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The Many (Subtle) Ways Parents Game the System: Mixed-method Evidence on the Transition into Secondary-school Tracks in Germany

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Abstract

We analyze the subtle mechanisms at work in the interaction between families and schools that underlie social inequalities at the transition point from elementary school into secondary-school tracks in Berlin, Germany. We do so by combining quantitative data from a large-scale survey and assessment study ($N = 3,935$ students and their parents) with qualitative data from in-depth interviews with parents ($N = 25$) collected during the 2010–11, 2011–12, and 2012–13 school years. The quantitative analyses show that students from high-socioeconomic status (SES) families were more likely to enter the academic track than were students from low-SES families, even if they performed equally well on a standardized achievement test, had the same grades in school, and received the same track recommendation from their teachers. The qualitative analyses illustrate the many ways in which parents intervene during the transition process, with high-SES parents having particularly effective ways of getting what they want for their children.

Keywords

tracking, class inequality, school/parent relationships, parental cultural capital, social capital, international education, mixed methods

Numerous empirical studies document that children whose families come from low socioeconomic backgrounds are less likely to succeed in education than children from high socioeconomic backgrounds. In fact, this may be the most consistent finding to emerge from educational research over the past 50 years. Although there is now a large body of evidence on educational inequalities, garnered from many national and international large-scale assessment studies (e.g., Mullis et al. 2012, 2016; Organisation for Economic Co-operation and Development 2016), we still know very little about the underlying mechanisms

causing the observed inequalities in student competencies and educational attainment. In particular, there has been a long and ongoing debate on

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the degree to which the features of schools and school systems contribute to educational inequalities (Coleman et al. 1966; Downey and Condrón 2016; Downey, Von Hippel, and Broh 2004; Jencks et al. 1972; Oakes 1985; Raudenbush and Eschmann 2015). The debate often centers on the question of whether schools exacerbate or reduce inequalities already present when students enter schools (see Downey and Condrón 2016; Raudenbush and Eschmann 2015). Accordingly, many studies focus on disentangling school inequality from inequality due to differences in children's homes. In this article, we seek to avoid this dichotomy and thus take a different approach. Instead of trying to separate school from family effects, we argue that school inequality and family inequality are highly interdependent: parents from high-socioeconomic backgrounds learn to "game" the system or "master the rules of the game" (see Lareau, Evans, and Yee 2016).

We analyze social inequalities in the transition from elementary school into secondary-school tracks in Germany, because this is a good case for understanding the complex and subtle mechanisms at work in the interactions between families and schools and that often underlie existing educational inequalities. Studying Germany's tracking system allows us to show that certain structural features of educational systems make it more likely that parents, especially those with high socioeconomic background, get what they want for their children. Compared to other industrialized countries, Germany has one of the highest levels of educational inequality. Comparative social stratification research suggests this is most likely due to its early tracking system, which sorts students into schools following different curricular tracks after elementary school (Shavit and Müller 2000; Van de Werfhorst and Mijs 2010). The transition into secondary-school tracks has been identified as a key time point at which social inequalities in the German educational system emerge (Kelly 2008; Neugebauer and Schindler 2012).

Most research on social inequalities at educational transition points has sought to disentangle two types of social background effects on track assignment: those that stem from achievement differences and those that exist net of these achievement differences (Jackson 2013a; Jackson et al. 2007; Kelly 2004). We follow this approach, but we adapt and extend it to fit the specific context of the transition from elementary to secondary school in Germany. That is, in addition to solely

analyzing social background effects on track assignment, we take a more process-oriented approach and also investigate social background effects on students' achievement, teacher-assigned grades, and teachers' track recommendations during elementary school, because these greatly influence which secondary-school track students will attend. We analyze these social background effects using longitudinal data from a large-scale representative survey and assessment study conducted in the city of Berlin during the school years 2011–12 and 2012–13 together with data from narrative interviews conducted with parents in the same time period. Our main interest is in understanding the mechanisms underlying the social inequalities during this educational transition process. By combining quantitative statistical analysis with in-depth analyses of qualitative data, we show that it is "the social dynamic of interaction that leads to the characteristics of the macro phenomenon" (Kroneberg and Kalter 2012:15; see also Hedström and Ylikoski 2010). In our case, it is the social dynamic of interaction between parents and school staff that leads to the observed social inequalities.

BACKGROUND

The Role of Educational Transitions and Tracking for Social Inequalities in Education

One common approach in research on educational inequalities understands educational careers as the result of a sequence of educational transitions, with early educational decisions predicting later attainment (Hillmert and Jacob 2010; Mare 1981). Accordingly, transitions are viewed and analyzed as key time points at which social inequalities in education emerge or are amplified (Lucas 2001; Nikolai and West 2013). Educational transitions are particularly crucial for the development of social inequalities at points that involve students entering different tracks—different courses, study programs, or schools—depending on their achievement level and thus embarking on different educational pathways.

Tracking, which aims to create homogeneous groups of students so teachers can more effectively tailor their instruction to students' needs (Hallinan 1994), is practiced in almost all educational systems. However, countries vary in the

degree to which they track students. In countries with within-school tracking (e.g., mostly Anglo-American and Nordic countries), virtually all schools are nominally comprehensive, but students are grouped full-time for all subjects or part-time for some subjects. In countries with between-school tracking (mostly continental European countries, including Germany, and some Asian countries), students with different achievement levels go to completely different schools with very different curricula. These schools lead to different educational certificates that substantially influence students' future occupational and educational paths (Dupriez, Dumay, and Vause 2008; Hopper 1968; Shavit and Blossfeld 1993).

A number of comparative studies show that countries with more rigid forms of tracking that begin earlier tend to have greater socioeconomic inequality in achievement and lower levels of intergenerational mobility in educational attainment (Brunello and Checchi 2007; Buchmann and Park 2009; Dupriez and Dumay 2006; Hanushek and Wößmann 2006; Montt 2011; Müller and Karle 1993; Pfeffer 2008; Shavit and Blossfeld 1993; Shavit and Müller 1998; Van de Werfhorst and Mijs 2010). Explanations for this finding include compositional effects, curricular differences, differences in teacher qualifications, and differences in resources between tracks (Brunello and Checchi 2007). Moreover, the impact of social background tends to be larger at earlier educational transitions than at later ones (Jackson and Jonsson 2013; Mare 1981; Müller and Karle 1993; Shavit and Blossfeld 1993), because the younger the students, the more uncertainty there is about their academic potential and the more parents make educational decisions for their children (Bauer and Riphahn 2006; Schnabel et al. 2002).

Primary and Secondary Effects of Social Background

To better understand how a person's social background influences educational transitions, many quantitative studies, in particular in European social stratification research (R. Becker 2003; Crosnoe and Muller 2014; Erikson et al. 2005; Erikson and Rudolphi 2010; Jackson 2013a; Jackson et al. 2007; Jackson, Jonsson, and

Rudolphi 2012; Karlson 2013; Kloosterman et al. 2009; Morgan 2012; Parker et al. 2015; Schindler and Lörz 2012), have used Boudon's (1974) theoretical distinction between the primary and secondary effects of social background on educational attainment (for an excellent discussion of Boudon's theory, see Jackson 2013b). According to Boudon, social inequalities in educational attainment are the result of two mechanisms. First, differences in educational attainment stem from achievement differences between people from different social backgrounds; this is the primary effect of social background. Second, people from different social backgrounds make different educational choices independent of potential achievement differences; this is the secondary effect of social background.

The primary effects of differences in achievement between social groups are mainly shaped by family origin, including inheritance, early socialization, and home environment conditions. In contrast, secondary effects are the aggregate result of differences in the educational choices made between social groups. Following Boudon's (1974) theory, these different decision-making processes are typically explained and analyzed using rational choice assumptions (Jackson 2013b). That is, individuals' educational decisions are assumed to be based on rational choices, in which they take into account the probability of success and the expected benefits and costs (Breen and Goldthorpe 1997; Erikson and Jonsson 1996). Breen and Goldthorpe (1997) suggest this decision making is also influenced by relative risk aversion, meaning individuals seek to maintain their family's social status and avoid downward social mobility. Applying Boudon's theoretical assumptions to transitions from elementary to secondary school, we can identify two reasons why high-socioeconomic status (SES) students attend the academic track more often than low-SES students. First, they perform better at school than do low-SES students. Second, even when there are no achievement differences between students from different backgrounds, high-SES parents are more likely than low-SES parents to choose the academic track for their children, because they expect a higher probability of success, see a greater benefit in having their children attend the academic track, have more resources and thus fewer costs, and want to ensure their children will maintain their social status.

Moving beyond Rational Choices to Understand Social Inequalities in Educational Transitions

Although Boudon's (1974) theoretical conception of primary and secondary effects, and hence his account of rational choice theory, has been prominently used in quantitative stratification research to explain social inequalities during educational transitions, several scholars argue that rational choices cannot provide a complete explanation and that other mechanisms may be causing the observed inequalities in track assignments (Boone and van Houtte 2013; Grodsky and Riegle-Crumb 2010; Kroneberg and Kalter 2012). We now turn to theoretical concepts from several research strands that can be used to further understand the processes underlying the social inequalities during educational transitions.

Social reproduction theory (Bourdieu and Passeron 1977) was not explicitly developed to understand educational transitions, but it provides a useful explanation for how high-SES parents might transmit their advantage to their children at transition points (Jackson 2013b; Jackson and Jonsson 2013; Thys 2018). According to this theory, educational choices are largely driven by a person's habitus—a mostly unconscious set of embodied dispositions that shape and constrain preferences and behavior. People with similar socialization usually share a habitus, leading to social reproduction (Bourdieu 1980). For the transition from elementary to secondary school in Germany, this would suggest that high-SES parents may not make a rational choice to send their children to an academic-track school; for them, it may have always been a certainty. Cultural reproduction theory further posits that the economic, cultural, and social capital of people from different social backgrounds plays an important role for social reproduction (Bourdieu 1986; Bourdieu and Passeron 1977), with cultural and social capital being particularly relevant for social reproduction in education. Cultural capital exists in three forms: institutionalized cultural capital (e.g., educational credentials or specialized knowledge); embodied cultural capital (e.g., one's personality or speech), which will be reflected in a person's habitus; and objectified cultural capital (e.g., books, clothes, instruments). The more a person's cultural capital corresponds to the values of society's dominant

class, and thus to those of educational institutions, the greater the person's likelihood of success.

The notion of social capital, which was also introduced by Coleman around the same time (Coleman 1988), describes "the ability of actors to secure benefits by virtue of membership in social networks or other social structures" (Portes 1998:7). In the educational context, it mainly refers to parents' formal and informal interactions with other parents and school personnel, which facilitate their children's success in school (Ream and Palardy 2008). For the transition from elementary to secondary school in Germany, social reproduction theory would thus suggest that children from high-SES backgrounds should be more likely to attend the academic track than children from low-SES backgrounds because their parents have higher levels of cultural and social capital and know how to navigate the educational system.

The Wisconsin social psychological model of status attainment (Sewell, Haller, and Ohlendorf 1970; Sewell, Haller, and Portes 1969; Sewell et al. 2004) postulates that social background's influence on educational attainment is mediated by social psychological factors. This empirically based theory provides useful insights into the potential mechanisms underlying inequalities at points of transition. The Wisconsin model suggests that in addition to a person's academic achievement (which is comparable to Boudon's [1974] primary effect), "significant others" and a person's educational and occupational aspirations play a key role in the status attainment process. Most relevant to our context is the assumption that the influence of significant others is primarily driven by the educational and occupational status they expect a person to attain (Sewell et al. 1970). That is, parents' aspirations regarding their children's future attainment should serve as a major intervening variable between their social status and their children's actual attainment (Haller 1968). The importance of parents' aspirations is supported by a number of empirical studies (Davis-Kean 2005; Englund et al. 2004; Singh et al. 1995; Stevenson and Baker 1987; Suizzo and Stapleton 2007), and some research suggests that parental aspirations underlie social inequalities in children's track location (Kelly 2008). According to the Wisconsin model, parents' aspirations should be a crucial mechanism for the

reproduction of social inequalities at points of educational transition. Because students in Germany transition from elementary to secondary school at such a young age, this model should be especially relevant to this early transition.

Social reproduction theory and the Wisconsin model focus mainly on mechanisms operating in students' families, but the influence of socioeconomic background on students' track location may also be transmitted via processes happening in schools. Esser (2016a, 2016b) notes the importance of the school context for explaining social inequalities at educational transition points (see also Maaz and Nagy 2009). He suggests that Boudon's (1974) theoretical framework should be extended to tertiary effects, that is, effects of social background on educational attainment that are transmitted via teachers and schools, in particular, teachers' stereotyped expectations that affect how they evaluate students' performance. In fact, teachers play a crucial role in students' educational pathways: they evaluate and grade students' performance and thus strongly influence the educational credentials they obtain. In tracked school systems, teachers play an even more pivotal role for students' educational pathways because they recommend which track students should attend. According to Esser, tertiary effects exist when teacher evaluations and recommendations are biased by students' background independent of students' actual achievement. Thys (2018) points out that teachers may also influence students' and parents' educational decision-making processes in teacher–parent interactions. Understanding these interactions between teachers and parents is a particular concern of the present study.

Empirical Evidence on Educational Transitions and Track Placement

A fairly consistent evidence base across countries shows that students from higher social backgrounds are much more likely to be placed in a higher track than students from lower social backgrounds (Barg 2013; Boone and van Houtte 2013; Ditton and Krüskén 2006; Gamoran and Mare 1989; Jackson 2013a; Jæger 2009; Kelly 2008; Ress and Azzolini 2014). To a large extent, these social inequalities in track placement are due to differences in competencies—as suggested by Boudon's (1974) primary effect. However, even when students' achievement is controlled for,

a residual effect of socioeconomic background on track placement typically remains (Jackson 2013a; Kelly 2008); this may be an indication of the presence of Boudon's secondary effect. Several studies using large-scale survey data have explicitly tested Boudon's assumption that the secondary effect is a result of socioeconomic differences in rational choices. Studying the transition into secondary school in Germany, Stocké (2007) found that parents' choices regarding their children's secondary-school track were indeed affected by the perceived probability of their children's success and their desire to avoid downward mobility. However, these factors did not explain the influence of social class on track choice, thus providing mixed evidence for the notion that rational decision making underlies inequalities in parents' track choices. Focusing on educational decision making beyond compulsory education in Denmark, Breen, Van de Werfhorst, and Jaeger (2014) show that relative risk aversion and the perceived value of long-term educational returns influenced students' choices. But similar to Stocké, Breen and colleagues found that these factors did not mediate the effect of social background on the educational pathway chosen after compulsory schooling.

This finding, that rational choice theory cannot fully explain social differences in track choices, has been confirmed by studies that combine rational choice theory and Bourdieu's (1980) habitus theory to analyze educational decision-making processes in the context of educational transitions. Using a mixed-methods design to study social inequalities during transitions into college in the United States, Grodsky and Riegle-Crumb (2010) show that some students, mostly from high-SES backgrounds, do not make a rational choice to go to college by carefully weighing the costs and benefits; instead, they have a "college-going habitus," meaning they have always assumed they would go to college. Similarly, using qualitative interview data, Glaesser and Cooper (2011) conclude that even though cost-benefit reasoning plays a role in young people's decision-making processes after compulsory schooling in Germany and England, their class-based habitus determines the upper and lower boundaries for their educational aspirations and reasoning. Boone and Van Houtte (2003), who studied the transition from elementary to secondary school in Flanders, also show the importance of predetermined preferences in educational choices. Using a mixed-methods

design, they found that students' perceptions of their available choices were shaped by what their parents considered acceptable—for middle-class families, this meant a lower-track education was not an option.

A number of qualitative studies also show how parents' cultural and social capital, in particular, parental involvement, can explain social inequalities in students' track placement. Investigating enrollment in more advanced courses at the transition from middle school to high school in the United States, Baker and Stevenson (1986) found that observed social inequalities can largely be explained by well-educated parents actively managing their children's school careers. Compared to low-educated mothers, mothers with at least a college education knew more about their children's school performance, had more social contact with school personnel, and were more likely to choose advanced tracks for their children regardless of their children's grades. This is in line with Useem's (1991, 1992) findings on placement in advanced mathematics courses in U.S. middle schools: well-educated parents were more knowledgeable about the tracking system, more involved in school affairs, and more likely to directly intervene at the school and exert influence over their children to ensure a higher math course placement.

Even though Lareau (1987; Lareau et al. 2016) does not directly study track placements, her work on socioeconomic differences in parents' economic, cultural, and social capital can be seen as further evidence that parental involvement may be driving social inequalities in track placement. Her work suggests that parents' overall level of involvement may not differ. In an early study, Lareau (1987) found that parents from a variety of different socioeconomic backgrounds all supported and helped their children to be successful in school. However, high-SES parents were more effective because they had more educational skills and more practical knowledge about the school system. In a more recent study on parents' search for a kindergarten, Lareau and colleagues (2016) found that high-SES parents were able to activate their cultural and social capital to access a high-status kindergarten for their children by knowing the rules of the game and complying with institutional standards. They concluded that parents' actions gain value only in a specific context or field (using Bourdieu's [1984] concept). The differences in parental involvement found in these qualitative studies contrast with the results of

Kelly's (2004) quantitative study, which found no support for the hypothesis that social inequalities in track placement are mediated by parents' direct involvement. Yet, parents' expectations regarding their children's educational attainment and track placement had a strong positive effect.

Finally, some recent evidence shows the influence of teachers and schools on social differences in track placement—what Esser (2016a, 2016b) frames as the “tertiary” effect of social background on educational attainment. Using a mixed-methods design to study the transition from primary to secondary education in Flanders, Thys (2018) found that teachers' expectations, evaluations, and recommendations differed for students from different social backgrounds. She concludes that teachers can counteract or reinforce inequalities in educational choices and are thus “gatekeepers” at educational transition points. Taken together, this research suggests that, beyond rational choices, there may be various mechanisms by which social background affects educational transitions. Of relevance for the methodological approach we adopt here, the different theoretical explanations for educational choices are commonly associated with different types of data. Whereas rational-choice theoretical studies typically use large-scale quantitative data, studies informed by social reproduction theory mostly use in-depth qualitative data. In our study, we combine both analytic approaches and both theoretical perspectives.

The Transition into Secondary-school Tracks in Germany

Comparative studies typically cite Germany as the prototypical example of a rigid early tracking system (Shavit and Müller 2000; Van de Werfhorst and Mijs 2010). German students are selected into schools of different tracks at the end of elementary school, when they are age 10 or 12 (depending on the state). Traditionally, Germany had a three-tiered system of *Hauptschule*, *Realschule*, and *Gymnasium*. The *Hauptschule* (the low track) and the *Realschule* (the intermediate track) offered a vocationally oriented curriculum; the *Gymnasium* (the high track) was the only track that provided students with an academic curriculum preparing them for university. In recent years, several de-tracking reforms have combined tracks and increased the permeability between tracks. As

a result, there is now considerable variation across federal states with respect to the number and quality of school tracks (for a detailed description, see M. Becker, Neumann, and Dumont 2016).

In addition to different school tracks, Germany's school system also has different school-leaving certificates, which still correspond to the traditional three-tiered track system. The low and intermediate school-leaving certificates qualify students for vocational education, whereas the highest school-leaving certificate, the *Abitur*, is the formal prerequisite for university enrollment. Different certificates can be obtained within the same school track depending on students' performance, but the pathway to the *Abitur* is more straightforward in the academic track, making it the most prestigious and sought-after school track.

Given the differences between tracks regarding the curricula and students' future opportunities, the transition from elementary to secondary school is a crucial point for the development of educational inequalities in the German educational system (Kelly 2008; Neugebauer and Schindler 2012). A number of studies show that students from low-SES backgrounds are much more likely to transition into nonacademic-track schools, and high-SES children are more likely to transition into academic-track schools. Although these differences are becoming smaller, they persist when students' competencies are controlled for (for a review of these studies, see Dumont et al. 2014). To explain these social inequalities in track attendance, it is important to understand the regulations and procedures governing the transition process. During the last year of elementary school, teachers recommend each student for a particular secondary-school track. This recommendation is not based on a standardized test of the student's competencies but relies on the student's grades at the end of elementary school and, in ambiguous cases, on the teacher's general assessment of the child's academic potential (the specific regulations differ between states). Most parents follow the teacher's recommendation and send their children to the recommended school track. When parents prefer a different track for their children, their options differ from state to state. In most states, the teacher's recommendation is not legally binding, meaning parents can send their children to any track they want, assuming they find a school willing to accept them. In the few states where the teacher's recommendation is binding, parents can formally challenge the recommendation by going

through a particular procedure, which is again state specific (e.g., by having their children pass an additional exam or complete a trial semester in the desired track).

Parents usually have the final say on which track their children will attend, but teachers play a crucial role during the transition process into secondary school. Accordingly, previous research suggests that social inequalities in secondary-school track attendance are a result of both socioeconomic differences in parental decisions (R. Becker 2000; Stocké 2007; Wiedenhorn 2011) and teachers' socially biased evaluations of children's performance (Böhmer et al. 2015; Nölle et al. 2009). However, these mechanisms are not well understood, particularly when it comes to the interaction between parents and teachers during the transition process. One interview study with teachers found that some parents negotiate with teachers about their track recommendations (Pohlmann-Rother 2010)—indicating that the interaction between families and schools may be driving the observed inequality in track attendance between children from different socioeconomic backgrounds.

The Present Study

Both the different theoretical explanations of social inequalities in educational transitions and the existing empirical evidence suggest that social background affects students' track placement through a variety of mechanisms before and during the transition phase. Previous studies were typically conducted within particular theoretical traditions regarding educational transitions (e.g., rational choice theory or social reproduction theory). These traditions, in turn, often went hand-in-hand with a particular empirical approach (e.g., with a quantitative approach using survey data or a qualitative approach using data from interviews or participant observations). Moreover, most prior research solely focused on the transition point itself and sought to disentangle social background effects on track assignment that stem from achievement differences and social background effects that exist net of these achievement differences (Jackson 2013a; Jackson et al. 2007; Kelly 2004).

In our study on social inequalities in the transition from elementary to secondary school in Germany, we aim to take a more holistic and process-

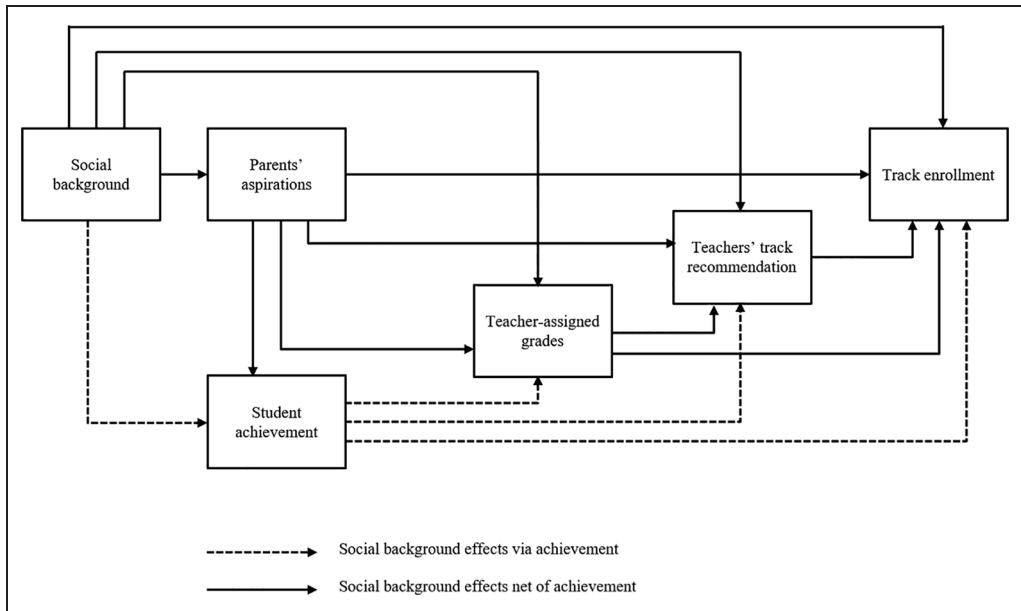


Figure 1. The conceptual model of the transition from elementary to secondary school in Germany underlying the quantitative analyses of the present study.

oriented approach. Based on the assumption that social inequalities at this educational transition point are due to a complex and long-term process happening within interactions between families and schools, we study social inequalities in students' final track placement and social inequalities in key variables that influence secondary-school track attendance. Accordingly, our main research question asks, What are the processes and mechanisms underlying social inequalities in the transition from elementary school to secondary-school tracks? Specifically, we analyze social background effects on four outcomes: student achievement, teacher-assigned grades, teachers' track recommendations, and track enrollment. We expect these variables to influence each other in consecutive order.

To do justice to the different theoretical explanations for social inequalities in educational transitions and to more comprehensively understand the underlying mechanisms, we use a mixed-methods design. In doing so, we are able to overcome the lack of depth of survey data and the lack of generalizability of qualitative data (for a similar approach applied to other educational transitions, see Boone and van Houtte 2013; Crosnoe and Muller 2014; Gomensoro and Bolzman 2015; Lee and Kramer 2013). Our quantitative analyses are based on

longitudinal data from a large-scale representative survey and assessment study conducted in the city of Berlin during the school years 2011–12 and 2012–13.

In line with previous research on social inequalities at educational transition points (e.g., Jackson 2013a; Jackson et al. 2007; Kelly 2004), we sought to disentangle social background effects on track assignment that stem from achievement differences and social background effects that exist net of these achievement differences. We also analyzed to what degree parents' short-term aspirations (regarding their children's track placement) and long-term aspirations (regarding their children's school-leaving certificate) can explain the observed social background effects. In this context, we assume that parental aspirations are manifestations of social background that drive their behavior in their interactions with their children and their interactions with their children's schools. Figure 1 depicts the conceptual model guiding our quantitative analyses.

We use data from in-depth interviews with parents to gain a deeper understanding of social background effects on student achievement, teacher-assigned grades, teachers' track recommendations, and track enrollment. Using qualitative data allows us to analyze the more

subtle mechanisms that are at work in the interaction between families and schools and that underlie social reproduction; these are difficult to find using survey data.

METHOD

Data and Sample

The school system in Berlin. Being not only a city but also a federal state, Berlin has its own school system. After six years of elementary school, students have two secondary-school track options: they can go to either the *Gymnasium* (which we will call the “academic track” hereafter) or the *Integrierte Sekundarschule* (which we will call the “nonacademic track”). The fact that there are only two secondary-school tracks in Berlin (in contrast to three or more tracks in other federal states in Germany) simplifies the empirical analyses and thus makes Berlin a suitable context to study social inequalities at the transition point from elementary to secondary school in Germany.

In the last year of elementary school, students receive their teacher’s recommendation to attend one of these two tracks. This recommendation is mainly based on the grades students received in all subjects during the second half of fifth grade and the first half of sixth grade. Schools calculate a weighted average score from 1 to 6 (with 1 being the best score) for each student, in which grades in German, mathematics, science, and the student’s first foreign language count twice and grades in all other subjects count once. Students with scores below 2.2 receive an academic-track recommendation; students with scores above 2.8 receive a nonacademic-track recommendation. For students who score between 2.2 and 2.8, the track recommendation is up to the teacher. Even though teachers provide these formal recommendations, parents are free to disregard them and choose the school track they believe is appropriate for their children. To better understand parents’ decision-making processes regarding school tracks, it is important to note that students can obtain all three school-leaving certificates in both school tracks; however, the pathway to the *Abitur* (the highest school-leaving certificate) is much more straightforward in the academic track. Not only is the curriculum in the academic track geared toward the *Abitur*, but students in the nonacademic track who want to gain the *Abitur* must have very

good grades to continue to upper-secondary school. Moreover, only a small percentage of nonacademic-track schools have an upper-secondary school attached to them; this means many students who gain entrance to upper-secondary school have to change schools after 10th grade. Therefore, it is not surprising that most parents in Berlin would like their children to attend the academic track (see Quantitative Measures section).

Quantitative data. We drew the quantitative data from a large-scale longitudinal study that evaluated Berlin’s secondary-school system (Maaz et al. 2013; Neumann et al. 2017). We use data from the study’s first cohort, which provides a representative sample of 3,935 students at the end of sixth grade from 87 public elementary schools. Sampling was based on a two-stage random sampling procedure that involved first randomly selecting schools (stratified by city district) and then randomly sampling two classrooms per school, with all students within the sampled classrooms being part of the sample. Data collection, carried out by trained research assistants at the schools, took place in May 2011, which was the end of the 2010–11 school year and right before the transition into secondary school. Data from official school records, standardized achievement test data from students, and questionnaire data from students, teachers, and school principals were collected. With the exception of individuals who were not at school on the day of data collection due to illness or other reasons, participation in the study was mandatory for students, teachers, and school principals. Parents, who participated in the study on a voluntary basis, were asked to fill out questionnaires several months before data collection at the schools took place. After the main data collection, students were followed during the transition process; data from official school records on their secondary-school track enrollment were collected at the beginning of secondary school in seventh grade in the 2011–12 school year.

Qualitative data. The qualitative data come from 25 narrative interviews we conducted with parents whose children entered secondary school in Berlin in the same year as students in the quantitative study. To avoid interfering with parents’ school choices and decision-making processes,

Table 1. Comparison of Quantitative and Qualitative Sample.

	Enrollment in		Total
	Nonacademic track	Academic track	
<i>Quantitative sample (N = 3,935)^a</i>			
Teacher recommendation for			
Nonacademic track	1,918 (48.7%)	273 (6.9%)	2,191 (55.7%)
HISEI	40.8 (18.7)	46.8 (20.1)	
Abitur	574	143	
Academic track	289 (7.4%)	1,455 (37.0%)	1,744 (44.3%)
HISEI	52.4 (19.5)	58.1 (20.6)	
Abitur	162	1,006	
Total	2,207 (56.1%)	1,728 (43.9%)	
<i>Qualitative sample (N = 25)^b</i>			
Teacher recommendation for			
Nonacademic track	4 (16%)	3 (12%)	7 (28%)
HISEI	45.5 (14.0)	64.7 (12.1)	
Abitur	1	3	
Teacher recommendation for			
Academic track	8 (32%)	10 (40%)	18 (72%)
HISEI	50.1 (10.1)	63.3 (9.9)	
Abitur	6	8	
Total	12 (48%)	13 (52%)	

Note: HISEI = Highest International Socio-Economic Index of Occupational Status.

^aParents' occupational status (HISEI), $M = 48.8$ ($SD = 21.2$); parents' educational background, Abitur: 48.4%.

^bParents' occupational status (HISEI), $M = 56.36$ ($SD = 12.81$); parents' educational background, Abitur: 68.0%.

we collected the data after the transition, during the 2011–12 and 2012–13 school years. We recruited the sample by writing to all parents' council representatives in Berlin and through the authors' personal networks. Parents who were interested in participating in the interview study were asked to send an e-mail with information on their own educational and occupational background and their children's current track and received track recommendation. This allowed us to select a diverse sample in terms of teacher track recommendations, track enrollment, and parents' social background. We were particularly interested in interviewing parents who did not follow teachers' track recommendations for their children. For our analyses, we differentiate between "high-educated" and "low-educated" parents based on whether or not they had obtained the Abitur (equivalent to the parents' educational background variable in our quantitative analysis).

Interviews were conducted by the second author and took place in parents' homes or public places. Parents were asked to respond to the following deliberately vague question: "Could you

tell me about your child's recent transition into secondary school, specifically how you experienced the school or school track choice you had to make?" During the interviews, the interviewer only asked clarifying questions or encouraged parents to talk about their personal experiences in as much detail as possible. Interviews lasted around 90 minutes, on average, and were recorded with a dictation machine. After the interviews, parents were asked to fill out a short questionnaire to collect demographic information.

Comparison of quantitative and qualitative samples. Table 1 provides description and comparison of the quantitative and qualitative samples. Note that our qualitative sample had no parents with immigrant backgrounds, and it had more parents with higher occupational and educational backgrounds compared to our representative quantitative sample. With regard to secondary-school track enrollment—the focus of our study—the majority of students in the quantitative sample enrolled in the recommended secondary-school track. However, 7.4 percent of

students who received a recommendation for the academic track enrolled in a nonacademic-track school, and 6.9 percent of students who received a recommendation for the nonacademic track enrolled in an academic-track school. Compared to these representative numbers, our qualitative sample underrepresents students with recommendations for the nonacademic track and, as explained earlier, overrepresents parents who did not follow teachers' track recommendations. However, the goal of qualitative samples is not to be representative of large populations; rather, sampling proceeds on theoretical grounds to obtain small, intentionally selected samples that can provide important information (Sale, Lohfeld, and Brazil 2002). In other words, "representativeness of concepts, not of persons, is crucial" (Corbin and Strauss 1990:9).

Quantitative Measures

We now turn to the measures used in the quantitative analyses. Descriptive statistics and intercorrelations for these variables can be found in Table 2. We also collected information on students' social background (i.e., parents' occupational status and educational background) for participants in the qualitative study (see Table 1).

Parents' social background. We measure parents' social background via two indicators to account for its multidimensional nature (Murdock 2000; Sirin 2005): parents' occupational status and parents' educational background. Data for both variables come from the parent questionnaire.

Parents' occupational status. Parents were asked to specify their current occupation, which we categorized according to the International Standard Classification of Occupations (ISCO-08; International Labour Organization 2012) and then transformed into the International Socio-Economic Index of Occupational Status (ISEI; Ganzeboom, De Graaf, and Treiman 1992). The ISEI is a standard measure capturing a person's occupational status on an index ranging from 16 to 90, with a higher score indicating higher status. When information was available for both the father's and the mother's occupation, we included the higher score in the analyses (HISEI). To ease interpretation, we standardized the variable before the analyses.

Parents' educational background. Parents reported their highest school-leaving certificate, which we then transformed into a dummy variable

indicating whether or not they had obtained the Abitur; any other school-leaving certificate served as the reference category. The analyses include the highest education level of either the mother or the father.

Students' achievement. Students' academic achievement was measured via standardized tests in German reading comprehension and mathematics. The tests were based on the German assessments of Progress in International Reading Literacy Study (Bos et al. 2003) and a national large-scale assessment study (ELEMENT; Lehmann and Lenkeit 2008). The tests were scaled on the basis of item response theory (i.e., a one-dimensional Rasch model; Rasch [1960] 1980); weighted likelihood estimates (WLE; Warm 1989) on a t metric were used as person estimates of students' competencies. Reliability was $r_{WLE} = .84$ for reading comprehension and $r_{WLE} = .91$ for mathematics. For our analyses, we took averages of students' scores in reading and mathematics and then standardized them to ease interpretation.

Students' grades. Information on students' grades came from administrative school data. For each student, schools calculate a weighted average score of the grades students received in all subjects during the second half of fifth grade and the first half of sixth grade (for further information, see The School System in Berlin section); these scores serve as the basis for teachers' track recommendations. We used these scores for our analyses, but we coded them such that high scores indicate desirable learning outcomes (ranging from 1 to 6). As for the other continuous variables, we standardized them to ease interpretation.

Teachers' track recommendations. Data on teachers' track recommendations also came from official school records. Students could receive a recommendation for either the academic or nonacademic track. Recommendations are mainly based on students' grades; however, in ambiguous cases, teachers are asked to give a track recommendation based on their evaluation of students' learning capacities. Our analyses use a recommendation for the nonacademic track as the reference category.

Students' track enrollment. Official school records provide information on which track

Table 2. Descriptives and Intercorrelations for Variables Considered in the Quantitative Study.

Variable	Descriptive statistic	Intercorrelations															
		1	2	3	4	5	6	7	8	9	10	11	12				
1. Enrollment in: Academic track	44.1%	.70															
2. Teachers' recommendation: Academic track	45.0%	-.68	-.80														
3. Students' grade	4.4 (0.8)	.44	.54	-.64													
4. Student achievement: Reading	52.8 (10.3)	.45	.54	-.64	.65												
5. Student achievement: Mathematics	49.7 (9.9)	.33	.37	-.43	.46	.41											
6. Parents' occupational status (HISEI)	48.8 (21.2)	.32	.34	-.38	.36	.33	.57										
7. Parents' educational background: Abitur	48.4%	.49	.49	-.55	.40	.40	.33	.38									
8. Parents' aspirations: Abitur	72.1%	.52	.48	-.48	.31	.32	.22	.30	.54								
9. Parents' aspirations: Academic track	63.0%	-.04	-.17	.23	-.33	-.26	-.32	-.09	.04	.10							
10. Students: Immigrant background	44.4%	.08	.10	-.15	.06	-.13	-.03	-.01	.01	.05	.03						
11. Students: Gender (female)	48.3%	-.17	-.18	.23	-.18	-.20	-.20	-.16	-.21	-.14	.06	-.06					
12. Students: Age at transition (in months)	149.8 (6.8)	-.14	-.14	.21	-.11	-.13	-.09	-.06	-.17	-.11	.01	-.02	-.02				
13. Students: Grade retention during elementary school	5.8%																

Note: HISEI = Highest International Socio-Economic Index of Occupational Status.

students enrolled in; this was collected after the transition into secondary school. Our analyses use enrollment in a nonacademic-track school as the reference category.

Parents' aspirations. In the parent questionnaire, parents were asked about their aspirations for their children's educational future. We differentiate between two types of parental aspiration: aspirations regarding track enrollment (short-term aspirations) and aspirations regarding the school-leaving certificate obtained at the end of schooling (long-term aspirations).

Parents' aspirations regarding track enrollment. Parents were asked whether they wanted their children to enter the academic or nonacademic track. The latter serves as the reference category in our analyses.

Parents' aspirations regarding the school-leaving certificate. Parents were asked which school-leaving certificate they wanted their children to obtain at the end of schooling: the lower school-leaving certificate, the intermediate one, or the highest school-leaving certificate. For our analyses, we created a dummy variable indicating whether parents hoped their children would attain the highest school-leaving certificate (the Abitur) or not. The latter serves as the reference category in our analyses.

Control variables. Our analyses include four control variables: students' immigrant background (indicating whether at least one parent was born outside of Germany; nonimmigrant students are the reference group), students' gender (male is the reference group), students' age at the transition into secondary school, and grade retention (indicating whether students repeated at least one grade during elementary school; no grade retention is the reference group).

Quantitative Analyses

Regression models. Based on our conceptual model shown in Figure 1, we first estimated regression models with clustered standard errors in Stata. For each outcome, we ran nested models, meaning we added more predictors with each model. The models for the four outcomes were similarly constructed and built on each other consecutively. In all models, we control for immigrant background, gender, age, and grade

retention. To ensure the representativeness of our sample, we use sampling weights to account for differential sampling probabilities.

Social background effects on students' achievement. To analyze the effect of students' social background on their achievement as measured in standardized tests, we ran two linear regression models. Model 1 predicts students' achievement test scores using the two indicators of students' social background: parents' occupational status and parents' educational background. Model 2 adds the two indicators of parents' aspirations as predictors.

Social background effects on students' grades. To analyze the effect of students' social background on their grades, we ran three linear regression models. Model 1 predicts students' grades using the two indicators for students' social background. Model 2 adds students' achievement to estimate the residual effect of social background. Finally, Model 3 adds the two parents' aspiration variables.

Social background effects on teachers' track recommendations. To analyze the effect of students' social background on teachers' track recommendations, we ran logistic regression models in Stata using the Karlson–Holm–Breen (KHB) method (Karlson and Holm 2011; Karlson, Holm, and Breen 2012; Kohler, Karlson, and Holm 2011). KHB, a decomposition method, is unaffected by rescaling and thus allows researchers to compare the coefficients of nested logistic regression models; this is not the case in conventional logistic regressions. The KHB method holds the explained variance constant in all models by using the residuals (a regression of the independent variables on the missing ones) as additional explanatory variables in the reduced models. The advantage of KHB compared to other decomposition methods is that it is intuitive, delivers unbiased results, and does not require the variables to be decomposed to be categorical. We estimate average partial effects for each predictor variable, which represent the average change in the probability of the outcome for a one-unit increase of these predictor variables.

We ran four models. Model 1 estimates the total effect of students' social background on teachers' track recommendations. Model 2 adds student achievement so we can estimate the residual effect of social background. Model 3 includes students' grades so we can further isolate the effects of social background that are independent

of students' grades. Finally, Model 4 enters parents' aspirations into the model.

Social background effects on track enrollment. We also estimate social background effects on enrollment in the academic track via logistic regression models using the KHB method. These models are constructed in a similar manner to the other models—more predictors are added from Model 1 through Model 5.

Path analysis. To complement the separate regression models for each outcome and to estimate the relative contribution of each predictor in the transition process, we also conducted a path analysis in Mplus (Muthén and Muthén 1998–2012) based on the conceptual model depicted in Figure 1. As in the regression models, the path analysis accounts for the nested data structure, uses sampling weights, and controls for students' immigrant background, gender, age, and grade retention. Note that the paths for continuous outcomes represent linear coefficients, and the paths for dichotomous outcomes represent linear probability coefficients; linear probability coefficients are identical or almost identical to average partial effects (Mood 2010).

Handling of missing data. Because participation was mandatory for students, we had very high participation rates: 93.4 percent of students participated in the assessment, and 93.0 percent of students filled out the questionnaire. Data from official school records, including demographic variables, were collected for all students. Among parents, 66.8 percent filled out the parent questionnaire. We multiply imputed missing data using the R package mice (multivariate imputation by chained equations; van Buuren and Groothuis-Oudshoorn 2011), creating 20 data sets. Multiple imputation is currently seen as the best method for dealing with missing data (for further details, see Graham 2009). For the imputation model, we also use auxiliary variables, that is, information from the data that was not included in our main analyses. Data were drawn from official school records and from the student questionnaire.

Qualitative Analyses

We analyze the qualitative data from the narrative interviews with parents using the “documentary method” (Bohnsack 2014; Bohnsack, Pfaff, and

Weller 2010), which originated in Karl Mannheim's sociology of knowledge (for a description, see Sagarin and Kelly 1969) and the tradition of ethnomethodology (Garfinkel 1967). This method aims to reconstruct the implicit knowledge and habitualized actions of individuals belonging to a social group. The documentary method involves three analytic steps. First, the interviews are transcribed word for word; second, this text is “reformulated” to understand *what* was said; and third, *how* something was said is interpreted. During the third and most important analytic step, we constantly compared parents' narratives with each other in an iterative process to extract similarities and differences between them; such an approach enables the researcher to break through subjectivity and bias when interpreting data and helps to achieve greater precision and consistency in the emerging concepts (for a description of the evaluative criteria for qualitative research, see Corbin and Strauss 1990). For brevity, we present only the condensed findings from this analysis and use quotes to illustrate these findings. For better readability, we present the qualitative findings in the same order as the quantitative findings.

RESULTS

Quantitative Results

Our main aim with the quantitative analyses was to establish robust parameters of social inequalities during the transition from elementary to secondary school by analyzing social background effects on four variables: student achievement, students' grades, track recommendation, and track enrollment. We first present findings from the separate regression models for each of these outcomes; we then turn to results of the path analysis.

Quantitative results for social background effects on students' achievement.

Table 3 shows results for predicting students' standardized achievement test scores based on parents' social background and parents' aspirations. Model 1 reveals that, holding the other variable constant, students from families with higher occupational status and from families where at least one parent had obtained the Abitur scored higher on standardized achievement tests (parents' occupational status, $b = .28$, $p < .001$; parents' educational background, $b = .37$, $p < .001$). After

Table 3. Predicting Student Achievement.

Variable	Model 1		Model 2	
	<i>b</i> *	SE	<i>b</i> *	SE
Parents' occupational status (HISEI)	.28***	.02	.21***	.02
Parents' educational background: Abitur	.37***	.04	.17***	.04
Parents' aspirations: Abitur			.56***	.04
Parents' aspirations: Academic track			.33***	.04
Control variables: Students				
Immigrant background	-.44***	.05	-.56***	.04
Gender (female)	-.06	.03	-.08*	.03
Age	-.08***	.02	-.05**	.02
Grade retention	-.26**	.07	-.12	.07

Note: *b** = standardized regression coefficient; all continuous variables were z-standardized. *N* = 3,935. HISEI = Highest International Socio-Economic Index of Occupational Status.
 p* < .05. *p* < .01. ****p* < .001.

Table 4. Predicting Students' Grades.

Variable	Model 1		Model 2		Model 3	
	<i>b</i> *	SE	<i>b</i> *	SE	<i>b</i> *	SE
Parents' occupational status (HISEI)	.24***	.03	.07**	.02	.04*	.02
Parents' educational background: Abitur	.42***	.05	.19***	.04	.05	.03
Student achievement			.62***	.02	.49***	.02
Parents' aspirations: Abitur					.45***	.04
Parents' aspirations: Academic track					.36***	.04
Control variables: Students						
Immigrant background	-.27***	.04	.01	.04	-.16***	.03
Gender (female)	.31***	.04	.35***	.03	.32***	.03
Age	-.07**	.02	.01	.02	.00	.01
Grade retention	-.59***	.09	-.43***	.07	-.35***	.06

Note: *b** = standardized regression coefficient; all continuous variables were z-standardized. *N* = 3,935. HISEI = Highest International Socio-Economic Index of Occupational Status.
 p* < .05. *p* < .01. ****p* < .001.

adding parents' aspirations to the model (Model 2), both coefficients drop in size but remain statistically significant. Parents' aspirations were highly predictive of students' achievement. Students whose parents wanted them to enroll in the academic track and receive the Abitur had much higher test scores than did students whose parents had lower aspirations (parents' aspirations to receive the Abitur, *b* = .56, *p* < .001; parents' aspirations to enter the academic track, *b* = .33, *p* < .001).

Quantitative results for social background effects on students' grades. Table

4 presents results for predicting students' grades during the second half of fifth grade and the first half of sixth grade (which served as the basis for teachers' track recommendations). Model 1 shows that, controlling for parents' educational background, students whose parents had higher occupational status received higher grades (*b* = .24, *p* < .001). Similarly, controlling for parents' occupational status, students from families where at least one parent had obtained the Abitur received higher grades (*b* = .42, *p* < .001). In Model 2, we add student achievement as measured in a standardized test. Not surprisingly, this is the strongest predictor of students' grades (*b* = .62, *p* < .001).

Table 5. Predicting Teachers' Recommendations for the Academic Track.

Variable	Model 1		Model 2		Model 3		Model 4	
	APE	SE	APE	SE	APE	SE	APE	SE
Parents' occupational status (HISEI)	.08***	.01	.02***	.01	.00	.01	.00	.01
Parents' educational background: Abitur	.15***	.01	.07***	.01	.01	.01	.01	.01
Student achievement			.21***	.00	.01*	.01	.01	.01
Students' grades					.31***	.01	.30***	.01
Parents' aspirations: Abitur							.03*	.01
Parents' aspirations: Academic track							.04***	.01
Control variables: Students								
Immigrant background	-.06***	.01	.03**	.01	.02**	.01	.01	.01
Gender (female)	.09***	.01	.10***	.01	-.01	.01	-.01	.01
Age	-.03***	.00	-.01**	.00	-.01	.00	-.01	.00
Grade retention	-.16***	.02	-.10***	.02	.03	.02	.03	.02

Note: All continuous variables were z-standardized. $N = 3,935$. APE = average partial effects; HISEI = Highest International Socio-Economic Index of Occupational Status.

* $p < .05$. ** $p < .01$. *** $p < .001$.

However, small, statistically significant residual effects of parents' social background remain (parents' occupational status, $b = .07$, $p < .01$; parents' educational background, $b = .19$, $p < .001$). Model 3 shows that these residual social background effects on students' grades are almost completely explained by differences in parents' aspirations for their children. Students whose parents wanted them to enroll in the academic track and get the Abitur received better grades, controlling for social background and achievement. Notably, the coefficients for parents' aspirations are quite substantial (parents' aspirations to enter the academic track: $b = .36$, $p < .001$; parents' aspirations to receive the Abitur: $b = .45$, $p < .001$) and are almost as large as the coefficient for student achievement ($b = .49$, $p < .001$).

Quantitative results for social background effects on teachers' track recommendations. Table 5 shows results for teachers' track recommendations. Model 1 shows that students from more privileged families were more likely to receive a recommendation for the academic track from teachers. More specifically, coming from a family with an occupational status one standard deviation above the sample mean increased the probability by 8 percentage points ($p < .001$) on average; having at least one parent who had obtained the Abitur increased the probability by 15 percentage points ($p < .001$). Model 2

adds student achievement. Students who scored one standard deviation above the sample mean in the standardized achievement tests had, on average, a 21-percentage-point-higher likelihood ($p < .001$) of receiving a recommendation for the academic track. The average partial effects of parents' occupational status and parents' educational background dropped to 2 percentage points ($p < .01$) and 8 percentage points ($p < .001$) but remained statistically significant, thus revealing small residual effects on teachers' track recommendations. In Model 3, we add students' grades to analyze whether students from different social backgrounds received different track recommendations even when they had the same grades in school. The residual effects of parents' occupational status and parents' educational background are fully explained by differences in students' grades. Grades are by far the strongest predictor for teachers' track recommendations. Students whose grades were one standard deviation above the sample mean had a 31-percentage-point-higher probability ($p < .001$) of receiving an academic-track recommendation from teachers. This pattern does not change when we add parents' aspirations to the model (Model 4). However, after controlling for all other predictors, both students whose parents aspired for them to complete the Abitur and students whose parents wanted them to attend the academic track were, respectively, 3 and 4 percentage points more likely to receive an academic-track recommendation.

Table 6. Predicting Enrollment in the Academic Track.

Variable	Model 1		Model 2		Model 3		Model 4		Model 5	
	APE	SE	APE	SE	APE	SE	APE	SE	APE	SE
Parents' occupational status (HISEI)	.09***	.01	.04***	.01	.02*	.01	.02*	.01	.02*	.01
Parents' educational background: Abitur	.15***	.02	.09***	.02	.04**	.02	.04*	.02	.01	.02
Student achievement			.17***	.01	.01	.01	.00	.01	.00	.01
Students' grades					.26***	.01	.20***	.02	.17***	.02
Teachers' recommendation: Academic track							.14***	.02	.11***	.02
Parents' aspirations: Abitur									.09**	.03
Parents' aspirations: Academic track									.14***	.02
Control variables: Students										
Immigrant background	.07***	.01	.15***	.01	.14***	.01	.14***	.01	.09***	.01
Gender (female)	.06***	.01	.07***	.01	-.02	.01	-.02	.01	-.01	.01
Age	-.03***	.01	-.01	.01	-.01	.01	-.01	.01	-.01	.01
Grade retention	-.19***	.04	-.15***	.04	-.03	.04	-.04	.04	-.04	.04

Note: All continuous variables were z-standardized. N = 3,935. APE = average partial effects; HISEI = Highest International Socio-Economic Index of Occupational Status.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Quantitative results for social background effects on secondary-school track enrollment.

Table 6 shows results for predicting students' actual transition into secondary-school tracks. Model 1 reveals that students from families with high occupational status had a 9-percentage-point-higher ($p < .001$) probability of entering the academic track; students from families with a high educational background had a 15-percentage-point-higher ($p < .001$) probability. Even when entering student achievement into Model 2, we still find statistically significant residual effects of parents' occupational status and parents' educational background, but these become smaller in size (parents' occupational status, 4 percentage points, $p < .001$; parents' educational background, 9 percentage points, $p < .001$). Nevertheless, student achievement is the strongest predictor of the probability of entering the academic track by 17 percentage points ($p < .001$). The residual effects of parents' social background decrease further but remain statistically significant when we enter students' grades into Model 3 (parents' occupational status, 2 percentage points, $p < .001$; parents' educational background, 4 percentage points, $p < .001$). Moreover, student achievement is no longer statistically significant in Model 3; students' grades are now the strongest predictor of the probability of entering the academic track by 26 percentage points. In Model 4, when we add teachers' track recommendations, the residual

effects of parents' occupational status and parents' educational background do not change in comparison to Model 3. In Model 5, we add parents' aspirations to analyze whether the residual effects of parents' occupational status and parents' educational background could be explained by differences in aspirations. Indeed, the educational background coefficient is no longer statistically significant; the coefficient for occupational status, however, does not change. Interestingly, parents' aspirations predict academic-track enrollment almost as strongly (parents' aspirations for their children to obtain the Abitur, 9 percentage points, $p < .001$; parents' aspirations for their children to attend the academic track, 14 percentage points, $p < .001$) as do teachers' track recommendations (11 percentage points, $p < .001$) and students' grades (17 percentage points, $p < .001$).

Results of the path analysis.

Figure 2 shows results of the path analysis, which estimates the relative contribution of each predictor in the transition process and empirically tests the predictions made by our conceptual model from Figure 1. As the depicted empirical path model shows, our conceptual model is largely confirmed. Moreover, the coefficients from the path analysis are very similar to results of the separate regression models. In fact, only two of the paths are different in terms of statistical

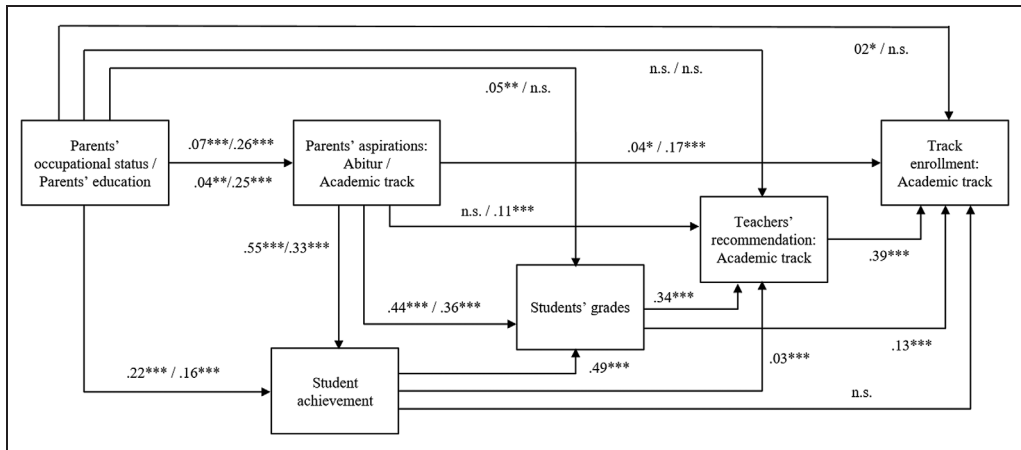


Figure 2. Empirical results from the path analysis regarding the transition from elementary school to secondary-school tracks.

Note: The paths for continuous outcomes represent linear coefficients; the paths for dichotomous outcomes represent linear probability coefficients. Model controls are included for immigrant background, sex, age, and grade retention. Two indicators were used for parents' social background (occupational status and education) and parents' aspirations (Abitur and academic track); for better clarity, the coefficients for each of these two indicators are depicted along the same path and separated by a slash. Regarding the path between parents' social background and parents' aspirations, the coefficients above the path correspond to parents' aspirations for the Abitur, and the coefficients below the path correspond to parents' aspirations for the academic track.

significance: the path from parents' aspirations for their children to obtain the Abitur and the path from students' achievement to teacher track recommendations (see Model 4 in Table 5). The size of the coefficients is very similar, and in many cases identical, between the two analytic approaches. Note that the path analysis includes the associations between parents' social background and parents' aspirations, which are not analyzed in a separate regression model. As Figure 2 shows, all four paths are statistically significant, with parents' educational background being a stronger predictor of parents' aspirations (parents' aspirations for their children to obtain the Abitur, $b = .26$, $p < .001$; parents' aspirations for their children to attend the academic track, $b = .25$, $p < .001$) than parents' occupational status (parents' aspirations for their children to obtain the Abitur, $b = .07$, $p < .001$; parents' aspirations for their children to attend the academic track, $b = .04$, $p < .01$). These findings suggest that parents from high-educated backgrounds somehow put their high aspirations into practice. The qualitative findings, to which we now turn, will show how they manage to do that.

Qualitative Results

The quantitative analyses reveal that students from high-educated families scored higher on standardized achievement tests, received better grades, were more likely to receive a recommendation for the academic track, and were more likely to enroll in the academic track. We now turn to in-depth interview data from parents to qualitatively analyze and thereby further unpack the social background effects that operate during the transition into secondary-school tracks.

Qualitative results for social background effects on students' achievement.

Even though much of the effect of social background on students' achievement is exerted in a child's early years, before school starts, our interview data reveal that high-educated parents continue to shape their children's school achievement during elementary school and the transition into secondary school. One common strategy, particularly among high-educated parents, was to help their children at home to prepare for tests. One parent vividly described why she got involved:

He can also study independently but he is always very distracted. . . . And also the problem is, that he studies best with me . . . because I always notice when he studies with me, he achieves better results. And so we spend many, many of our weekends just doing quite a lot of studying and, uh, because he has—has to learn this himself: he didn't learn this well in elementary school, I think, or he wasn't taught it, how to learn independently and to develop strategies how to do this well. This is only coming up now, and so, um, we spend a lot of time on this. (parent: high-educated; child: academic-track recommendation academic-track enrollment)

High-educated parents also used private tutoring to help children prepare for tests and schoolwork. They reported increasing their use of both strategies during the last two years of elementary school, as the transition into secondary school was approaching and as students' grades started counting toward teachers' track recommendations. A more subtle strategy high-educated parents reported was teaching their children learning strategies: they made sure their children "learned how to learn," for example, by explaining why it is important to do their homework immediately after school and not put it off. In contrast, none of the low-educated parents talked about helping their children at home or ensuring their children would receive good grades. In many of the low-educated parents' narratives, it became clear that they expected their children to be in charge of their schoolwork, and they did not perceive it as their responsibility to help their children in school matters on an everyday basis.

Qualitative results for social background effects on students' grades. All parents talked about intervening in school to get better grades for their children. Most parents described the last two years of elementary school as a time when all parents became nervous and felt a lot of pressure due to the transition into secondary school. However, high- and low-educated parents' interventions differed. Some parents, particularly those from low-educated backgrounds, directly confronted their children's teachers or even the school principal about their children's

grades. One high-educated parent described how other parents in her child's school acted:

And if it only depends on one grade, uh, yes, then it is clear, then they would strong-arm certain teachers and say, "Now please turn the C into a B so that it's not on you if our kid doesn't get an academic-track recommendation," or something like that. (parent: high-educated; child: academic-track recommendation academic-track enrollment)

One low-educated parent openly talked about how she approached her child's teacher to make sure her child would pass the class. She asked the teacher to report back to her every two weeks:

In November, the math teacher, the new one, wrote to me and told me that my son's grade is at a D. Well, then all the alarm bells started ringing, because I saw the report card, so the pressure really returned. Uh, then, I called the school and the secretary tried to get rid of me a bit, and then I really made some noise, and then I wrote and said that I want to know from the math teacher every 14 days about what's going on, what she's doing about it, and what I can do. Now he's got a C again. (parent: low-educated; child: nonacademic-track recommendation nonacademic-track enrollment)

In contrast, interactions between high-educated parents and teachers were not as direct or confrontational; they were a lot more subtle. Most high-educated parents reported how well they got along with their children's teachers, or they mentioned that they already knew their children's teachers from outside of school. In these cases, parents typically said the teachers agreed with them about their children's academic abilities. Perhaps these parents' children really did perform better, but it is important to note that high-educated parents specifically mentioned the social connection they had with the teachers. This mutual understanding with teachers may be the reason why high-educated parents did not need to get involved in a direct and confrontational manner.

Qualitative results for social background effects on teachers' track recommendations. Just as parents interacted with teachers about their children's grades, albeit in different ways, they also intervened regarding their children's track recommendations through teacher–parent interactions. As in the interactions with teachers about grades, high- and low-educated parents engaged in different behaviors. High-educated parents mentioned a mutual understanding with teachers about their children's track recommendation, or, in cases where teachers and parents disagreed about the recommendation, they reported that teachers ended up giving their children the desired recommendation without their having to do something about it:

Then I think there was a parents' meeting or a report card meeting on that day or the next day; she discussed it there with the other teachers again and then came to me and said, "Yes, I can give it [the academic-track recommendation] to you," but what really made her change her mind, I have no idea. . . . I only then talked to his class teacher about whether she, that she has to write a recommendation, whether she would do this, and at first she actually said no, but then she did it anyway, and then it all worked out well. (parent: high-educated; child: nonacademic-track recommendation → academic-track enrollment)

In contrast, lower-SES parents approached teachers much more directly about their children's track recommendations:

I had to put some pressure on there, that this is definitely an academic-track recommendation, even if they [the teachers] haven't noticed this so far. (parent: low-educated; child: academic-track recommendation → academic-track enrollment)

That's why she said, based on the grades, yes, but personally she would not really recommend it, and then we said we still wanted the [academic-track] recommendation because Susi absolutely wanted it, and we have the free choice to say academic track or nonacademic track. If we had just listened to the teachers, it would have

worked out differently. . . . She herself would not have done it and um, but I said, Well, . . . but I absolutely want it. (parent: low-educated; child: academic-track recommendation → nonacademic-track enrollment)

Qualitative results for social background effects on secondary-school track enrollment. Regarding the final enrollment process into a secondary-school track, parents reported how they intervened or were prepared to intervene if their children did not get accepted at the school they wanted:

We also have a law department in our company and I went ahead and asked someone to read up on it, in case we had to take action, so I set all the wheels in motion. . . . Yes, if that hadn't worked out, I was already eyeing up a private school because I'm someone who doesn't like being ordered around or dictated to by others, so I'm always looking for a plan B. (parent: low-educated; child: nonacademic-track recommendation → non-academic-track enrollment)

And I said, OK, my little one can actually do this, and I then took this piece of paper, this nonacademic-track recommendation, and I went to the academic-track school. . . . The secretary looked at the grades and said, "Oh, with a C in math"—or something like that—"this won't work at all," and "No, I can't accept this, I can't help you, the school can't take him, he's too bad." I said, "Uh, hello, I came here especially for this, took the time out, set this up, and I have to go to work now and I just wanted to leave this here," and I thought, if that's your opinion in the end, then I'll get an official letter that this is not going to work, maybe signed by the principal or something like that; but yes: "No, we won't do this," and I said that this is not your decision, and she said, "Alright." (parent: high-educated; child: nonacademic-track → recommendation academic-track enrollment)

Such direct interventions during the school enrollment process were reported by parents

regardless of their educational background. But other aspects mentioned during the interviews did differ for high- and low-educated parents. One key topic that emerged was high-educated parents' deep knowledge of the school system, in particular, the procedure for enrolling in secondary school and specific schools' academic profiles. Some parents gained this knowledge through their own professional backgrounds, for example, because they were teachers themselves or because they worked in law and had read the official regulations for secondary-school enrollment. Others explained how they gained this knowledge through being actively involved in the school:

I've been a parents' representative since elementary school, and, um, the longer you do this, the more you realize what the things are that you have to work on, where you have to do certain things. (parent: high-educated; child: academic-track recommendation → academic-track enrollment)

Many high-educated parents also described how they had gained this knowledge through their social networks:

Of course you also always meet people—at open day, and, uh, the day where the schools present themselves—parents you already know from the soccer club or from the elementary school, and you talk to each other, yes, and also get a bit of background knowledge, someone knows a bit here and a bit about that. (parent: high-educated; child: academic-track recommendation → academic-track enrollment)

I always look for people who are like me and ask them about their experiences no matter what the situation is, and that's always worked well. So I know that if he has the same mentality as me, then I can also rely on what he is saying. (parent: high-educated; child: academic-track recommendation → academic-track enrollment)

The most profound difference that emerged in the interviews between parents from different social backgrounds related to their values and their general approach toward their children's transition into secondary school. High-educated parents did

not put much thought into their school track decision; for them, it was obvious their children would attend the academic track, because they had attended the academic track themselves. The following quote from a high-educated parent illustrates this natural decision to attend the academic track:

Whether you get an academic-track recommendation at all or whatever recommendation you get—and even if you do not get one, you can still make your own decisions—a lot depends on it. Um, it is also that you wonder what's actually the best choice for the child, right? It's always an individual decision. And for me it was because I went to an academic-track school myself, it was actually clear, OK, academic track, right, my children will go to an academic-track school of course. (parent: high-educated; child: academic-track recommendation → academic-track enrollment)

Even in cases when their children did not get a recommendation for the academic track, high-educated parents chose the academic track for them because they perceived their children's competencies as being malleable. They had confidence and trust that their children would adjust to the academic track and be successful.

In contrast, low-educated parents were much less confident in dealing with the transition process and put much more thought into their school track decision, weighing the pros and cons for each track. Moreover, they perceived their children's competencies as being more or less fixed and did not have the same natural confidence as high-educated parents that their children would succeed in the academic track. This often led low-educated parents to make pragmatic decisions or decisions mainly motivated by risk avoidance. Sometimes, this meant deciding against the academic-track school even if a child received an academic-track recommendation:

So he did actually say he'd like to go to an academic-track school, but then I said we could spare ourselves that, he is much too lazy, he doesn't need the pressure, he should do something more practical, but that constant pressure is not necessary; so maybe he does some thinking, and he

knows what he wants to do. I mean, you can still do the vocational version of the Abitur after the 10th grade, or as I said, if he's mentally up to it, if he wants to. . . . She [the teacher] said that if he wanted, he could go to the academic track, and he will probably get the recommendation. I didn't know this yet then, but I said no, the academic track is out of the question, so this was our decision. (parent: low-educated; child: academic-track recommendation → nonacademic-track enrollment)

Integration and Summary of Quantitative and Qualitative Findings

The quantitative and qualitative analyses provided complementary evidence on how students' social backgrounds affect the transition into secondary-school tracks in Germany via different pathways. Through our quantitative analyses, we showed that students from high-educated families were more competent as measured in standardized achievement tests. But even after statistically controlling for these achievement differences, residual effects of social background remained. That is, students from high-educated families received slightly better grades in school than did their low-educated classmates with the same test scores. Similarly, students from high-educated families and from families with higher occupational status were more likely to receive a teacher recommendation for the academic track after controlling for achievement differences. However, these effects were rather small and almost vanished when controlling for students' grades. Moreover, students from high-educated families were more likely to enroll in the academic track when controlling for achievement differences. This effect persisted when we additionally controlled for grades and track recommendations received from teachers. Finally, we found parents' aspirations to be strong predictors of all outcomes. This was particularly the case for students' grades, for which parents' aspirations were almost as strong a predictor as students' achievement.

Our qualitative analyses also provided evidence on social background effects during the transition into secondary-school tracks and allowed us to gain a deeper understanding of the underlying mechanisms. For most of the high-educated parents, it was clear their children would

attend the academic track (even if they did not receive an academic-track recommendation), because they had attended the academic track themselves. Accordingly, these parents subtly intervened to make sure their children would be able to attend an academic-track school long before the actual decision was made. They knew a lot about the school system and the enrollment procedure, in particular, the importance of grades, so they invested considerable efforts in improving their children's grades. In addition to increased study efforts at home, these parents also interacted with teachers to ensure teachers knew what track recommendation they expected and thus what grades their children needed. However, based on the accounts they provided in the interviews, it seemed parents were unaware of what they were doing when communicating with teachers. The only thing they commonly mentioned was how well they got along with the teachers. Therefore, the interaction between teachers and high-educated parents may best be described as a tacit, subtle, and long-term process of wordless understanding, with teachers anticipating what these parents wanted and delivering it.

Even though low-educated parents also actively sought the best for their children, their interactions with teachers about grades and track recommendations started rather late during elementary school and were more direct and confrontational than those of high-educated parents. These observations are in line with results of the quantitative analysis, which show large social background effects and effects of parents' aspirations on grades, but almost no inequalities in track recommendations, in particular after controlling for students' grades.

Regarding the actual transition into secondary school, low-educated parents did not take it for granted that their children would attend an academic-track school. Therefore, their children's transition into a secondary-school track involved an actual decision-making process, with a weighing of pros and cons, costs and benefits. This sometimes led these parents to go against an academic-track recommendation and enroll their children in the nonacademic track instead. On the other hand, high-educated parents enrolled their children in academic-track schools even without a recommendation for it, because they did not doubt that their children belonged in this track and would be successful.

DISCUSSION

Discussing our findings against the backdrop of the theoretical explanations of social inequalities during educational transition, we find (at least partial) support for each one. Our quantitative analyses show that social inequalities in track placement are largely explained by differences in students' achievement. Moreover, we find observable residual effects of social background net of achievement. This is in line with Boudon's (1974) distinction between primary and secondary effects. In the qualitative analyses, we found evidence for decision-making processes in line with rational-choice theoretical assumptions—which are at the heart of Boudon's secondary effects. However, we observed such rational choice decisions only for low-educated parents. In contrast, high-educated parents had an “academic-track-going habitus”: they had always known their children would attend the academic track. This offers support for Bourdieu's (1980) habitus theory and is similar to what Grodsky and Riegle-Crumb (2010) call a “college-going habitus” and what Boone and van Houtte (2013) call “choice within predetermined limits.” Based on these findings, we believe rational choice theory and the habitus concept may be two sides of the same coin. In fact, we are not the first to suggest an integration of these theoretical concepts. In a larger study on the transition from compulsory schooling to university in Italy, Gambetta (1987) concludes that when making educational decisions, individuals are both “pulled from the front”—meaning they will purposefully weigh multiple courses of action and choose the one with the most desired future—and “pushed from behind”—by forces that are not entirely conscious and that will limit their preference structure. In a similar fashion, Esser (1990) argues that decision-making processes may not necessarily be conscious; often, “habits” and cognitive “frames” will determine an individual's decision.

Based on our qualitative analyses, we found that parents' cultural and social capital (Bourdieu 1986) also matters tremendously for the transition into secondary-school tracks. Our findings regarding the tacit understanding between teachers and high-educated parents suggest parents' embodied cultural capital—the most subtle form of capital—may be particularly important. Parents' social capital also matters to the extent that high-educated parents know a lot more about the school system through their networks with other parents

and their own involvement in the school. This is in line with Connell and colleagues' (1982) seminal study showing that educational inequalities are driven by the relationships and interactions between parents and teachers, which they describe as “class relation.” The importance of the quality of interactions may also explain why Kelly (2004) did not find evidence for the role of parents' direct involvement using survey data. In-depth narrative interview data allowed us to uncover these mechanisms; because parents were often not aware of their own behavior, it is unlikely we would have discovered this using quantitative survey data. What we did find in our quantitative analyses, similar to Kelly (2004) and in line with the theoretical assumptions of the Wisconsin model, is that parents' aspirations play a key role in the transition process.

Finally, we also found evidence for social background effects transmitted via teachers and schools, what Esser (2016a, 2016b) calls “tertiary effects.” Our study shows that teachers play a crucial role during transitions into different educational tracks, because they evaluate students' performance, assign grades, and often provide track recommendations. Therefore, in line with others (e.g., Thys 2018), we believe that analyzing the role of teachers in educational transitions is crucial for obtaining a complete picture of the mechanisms underlying social inequalities at these important times in students' academic careers. We would thus like to encourage others to continue along this analytic path.

Taken together, our findings show that social inequalities in educational transitions are the result of a complex and long-term process in which different mechanisms—involving parents, teachers, and most importantly, the interactions between them—play a major role. Therefore, we believe that solely analyzing track enrollment and differentiating between social background effects via and net of student achievement are not sufficient. Even though it is informative to empirically disentangle these two effects, this ignores not only how many other factors play a role but also how the two effects may be related and intertwined. For instance, as Jackson (2013b) suggests, our qualitative analyses show that parents' anticipatory decisions influence the way they help their children at home. To gain a more complete picture of social inequalities in educational transitions, we believe it is important to combine not only different theoretical explanations but also mixed-method evidence.

The Role of Institutional and Organizational Features for Social Inequalities in Educational Transitions

Our study was conducted in Germany, a country with one of the highest levels of educational inequalities. Our findings support comparative social stratification research that suggests this may be due to Germany's rigid early tracking system. As Jackson and Jonsson (2013) suggest, certain institutional features, such as an educational system's stratification, should make high-SES parents' advantages more likely to manifest themselves. Indeed, the early and high stratification in the German system makes it easier for parents from high-SES backgrounds to secure certain advantages for their children. Despite the increasing openness of the system, recent studies analyzing students' trajectories throughout secondary school show that social inequalities at the transition point into secondary school persist, as it is mostly high-SES students (and their parents) who are making use of increased opportunities to correct track decisions (Buchholz and Schier 2015; Glaesser and Cooper 2011).

In addition to general institutional features, more specific organizational features of particular school systems and schools may also manifest at the microlevel between individuals. As Useem (1991) and Oswald, Baker, and Stevenson (1988) suggest, organizational features might constrain parental involvement patterns and influence the nature of family-school relationships. This is also likely the case for our study. In Berlin, parents are free to choose the secondary-school track for their children; if they had to follow teachers' track recommendations, they might have behaved in different ways in their interactions with school personnel, which in turn might have affected our observed levels of overall inequality.

Limitations

Our study has several limitations we need to address. First, our qualitative sample contained many parents from high-educated backgrounds and few who had obtained the low school-leaving certificate or even no school certificate. It is not clear how this might have biased our findings. Second, and related to the first limitation, our qualitative sample did not include any parents from immigrant backgrounds. Quantitative

research on social inequalities at the transition point into secondary school in Germany suggests students with immigrant parents are more likely to enroll in the academic track than are students of German-born parents with comparable social backgrounds and academic performance (Dollmann 2016); in fact, we also found this to be the case in our data. It is thus very likely that mechanisms other than those we identified are at play for students from immigrant backgrounds. For instance, language barriers might play a role for immigrant parents' interactions with schools. At the same time, immigrants typically have very high aspirations for their children (Kao and Tienda 1995), which could also influence their involvement during the transition into secondary school.

Third, our measure of students' achievement was based only on test scores in German reading comprehension and mathematics. Our findings regarding the residual effects of social background may have been smaller if we had been able to test students in more subjects. Fourth, we conducted interviews only with parents, not with teachers. Because we focus on the interaction between families and schools, it would have been informative to see whether teachers' perspectives differ from parents' perceptions. Unfortunately, this was beyond the scope of the present study. Fifth, we focused on social inequalities regarding the decision between the academic and nonacademic tracks. However, these are not the only factors that determine parents' school track selection; we did not report school-specific factors that parents mentioned during the interviews. Berlin has many different schools with particular academic profiles; hence, in some cases, parents' decisions were determined more by these profiles than by the school track. Other factors that influenced parents' school choice were the school's location, personal connections to the school, and the school's reputation.

Sixth, in addition to school-specific factors of secondary schools, we did not analyze how the school context of elementary schools affects the transition into secondary schools. For instance, recent evidence suggests school context in elementary schools, in particular, the student body composition, affects choice processes at the transition into secondary school (Thys and Van Houette 2016). Taken together, the processes and mechanisms underlying the social inequalities at the transition point from elementary school into secondary-school tracks are thus likely to be much more complex than presented in our study.

Notwithstanding these limitations, we believe our study makes an important contribution to the research on educational transitions. We show that social inequalities at points of transition are the result of different and complex mechanisms, and the institutional regulations in place leave plenty of room for parents to game the system. High-educated parents have particularly effective, albeit subtle, ways to get what they want for their children. In other words, high-educated parents know how to “master the rules of the game” (Lareau et al. 2016:280), showing that “the educational tournament does not exactly occur on a level playing field” (Kelly 2008:220). Moreover, our study makes important theoretical and empirical contributions to the research on social inequalities more generally, as we were able to show that the source of inequality is not so much “in families” or “in schools” but in the interaction between the two, revealing a complex interdependency between these two institutions in shaping inequalities.

AUTHORS' NOTE

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RESEARCH ETHICS

The review board of the Berlin Senate Administration for Education, Science, and Research approved the research on human subjects conducted for this manuscript. The research was therefore carried out in compliance with the ethical standards articulated in the 1964 Declaration of Helsinki and its subsequent amendments and Section 12 of the ASA's Code of Ethics. Specifically, all students and their parents or guardians gave their informed consent prior to participation in the study. Participants were allowed to withdraw their consent at any time during or after the data collection. Adequate

steps have been taken to protect participants' confidentiality.

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