differentiation not tackled by the aforementioned policies continue to contribute to the reproduction of educational inequality in all three countries.

We thus argue that policymakers seeking to address educational inequality should consider how upper-class parents use their socio-economic and cultural resources to preserve their children’s relative advantages in existing school systems. As previously argued by researchers on Nordic countries (Erikson and Jonsson, 1996), educational reforms should be complemented by broader redistributive policies aimed at reducing socio-economic differences across families to level children’s starting points. Moreover, policymakers should consider how they may reduce educational inequality in the short term through policies that address information asymmetries on the benefits, costs, and risks of specific types of educational pathways (Barone et al., 2018). In sum, to further our understanding of the micro-mechanisms behind the (re)production of social inequality in secondary education, more cross-national research investigating the specific behaviours and strategic actions pursued by socio-economically advantaged groups is warranted.

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Supplemental Material

Supplemental material for this article is available online.

Notes

1. ERC = European Research Council.
2. The readers interested in the specific analyses at the basis of our arguments can refer to the Online Supplementary Material linked to this article, in which selected analyses are presented. The readers who are interested in more specific details about how the single country studies were conducted can refer to Blossfeld et al. (2016). In this article, we provide a more thorough comparison of the *eduLIFE* research findings in order to discuss additional material and to highlight some policy implications.

3. See for instance the study on Hungary in Blossfeld et al. (2016: ch. 8).
4. One should bear in mind that our research on England is done following pupils who entered lower secondary education in 2004, when the degree of standardization of curriculum was lower. Reforms of secondary education since then have made the curriculum more standardized across schools and subjects although the school curriculum has still some flexibility compared to the prescriptions of the national curriculum.
5. See Tables A1–A3 in the Online Supplementary Material.
6. For Germany see Tables A4–A5, for Israel Table A6, and for Italy Table A7 in the Online Supplementary Material. For Switzerland, you can refer to Chapter 7 in Blossfeld et al. (2016: 119) and for France to Chapter 17 in Blossfeld et al. (2016: 297). In Italy and France, these percentages are computed only on the selected population of students who successfully completed upper secondary education. In both countries, a non-negligible proportion of students drop out from high school without obtaining any qualification.
7. The only exception is Israel, where most mobility is from vocational and technical schools to the academic track.
8. See Table A8 in the Online Supplementary Material.
9. This is derived from inverting the odds-ratio (.11) presented in Table A9, column M3a (less than upper secondary vs. university-educated parents).
10. The direct effect of parental education on access to higher education – net of prior academic performance, school track, and other socio-demographic characteristics – amounts to 5 percentage points in Switzerland, whereas it is around 15–18 percentage points in Italy and in the United States. Results are reported in Table A10, Table A11 and Figure A1 in the Online Supplementary Material.

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