

FAMILY LEGACIES: SOCIAL ORIGINS, SOCIAL MOBILITY, AND
EDUCATIONAL OUTCOMES IN IMMIGRANT AND NATIVE FAMILIES

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DEDICATION

For my family.

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ABSTRACT

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While it is widely accepted that parental education is associated with children's educational outcomes, a resurgence of research on the persistence of inequalities across multiple generations and contexts underscores the need for a fuller understanding of family legacies. Growing evidence suggests that grandparental education and parental social origins are important sources of inequalities that have been overlooked. Though the intergenerational literature has shown weaker associations between family background and student outcomes in racial minority and immigrant families, little research has examined whether these findings hold when taking into account a more comprehensive view of family background. This research takes advantage of data on grandparental, parental, and student education from the Education Longitudinal Study of 2002 (ELS:2002), a nationally representative study of 10th-graders who were followed for a decade. The study first examines whether maternal grandparental education continues to be associated with student academic achievement and attainment, net of parental resources, and whether having more educated grandparents similarly serves as a resource in native, immigrant, and minority families. Next, the study focuses on the relationship between maternal social mobility trajectories (which combine maternal social attainment

and social origins) and different forms of parental involvement at home and in schools, comparing patterns between native and immigrant families. Lastly, the study examines variations in teacher perceptions of parental involvement and student ability by maternal social mobility trajectories, again focusing on comparisons of patterns between native and immigrant families. Overall, the study finds a consistent association between broader conceptions of family background that include grandparental education and maternal social origins and student outcomes in native families, but much less consistent evidence of such associations in immigrant and racial minority families. The study posits that immigrant and racial minority families do not benefit from the same family resources compared to native families, given the challenges associated with navigating a new educational system as well as systemic institutional barriers that prevent the full incorporation of families from diverse backgrounds. Implications for expanding theories of social and cultural reproduction as well as for educational policies focused on family-school relationships are discussed.

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Chapter 1

Taking the Long View: Family Educational Histories and Student Educational Outcomes in Immigrant and Native Families

Abstract

Renewed interest in the transmission of inequality across multiple generations has provided evidence that grandparental education is independently associated with their grandchildren's educational outcomes. While intergenerational literature has shown significantly weaker associations between family background and student outcomes in racial minority and immigrant families, such families have largely been overlooked in the growing literature taking a multigenerational perspective of social reproduction. This study thus examines whether maternal grandparental education continues to be associated with student academic achievement (10th-grade GPA) and attainment (completion of bachelor's degree), net of parental resources, and whether having more educated grandparents similarly acts as a resource among native, immigrant, and minority families. Nationally representative data from the Education Longitudinal Study of 2002 (ELS:2002) are used to construct family educational histories (n=12,350) and analyses compare patterns between native and immigrant families as well as for racial minority families. Results show that having a more educated maternal grandparent is consistently associated with advantages in student outcomes among native White families but not among immigrant families and less so among native minority families. Findings from this study have implications for the long-term well-being of immigrant and minority families in the U.S.

Introduction

It has long been understood that parental socioeconomic status (SES) plays an important role in children's educational outcomes (Blau & Duncan, 1967; Haller & Portes, 1973), such that researchers take "parental effects as a given" (Kao & Thompson, 2003, p. 432). Numerous studies find that parents with more education generally also have greater access to economic, social, and cultural resources that benefit their children's education. However, research also finds significant variation in the strength of associations between parental SES and student outcomes in racial minority and immigrant families (e.g., Gamoran, 2001; Luthra & Soehl, 2015), raising the question of how well models of social reproduction explain outcomes in such families.

More recently, a resurgence of interest in the transmission of inequalities across multiple generations has provided evidence that beyond parents' own socioeconomic status, the class position of grandparents continues to exert an influence on their grandchildren's educational and life outcomes (Anderson, Sheppard, & Monden, 2018). Indeed, in their recent review of literature, Anderson et al. (2018) conclude that on average, about one-third of the association between grandparental education and their grandchildren's education remains once parental resources are taken into account. That is, regardless of parental education, students who have more highly educated grandparents also tend to have higher educational achievement and attainment. This multigenerational perspective, which takes a longer view of family educational histories, has highlighted grandparental education as a potential resource for families.

However, there has been a significant lack of research on whether multigenerational processes of social reproduction are as apparent among non-White and immigrant families. While there is some limited evidence that such processes are weaker in minority families than in White families (Song, 2016), family nativity has generally been overlooked. Intergenerational literature suggests that family educational histories may play a smaller role in immigrant families, possibly due to their optimism towards educational opportunities or their positive selection (e.g., Feliciano & Lanuza, 2017; Kao & Tienda, 1995). However, research on immigrant families has focused primarily on the influence of parents. Whether or not such families benefit from grandparental resources remains unclear. It is possible that taking into account grandparental education will reveal advantages in family educational histories not accounted for by parental resources among immigrant families, further illuminating the positive selection of immigrants to the U.S. However, it is also possible that given the disruptions inherent to the migration process, grandparental resources are much less salient to the experiences of immigrant families.

Given increasing concern over the diverging outcomes of students from different family backgrounds (G. J. Duncan & Murnane, 2011) and mounting evidence of enduring educational inequalities across generations, it is important to examine the extent to which minority and immigrant families are able to benefit from the same family resources as native White families. Using nationally representative data from the Education Longitudinal Study of 2002 (ELS:2002), this study examines whether maternal grandparental education continues to be associated with student academic achievement (10th-grade GPA) and attainment (completion of bachelor's degree), net of parental

resources, and whether having more educated grandparents similarly serves as a resource among native, immigrant, and minority families. Results show that among native families, particularly native White families, grandparental education is positively associated with student outcomes, even after taking into account parental resources. However, this pattern is not as strong among Black and Latino native families and is not at all supported among immigrant families. Thus, while patterns for native White families conform to the emerging consensus over the importance of grandparental resources for children's well-being, patterns for non-White and immigrant families instead suggest potential long-term disadvantages in the accumulation of family resources.

Family Socioeconomic Background and Educational Outcomes

The relevance of parental socioeconomic status (SES) for their children's educational outcomes has been established across a variety of studies (Haller & Portes, 1973; Havemen & Wolfe, 1995; Sewell & Shah, 1968; Sirin, 2005; White, 1982; Willis, 1981). Moreover, the association between family socioeconomic status and student outcomes has remained stable over time and is found across many different countries (Mare, 1981; Pfeffer, 2008). The various components of parental socioeconomic status, such as education and income, can be broadly viewed as proxies for the resources parents bring to bear on their children's education, including economic capital, social capital, and cultural capital (Gamoran, 2001). Parents with greater economic capital can purchase more or better quality educational goods for their children (Becker & Tomes, 1986; Bennett, Lutz, & Jayaram, 2012; Chin & Phillips, 2004), thereby facilitating their children's educational success. Parental SES is also associated with how parents interact

with their children and their children's schools (Horvat, Weininger, & Lareau, 2003), which can result in differences in educational outcomes. While studies variably conceive of parental aspirations and involvement as social capital (Coleman, 1987; McNeal, 1999; Ream & Palardy, 2008; Teachman, Paasch, & Carver, 1997) or cultural capital (Calarco, 2018; Lareau, 2000a), in both views, studies find a positive association between parents' SES and their academic aspirations for and involvement in their children's education, which are in turn positively associated with student outcomes.

Racial and Immigrant Differences the Influence of Family Background

Alongside differences in educational outcomes by family SES, studies have also documented significant differences by race and nativity in the U.S. Across educational outcomes, racial and ethnic minority students, including Black, Latino, and American Indian students, tend to fare worse compared to their White peers, though Asian students tend to do as well or sometimes better (Gamoran, 2001; Kao & Thompson, 2003).

Among immigrant families, evidence suggests that the children of immigrants (i.e., the second-generation) generally reach educational parity with the native-born, although the educational outcomes for some children from immigrant groups with much lower levels of parental education are not as favorable (Kasinitz, Mollenkopf, Waters, & Holdaway, 2008; Waters & Pineau, 2015). While differences in family SES do not fully explain racial disparities in educational outcomes, they do largely explain immigrant disadvantages (Downey, 2008; Gamoran, 2001; Kao & Thompson, 2003; Pong, Hao, & Gardner, 2005; Waters & Pineau, 2015). Taking into account family SES has even yielded evidence of an "immigrant advantage," where the children of immigrants

sometimes experience better educational outcomes compared to their peers from native families with similar levels of family resources (Baum & Flores, 2011; Coll & Marks, 2012; Glick & White, 2004). Nevertheless, some immigrant assimilation theories assert that parental social class will be a likely predictor of how well their children succeed (Portes & Zhou, 1993) and that the children of immigrant benefit from the positive selection of their parents or ethnic group (Feliciano, 2005; Lee & Zhou, 2015).

The weaker association between family socioeconomic background and children's educational outcomes in minority and immigrant families may be due in part to their differential access to mainstream social capital (Kao & Rutherford, 2007; McNeal, 1999; Stanton-Salazar, 1997). McNeal (1999), for example, finds that parental involvement in children's education, including parent-child interactions and PTO involvement, are more consistently and positively associated with high school outcomes among White families, and less so among Black, Latino, and Asian families. Other work suggests qualitative differences in how minority families interact with or are received by their children's schools, such that minority parents' involvement is less likely to yield the same benefits for their children as that of White parents' (Lareau & Horvat, 1999). Research on immigrant families have focused on the forms of social capital available within tightknit ethnic enclaves, such as extensive intergenerational closure and access to supplemental education services, particularly for Asian immigrant groups (Zhou & Bankston, 1994; Zhou & Kim, 2006). Such ethnic social capital can be especially beneficial for those with fewer socioeconomic resources (Lee & Zhou, 2015). However, studies also find that immigrant parents across social class strata show lower levels of contact with their

children's schools, a finding often attributed to the difficulties and challenges immigrant parents share in navigating institutional expectations of parental involvement in the U.S. (Cherng & Ho, 2018; Crosnoe, Ansari, Purtell, & Wu, 2016; Delgado-Gaitan, 1991; Glick, Ruf, White, & Goldscheider, 2006; Kao & Rutherford, 2007; Louie, 2012; Pong et al., 2005; Suárez-Orozco, Suárez-Orozco, & Todorova, 2008).

Though minority and immigrant families across social class backgrounds may face disadvantages in terms of social capital, studies also find that parental aspirations for their children, an important form of cultural capital, are especially strong among such families. Comparing college aspirations among Black and White students, Solorzano (1992) finds that across social class groups, a similar or greater proportion of Black students had college aspirations. Huttman (1991) also notes that historically, Black families have attached particular importance to education for upward mobility, an attitude shared across working- and middle-class Blacks. Similar patterns have been found for Latino and Asian families in the U.S. as well (Suizzo & Stapleton, 2007). For immigrant families, a recurrent theme in research is that of “immigrant optimism,” which describes the high aspirations immigrant parents, even those from disadvantaged backgrounds, have for their children's education (Cherng & Ho, 2018; Feliciano & Lanuza, 2015; Fuligni, 1997; Gibson & Ogbu, 1991; Kao & Tienda, 1995; Louie, 2012; Perreira, Harris, & Lee, 2006; Portes & Rumbaut, 2001; Roubeni, Haene, Keatley, Shah, & Rasmussen, 2015; Suárez-Orozco et al., 2008).

Overall, the research on racial and immigrant differences in educational outcomes suggests that models of social reproduction do not work very well for these families –

they are unable to explain the persistent disadvantages experienced by minority students or the better than expected outcomes among students from immigrant families. Moreover, models of social reproduction that move beyond financial resources to include social and cultural resources also find significant variations among minority and immigrant families. Thus, while purely class-based models of social reproduction anticipate stark differences in parental social and cultural capital by family socioeconomic background, such perspectives overlook the important deviations from this pattern by family race and nativity, highlighting the need for social reproduction models to accommodate these factors.

A Multigenerational Perspective

In recent years, researchers have begun to focus on expanding social reproduction models beyond the intergenerational parent-child models that is common across education and stratification research. Such work seeks to understand how family social class beyond the parental generation – primarily grandparental social class – may continue to play a role in perpetuating inequalities (Mare, 2011; Pfeffer, 2014). However, attention to race and nativity is largely missing in this burgeoning research on multigenerational models of social reproduction. One reason for the lack of analyses focusing on racial and immigrant differences in the influence of grandparents may be data limitations: most studies in the U.S. rely on data from the Panel Study of Income Dynamics (Daw & Gaddis, 2016; Sharkey & Elwert, 2011; Song, 2016; Wightman & Danziger, 2014; Yeung & Conley, 2008) or versions of the National Longitudinal Survey of Youth (Fiel, 2019; Hill & O’Neill, 1994; Kroeger & Thompson, 2016; Loury, 2006),

which lack representative immigrant populations, and non-U.S. studies tend to be conducted in contexts that lack the racial and immigrant diversity found in the U.S. (Anderson et al., 2018; Bol & Kalmijn, 2016; T. W. Chan & Boliver, 2013; Chiang & Park, 2015; Deindl & Tieben, 2017; Møllegaard & Jæger, 2015; Zeng & Xie, 2014; Ziefle, 2016).

Studies focusing on the relationship between grandparental education and their grandchildren's educational outcomes have yielded somewhat mixed results, with one recent review of literature concluding that about 58 percent of the 69 analyses examined find an independent relationship between grandparental and grandchildren's education, net of parental education. The same review found that in U.S. studies, about half found a lingering "grandparent effect" (Anderson et al., 2018). Both Hill and O'Neill (1994) and Ferguson and Ready (2011), for example, find a positive association between grandparental education and young children's test scores, even after controlling for parental socioeconomic resources, such as education, income, and occupational prestige. A "grandparent effect" on educational attainment has also been observed. Kroeger and Thompson (2016) find that women who have more educated maternal grandmothers are themselves more likely to complete college, a pattern that persists net of maternal education. Similarly, Lawrence (2016) finds that among students with college-educated parents, those whose grandparents were also college-educated have the highest rates of entry into college, particularly selective colleges. Among students whose parents did not attend college, those who had a college-going grandparent have higher rates of postsecondary entry than those with no family history of college attendance (see also

Fiel, 2019). Such findings underscore the need to take a longer view of family educational histories in research.

Why might grandparental education continue to matter for grandchildren's education outcomes? Potential mechanisms include financial, social, and cultural resources that are closely associated with, even if not directly measured by, grandparental education. Grandparents with higher socioeconomic status, for example, can purchase educational advantages for their grandchildren and their financial assets can serve as a protective mechanism for their grandchildren in instances where parents struggle (Hällsten and Pfeffer 2017). Grandparental education can also influence grandchildren's educational outcomes through the transmission of cultural resources, such as aspirations (Zeng and Xie 2014) and "pro-education" norms (Hällsten and Pfeffer 2017). Indeed, some researchers suggest that in the U.S., which has low rates grandparents co-residing with their grandchildren, grandparents may most directly influence their grandchildren through cultural or normative channels rather than directly through help with childrearing (Fiel, 2019; Zeng & Xie, 2014). While results have been mixed, in general, studies tend to find that grandparents can be compensatory, filling in when parental resources are particularly low (Anderson et al., 2018; Bengtson, 2001).

However, the mechanisms behind multigenerational effects offered by existing research may differ for minority and immigrant families. At least for racial minority families, there is evidence that suggests a weaker association between grandparental education and their grandchildren's outcomes (Attewell, Lavin, Domina, & Levey, 2007; Ferguson & Ready, 2011; Fiel, 2019; Kroeger & Thompson, 2016; Song, 2016). Kroeger

and Thompson (2016) find that the transmission of maternal grandmothers' educational advantage to their granddaughters is weaker, though still present, among non-White families, while Fiel (2019) notes a significant penalty for Black and Latino families with college-educated grandparents, suggesting that racial minority families experience greater difficulties in transmitting educational advantages over generations. For minority families, multigenerational patterns mirror those found in the intergenerational literature, painting a consistent portrait of minority disadvantage.

For immigrant families, we might also expect a parallel with the intergenerational literature. The longstanding image of America as the land of opportunity for immigrants seeking a fresh start suggests that immigration itself is a process that potentially disrupts processes of social reproduction. For example, regardless of their background, immigrant parents may maintain high educational aspirations that their children feel strongly obligated to meet (Louie, 2012; Portes & Rumbaut, 2001; Smith, 2006), resulting in positive educational outcomes even among immigrant families with longer histories of educational disadvantages. In a less optimistic light, the economic, social, and cultural resources that families with advantaged educational histories transmit across generations may be less applicable to immigrant families. Grandparents in immigrant families may be dependent on the financial resources of their own children rather than contributors to their grandchildren's education. Moreover, research has shown that parental cultural capital depends on their ability to meet the standards of educational institutions (Lareau & Weininger, 2003). As newcomers, immigrant parents, even those whose own parents are highly educated, may lack familiarity with the institutional norms of U.S. schools and

as a result, be less successful in intervening in their children's education (Cherng and Ho 2018). Likewise, the social and cultural capital highly educated grandparents in immigrant families possess in their countries of origin are less likely to be applicable in the U.S. Grandparents in non-English speaking immigrant families may even be unable to convey moral support if their grandchildren are unable to communicate with them in their native languages. Thus, the mechanisms put forth in existing research through which grandparents might directly influence their grandchildren may simply not apply to many immigrant families.

Study Motivation

A broad swath of education research has shown that parental education plays a crucial role in shaping children's educational outcomes. However, intergenerational research has also found that family socioeconomic background often has a weaker influence in minority and immigrant families, suggesting models of social reproduction should be revised to take into the impact of race and nativity. More recently, researchers have begun considering how social inequalities can persist across multiple generations. In this multigenerational perspective, grandparental education is considered a part of family educational histories that can continue to impact grandchildren's outcomes. While weaker associations in the strength of the "grandparent effect" have been found for minority families, consistent with the intergenerational literature, such research has largely not considered the role of family nativity. While the intergenerational literature suggests a potentially weaker relationship between family background and educational outcomes for the children of immigrants, which may extend to grandparental background

as well, research on the relative selectivity of different immigrant groups offer the possibility that a fuller accounting of immigrant family educational histories may yield evidence of greater social class differences than previously observed. This study thus focuses on the role of grandparental education for their grandchildren's education in native and immigrant families, while paying attention to racial and ethnic differences within families, with the aim of better understanding how well racial minority and immigrant families will fare long-term.

Data and Methods

Data

This study uses data from the Education Longitudinal Study of 2002 (ELS:2002), conducted by the National Center for Education Statistics (NCES). ELS:2002 employed a two-stage stratified sampling design in which first schools and then students within schools were selected for participation. The study followed a nationally representative sample of over 15,000 high school students who were 10th-graders in 2002 for a decade. Students and their parents were surveyed in the base year of the study and follow-up surveys of students were conducted in 2004, 2006, and in 2012 (eight years after most students completed high school). ELS:2002 oversampled Asian and Latino students, making it particularly useful for studying immigrant families. The sample was restricted to cases where both parents and students responded to their respective base year surveys and that were not missing information on mothers' nativity (the basis for determining native and immigrant families) resulting in a total sample size of about 12,350 cases (Ns are rounded to the nearest tens throughout, per NCES disclosure rules). The analytic

sample of families with native-born mothers comprises about 83 percent of the total sample (n=9,890) and the analytic sample of families with immigrant mothers make up the remaining 17 percent of the total sample (n=2,470).

Information was collected on both maternal and paternal family education histories, although analyses focus on maternal family education histories for a number of reasons. First, mothers are often tasked with the responsibility for organizing and managing various aspects of their children's education (Lareau, 2000b; Streib, 2015) and are thus a significant influence on educational outcomes. Second, the greater importance of maternal education relative to that of paternal education for children's outcomes has been demonstrated across a wide body of literature (Roksa & Potter, 2011; Weininger, Lareau, & Conley, 2015). Third, other studies taking a multigenerational perspective also focus on maternal family histories (Fiel, 2019; Kroeger & Thompson, 2016). Lastly, researchers find evidence that the strength of multigenerational ties is stronger in the maternal line (C. G. Chan & Elder, 2000); thus, maternal grandparents may be more of an influence on their grandchildren's outcomes compared to paternal grandparents. However, to make use of all available grandparental information, supplemental analyses using combined family educational histories (taking the highest level completed by any grandparent or parent), which yield findings consistent with the main analyses using maternal family educational histories, are also discussed.

Measures

Student Outcomes: This study examines two student educational outcomes: student academic achievement (*10th-grade GPA*) and student academic attainment

(*bachelor's degree attainment*). Tenth-grade GPA is for academic courses only.

Bachelor's degree attainment is measured as of the final wave of the survey, in 2012, about eight years after most students graduated from high school.

Family Race/Ethnicity and Nativity: To determine family race/ethnicity, student self-reports are used. Racial and ethnic categories include White, Black, Latino, Asian, and Other (including American Indians/Alaskan Natives, Native Hawaiians/Pacific Islanders, and those identifying as multiracial). Family nativity is determined by maternal place of birth. Families where mothers were born in the U.S. or Puerto Rico are considered native families, while families where mothers were born outside the U.S. are considered immigrant families.

Maternal Grandparent Highest Education: Grandparental education is measured as a categorical variable, with the lowest level of education being "Less than High School," followed by "High School," and "Some College or More." The highest level of education attained by a students' maternal grandparent – usually maternal grandfathers – is used.

Maternal Educational: Maternal education is similarly measured as a categorical variable, although to take into account the expansion of education and higher educational standards, the lowest level of maternal education is "High School or Less," followed by "Some College," and "Bachelor's Degree or Higher" (see also Roksa & Potter, 2011).

Parental Resources: To understand whether an association between grandparental education and grandchildren's education persists even after taking into account parental socioeconomic status, a number of parental economic, social, and cultural resources are

included. In addition to *maternal education*, described above, family economic resources are approximated with three other socioeconomic measures, including the highest value of *parental occupational prestige*, a categorical measure of *family income*, and a categorical measure of *family college savings*, which measures how much money parents reported setting aside for their child's postsecondary education. Parental cultural resources are measured by whether or not *mothers convey college aspirations* to their children. To measure parental social resources, three summative scale measures of parental involvement in education are included. The first, *parental academic advice*, measures how often parents provided advice or information about 1) school course or program selection, 2) college entrance exams, and 3) applying to postsecondary educational institutions. Next, *parental PTO involvement* includes 1) belonging to the school's parent-teacher organization, 2) attending meetings of the parent-teacher organization, 3) taking part in the activities of the parent-teacher organization, and 4) acting as a volunteer at the school. Lastly, *parental contact with school* is based on how many times parents contacted their child's school about their child's 1) school program, 2) plans after high school, and 3) course selection for entry into postsecondary education. Together, these measures account for the variety of ways in which prior research has suggested family background matters for student outcomes.

Contextual Measures: Although not the focus of the study, contextual measures take into account additional family, student, and school characteristics that are not only associated with family socioeconomic background but also with student outcomes.

Family characteristics include the average age of parents (year of birth, centered at the

mean) as well as family structure (whether in a two-biological parent household). Student characteristics include gender (female=1) and age (year of birth, centered at the mean). For analyses of immigrant families, a measure of student immigrant generation is also included (with foreign-born adolescents identified as first-generation and U.S.-born adolescents identified as second-generation). Lastly, a number of students' 10th-grade school characteristics are controlled for, including whether the school is public, whether the school is urban, school socioeconomic conditions (as measured by the percentage of 10th-graders in the school receiving free or reduced-price lunches [FRPL]), 10th-grade class size, and school region. Table 1.1 provides descriptive statistics for the measures of primary interest in the study. Remaining descriptive statistics for contextual measures are provided in Appendix Table 1.1.

Analytic Strategy

Descriptive findings show patterns of student educational achievement (10th-grade GPA) and attainment (bachelor's degree completion) by maternal family educational histories in order to demonstrate the general relevance of maternal grandmothers' education. Next, to understand whether the association between grandparental education and student educational outcomes can be fully accounted for by parental resources or if they persist beyond that, multivariate analyses are shown that take into account parental economic, social, and cultural resources. Findings first focus on a general comparison of patterns for native and immigrant families before turning to racial and ethnic differences within such families.

Table 1.1. Descriptive Statistics for Primary Study Measures

	Native Families	Immigrant Families
10th-Grade GPA	2.57	2.45
Attained Bachelor's by 2012	0.38	0.35
Maternal Grandparent Highest Education		
Less than High School	0.19	0.53
High School	0.44	0.24
Some College or More	0.38	0.24
Family Resources		
Maternal Education		
High School or Less	0.36	0.54
Some College	0.38	0.24
Bachelor's or More	0.26	0.21
Highest Parental Occupational Prestige Score	51.75	44.96
Family Income		
<=\$25k	0.18	0.36
>\$25k-\$35k	0.11	0.17
>\$35k-\$75k	0.42	0.31
>\$75k	0.29	0.16
Family College Savings		
<=\$5k	0.7	0.79
>\$5k-\$20k	0.19	0.12
>\$20k	0.12	0.09
Mother Conveys College Aspirations	0.78	0.74
Parent Academic Advice	6.25	6.1
Parent PTO Activities	1.15	0.98
Parent-Initiated School Contact	4.03	3.75
Total N	9,890	2,470

Note: Estimates are based on weighted imputed data. Total N rounded to nearest tens per NCES disclosure rules.

All analyses were conducted using Stata 14 and are weighted to take into account the sampling design of ELS:2002. Missing data were handled using multiply imputed using predictive mean matching (k=5). A total of five datasets were imputed. For the native sample, missing values across measures ranged from less than one percent to 23 percent. Grandparental education was the measure with the greatest number of missing

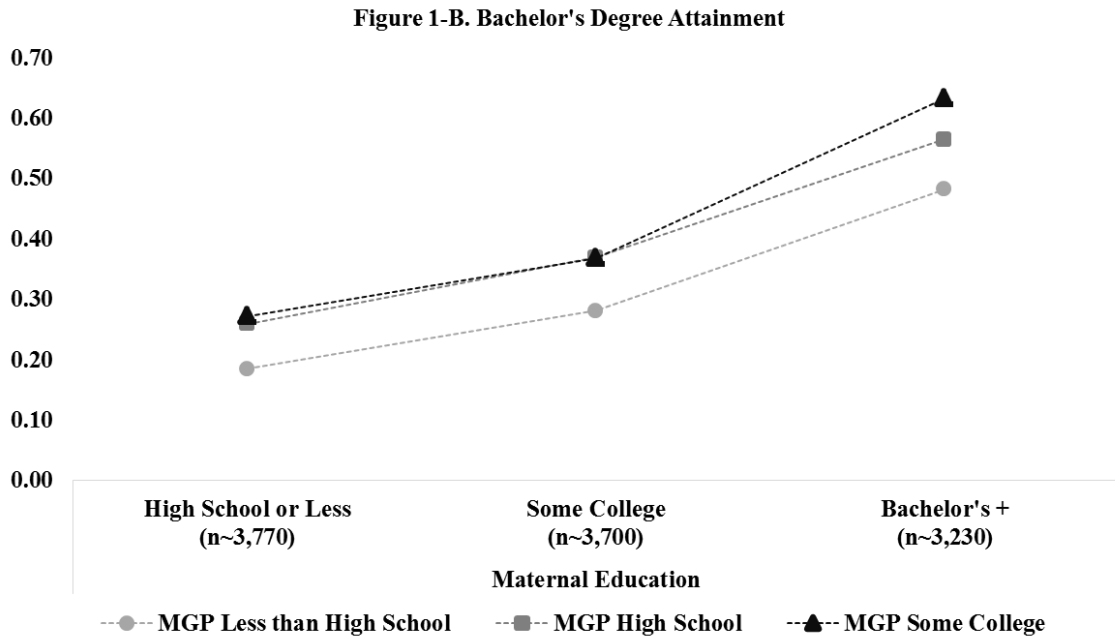
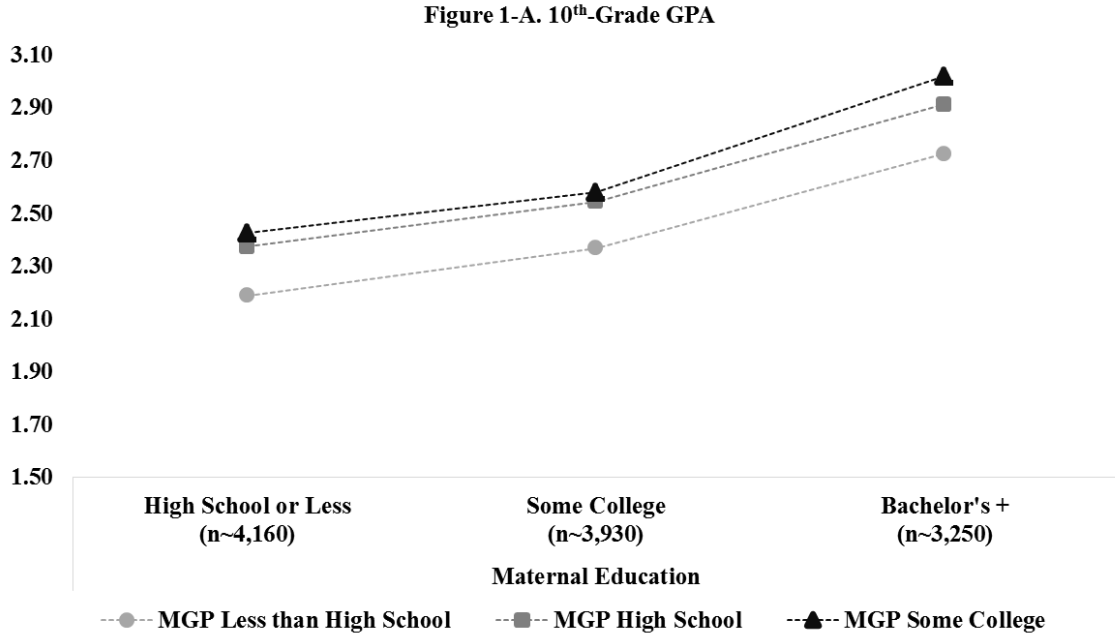
values (11 percent for native families and 23 percent for immigrant families). Appendix Tables 1.7-1.8 presents a comparison of selected findings from analyses using imputed values versus listwise deletion of cases missing all maternal grandparental information. Results are substantively similar.

Findings

Descriptive Findings

Figure 1.1 shows unadjusted values of 10th-grade GPAs and bachelor's degree attainment rates by maternal family educational history for the total sample. As can be seen in Figure 1-A, even among similarly educated mothers, differences exist in students' academic achievement depending on their maternal grandparents' education. For example, among students whose mothers completed at least a bachelors' degree, those who had maternal grandparents with some college experience had an average GPA of about 3.02 compared to 2.72 for their peers whose highest educated maternal grandparent did not complete high school. Figure 1-B shows a similar pattern for bachelor's degree attainment. Generally, across levels of maternal education, a greater proportion of students with more educated maternal grandparents completed college compared to their peers with similarly educated mothers but less educated maternal grandparents. For example, nearly two-thirds of students with college-educated mothers and maternal grandparents completed college compared to less than half of their peers with similarly educated mothers but whose maternal grandparents did not complete high school. Descriptive patterns demonstrate the importance of family educational histories beyond the parental generation. The following multivariate analyses examine this pattern is

Figure 1.1. Observed 10th-Grade GPA and Bachelor's Degree Attainment by Family Educational History



Note: Estimates are unadjusted and based on weighted values.

similarly found among both native and immigrant families. Two models are estimated. The baseline model for both native and immigrant families (Model 1) includes maternal grandparental education and all contextual measures, including family, student, and school characteristics that, while important, are not the focus of the study. Next, in order to understand if the association between grandparental education and adolescents' own academic achievement and attainment operates only through parental characteristics, Model 2 introduces maternal education and family economic and cultural resources.

Maternal Family Educational History and Adolescents' Academic Achievement and Attainment

Tables 1.2 and 1.3 provide results from weighted OLS regression models estimating students' 10th-grade GPAs separately for native and immigrant families. Maternal grandparental education is positively associated with adolescents' academic achievement, as measured by 10th-grade GPA, among families with native mothers but not families with immigrant mothers (Models 1a and 1b, respectively). The academic advantage associated with having more educated maternal grandmothers among families with native mothers persists net of maternal education and other family economic and cultural resources (Model 2a).

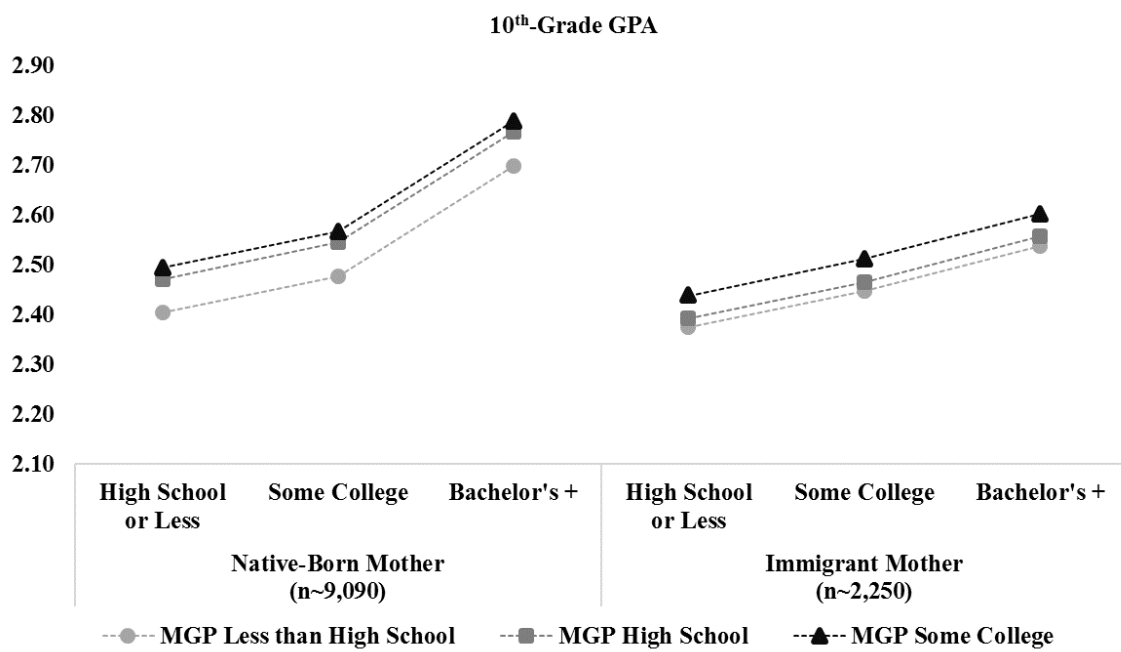
For ease of interpretation, Figure 1.2 shows predicted values of 10th-grade GPA by maternal family educational history and nativity, estimated from Models 2a and 2b and with all other covariates held at their means. Students from families with native-born college-educated mothers and maternal grandparents with college experience have an

Table 1.2. Coefficients from Weighted OLS Regression Models Estimating Students' 10th-Grade GPA by Maternal Nativity

Highest Maternal Grandparent Education (Ref: Less than High School)	Native Families				Immigrant Families				
	Model 1a		Model 2a		Model 1b		Model 2b		
High School	0.13	***	0.07	*	0.06		0.02		
Some College or More	0.27	***	0.09	**	0.18	**	0.06		
Family Resources									
Maternal Education (Ref: High School or Less)									
Some College			0.07	**			0.07		
Bachelor's or More			0.30	***			0.16	**	
Highest Parental Occupational Prestige Score			0.00	+			0.00		
Family Income (Ref: <=\$25k)									
>\$25k-\$35k			0.04				0.05		
>\$35k-\$75k			0.09	**			0.05		
>\$75k			0.15	***			0.08		
Family College Savings (Ref: <=\$5k)									
>\$5k-\$20k			0.09	***			0.04		
>\$20k			0.08	*			0.04		
Mother Conveys College Aspirations			0.28	***			0.24	***	
Parent Academic Advice			0.04	***			0.04	**	
Parent PTO Activities			0.04	***			0.02		
Parent-Initiated School Contact			-0.04	***			-0.03	+	
Background Measures									
Parent Age	-0.02	***	-0.01	***	-0.01		0.00		
Two-Biological Parent Family	0.29	***	0.20	***	0.19	***	0.16	**	
Student is Female	0.33	***	0.31	***	0.40	***	0.37	***	
Student Age	0.20	***	0.15	***	0.19	***	0.17	***	
Student Race/Ethnicity (Ref: White)									
Black	-0.46	***	-0.44	***	-0.20		-0.25	+	
Latino	-0.39	***	-0.34	***	-0.28	**	-0.23	*	
Asian	-0.24		-0.26	+	0.30	**	0.26	**	
Other	-0.32	***	-0.27	***	0.00		-0.05		
Student Immigrant Generation (Ref: First Generation)									
Second Generation					-0.05		-0.08		
Public School	-0.13	*	-0.03		0.04		0.07		
Urban School	0.01		-0.02		-0.01		0.00		
School 10th-Grade FRPL % (Ref:<=10%)									
11-30%	-0.09	*	-0.02		-0.22	*	-0.16	+	
>30%	-0.06		0.05		-0.26	*	-0.17		
School 10th-Grade Class Size (Ref:<200)									
201-399	-0.06	+	-0.08	*	-0.14	+	-0.16	*	
>=400	-0.05		-0.10	**	-0.31	***	-0.32	***	
School Region (Ref: Northeast)									
Midwest	0.19	***	0.21	***	0.28	**	0.31	**	
South	0.12	**	0.10	*	0.44	***	0.42	***	
West	0.12	*	0.14	*	0.21	*	0.24	*	
Total N	9,090				2,250				

Note: Ns are rounded to the nearest tens per NCES disclosure rules. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10. Standard errors are shown in Appendix Table 1.2.

Figure 1.2. Predicted Values of 10th-Grade GPA by Maternal Family Educational History and Nativity



Note: Predicted values are estimated from Models 2a and 2b shown in Tables 1.2-1.3, with all remaining covariates held at their mean values.

estimated 10th-grade GPA of about 2.79 while their peers with college-educated mothers but maternal grandparents who did not complete high school have an estimated GPA of about 2.70. Among native families, the estimated gap in 10th-grade GPAs between students with the most educated maternal grandparents and the least educated maternal grandparents is approximately 0.09 grade points (the equivalent of about 10 percent of a standard deviation, $SD=0.87$). Between students with modestly educated grandparents and the least educated grandparents, the gap is about 0.07 grade points (the equivalent of about 8 percent of a standard deviation). Among immigrant families, the corresponding differences in grade points are 0.06 and 0.02, respectively (about 6 percent and 2 percent of a standard deviation, $SD=1.04$), and are not statistically significant.

Tables 1.4-1.5 provide results from weighted logistic regressions models estimating students' bachelor's degree attainment. Findings are similar to those found for academic achievement. Namely, among families with native mothers, adolescents with more educated maternal grandmothers are more likely than are their peers with less educated grandmothers to attain a bachelor's degree (Model 1a). However, this advantage is not found among adolescents with immigrant mothers (Model 1b). Moreover, the negative (though not statistically significant) coefficients for more educated maternal grandparents suggest potentially lower academic attainment among students from more advantaged immigrant families (Model 2b). Taking into account maternal education and family economic and cultural resources reduces some of the advantage associated with having a more educated grandmother among families with native mothers (Model 2a). However, even after accounting for these factors as well as additional family composition

Table 1.3. Coefficients from Weighted Logistic Regression Models Estimating Students' Bachelor's Degree Attainment by Maternal Nativity

Highest Maternal Grandparent Education (Ref: Less than High School)	Native Families				Immigrant Families				
	Model 1a		Model 2a		Model 1b		Model 2b		
High School	0.47	***	0.31	***	0.04		-0.14		
Some College or More	0.81	***	0.32	**	0.16		-0.29		
Family Resources									
Maternal Education (Ref: High School or Less)									
Some College			0.23	**			0.19		
Bachelor's or More			0.64	***			0.36	+	
Highest Parental Occupational Prestige Score			0.01	***			0.01	*	
Family Income (Ref: <=\$25k)									
>\$25k-\$35k			-0.08				-0.04		
>\$35k-\$75k			0.29	**			-0.12		
>\$75k			0.59	***			0.49	+	
Family College Savings (Ref: <=\$5k)									
>\$5k-\$20k			0.23	**			0.25		
>\$20k			0.4	***			0.45	+	
Mother Conveys College Aspirations			0.9	***			0.5	*	
Parent Academic Advice			0.11	***			0.09	**	
Parent PTO Activities			0.1	***			0.07		
Parent-Initiated School Contact			-0.07	**			-0.03		
Background Measures									
Parent Age	-0.05	***	-0.04	***	-0.02		-0.01		
Two-Biological Parent Family	0.65	***	0.36	***	0.46	**	0.37	*	
Student is Female	0.4	***	0.41	***	0.25	+	0.29	*	
Student Age	0.43	***	0.31	***	0.44	***	0.37	***	
Student Race/Ethnicity (Ref: White)									
Black	-0.53	***	-0.5	***	-0.04		-0.04		
Latino	-0.62	***	-0.53	***	-0.95	***	-0.76	**	
Asian	0.03		0.03		0.48	*	0.46	*	
Other	-0.6	***	-0.52	***	0.12		0.11		
Student Immigrant Generation (Ref: First Generation)									
Second Generation					0.18		0.09		
Public School	-0.5	***	-0.25	*	-0.17		0.01		
Urban School	0.28	***	0.23	**	0.16		0.23		
School 10th-Grade FRPL % (Ref:<=10%)									
11-30%	-0.45	***	-0.27	**	-0.47	+	-0.29		
>30%	-0.61	***	-0.29	**	-0.68	*	-0.38		
School 10th-Grade Class Size (Ref:<200)									
201-399	0.18	*	0.09		0.1		0.05		
>=400	0.21	*	0.04		-0.07		-0.09		
School Region (Ref: Northeast)									
Midwest	-0.17	+	-0.13		-0.25		-0.13		
South	-0.27	**	-0.37	***	0.18		0.18		
West	-0.55	***	-0.53	***	-0.43	*	-0.33	+	
Total N			8,610				2,090		

Note: Ns are rounded to the nearest tens per NCES disclosure rules. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10. Standard errors are shown in Appendix Table 1.4.

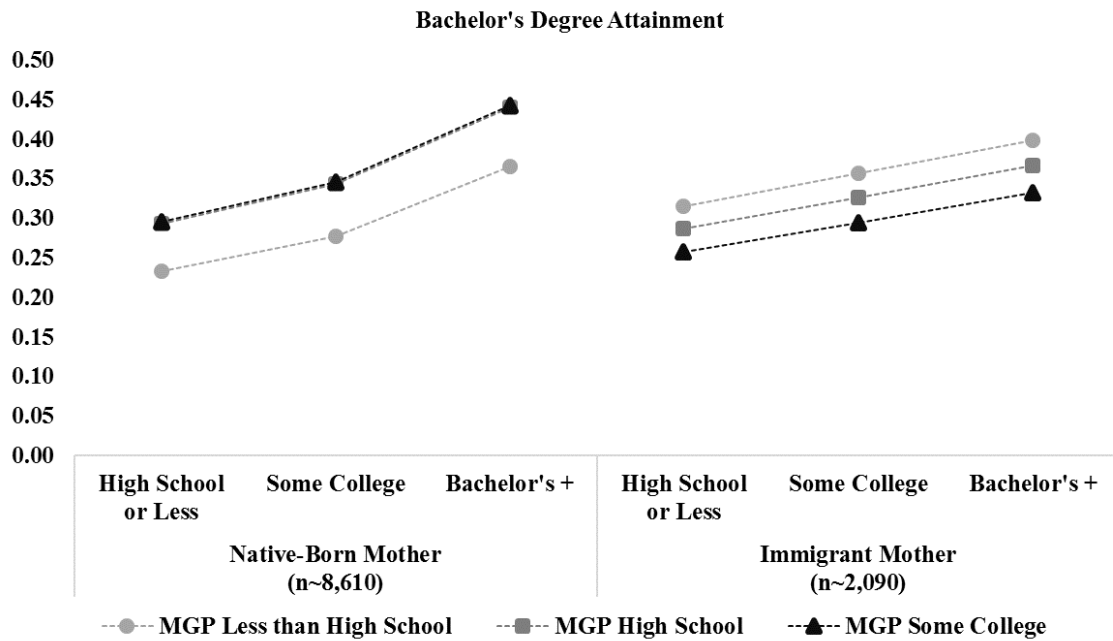
and school characteristics, adolescents in native families with more educated maternal grandparents continue to remain more likely to complete a bachelor's degree.

Figure 1.3 plots predicted probabilities of bachelor's degree attainment by maternal family educational history and nativity. Predicted probabilities are estimated from Models 2a and 2b as shown in Table 3, with all remaining covariates held at their mean values. Among native families, students with more educated maternal grandparents consistently have higher predicted probabilities of completing college than their peers whose maternal grandparents did not complete high school. For example, among native families with college-educated mothers, the predicted probability of completing college for students with the most highly educated maternal grandparents (with some college experience or more) is about seven percentage points greater than their peers with the least educated maternal grandparents (44 percent compared to 37 percent, respectively). These differences in predicted probabilities are relatively consistent at all levels of maternal education. Among immigrant families, a very different picture emerges. Although differences are not statistically significant, students from immigrant families with the least educated maternal grandparents actually have higher predicted probabilities of completing college than their peers with more educated maternal grandparents.

Differences by Race and Ethnicity

In order to understand whether the overall patterns hold across racial and ethnic groups, additional analyses were conducted for native-born Whites, Blacks, and Mexicans as well as immigrant Mexicans and Asians. Though sample sizes for families with native-born and immigrant Mexican mothers were sufficient for separate analysis,

Figure 1.3. Predicted Probabilities of Bachelor's Degree Attainment by Maternal Family Educational History and Nativity



Note: Predicted probabilities are estimated from Models 2a and 2b shown in Tables 1.4-1.5, with all remaining covariates held at their mean values.

sample sizes for Asians, particularly native-born Asians, were too small to disaggregate specific ethnic groups. The modelling strategy is otherwise identical to those of the main analyses.

Figure 1.4 plots predicted values of 10th-grade GPA and predicted probabilities of bachelor's degree completion by student race/ethnicity for families with native-born mothers. Among native families, the advantages associated with having a more educated maternal grandparent are clearest for White families. This is reflected in the size of gaps between different levels of maternal grandparental education shown in Figure 4-A (10th-grade GPA) and 4-B (bachelor's degree completion). Students from native Black families experience poorer educational outcomes compared to their White peers, but the overall patterns found are fairly similar. Notably, Black students with the least educated grandparents generally fare worse than their peers with similarly educated mothers but more educated grandmothers (though differences do not reach statistical significance). In contrast, among Mexican families with native-born mothers, an opposite pattern emerges – students with less educated grandmothers experience more positive academic outcomes. Although the differences are not statistically significant and estimates should be interpreted with caution given the smaller sample size, the findings nevertheless highlight diversity in social reproduction processes. Prior research, for example, has found relatively little social mobility across several generations of Mexican Americans (Telles & Ortiz, 2008). It is also possible that selective attrition in identifying as Mexican occurs for Mexican-origin Americans with higher socioeconomic status, resulting in a

Figure 1.4. Predicted Values and Probabilities by Maternal Family Educational History and Race/Ethnicity (Native Families)

Figure 4-A. 10th-Grade GPA

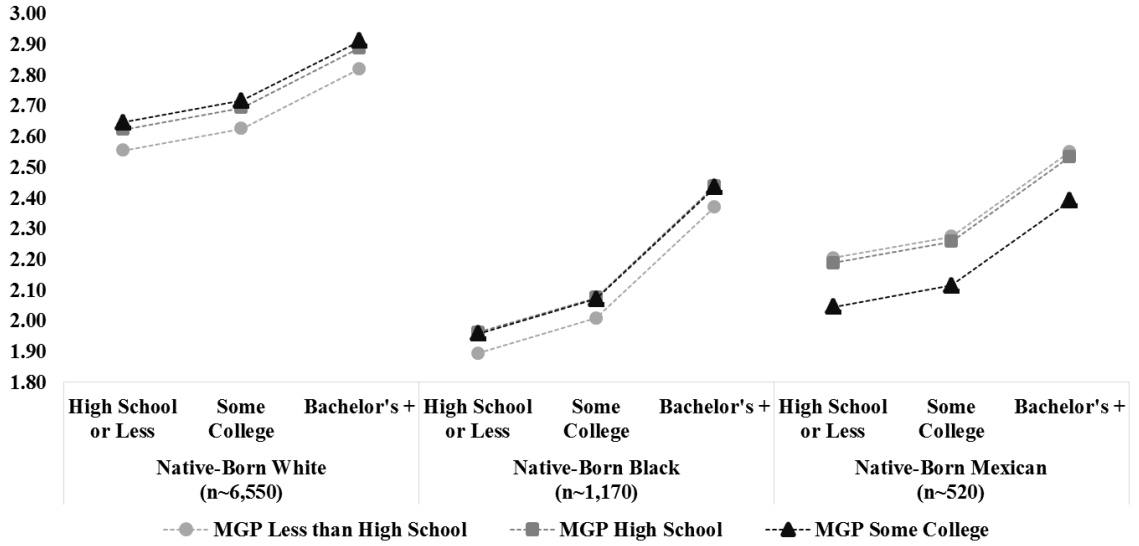
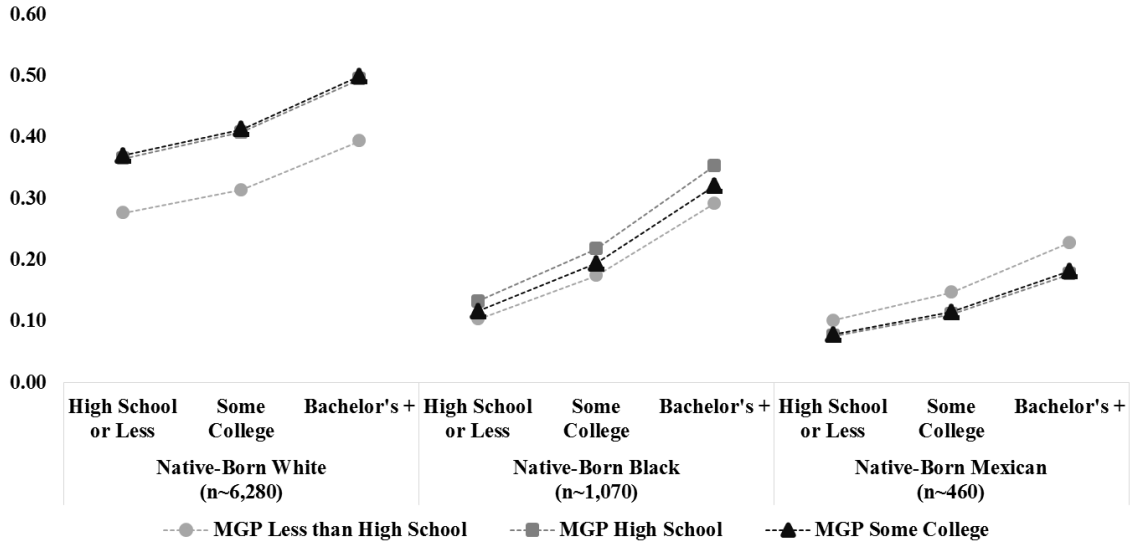


Figure 4-B. Bachelor's Degree Attainment



Note: Predicted values are estimated from regression models (not shown), with all remaining covariates held at their mean values. All Ns rounded to nearest tens per NCES disclosure rules.

third-generation Mexican sample that is particularly disadvantaged (B. Duncan & Trejo, 2011).

Figure 1.5 similarly shows predicted values of 10th-grade GPA (Figure 5-A) and bachelor's degree completion (Figure 5-B) for Mexican and Asian families with immigrant mothers. While large differences in outcomes between the two groups are apparent, within these groups the associations between maternal grandparental education and student outcomes are similar and consistent with the pooled immigrant findings in the main analyses – namely the lack of significant association between maternal grandparental education and students' educational outcomes. This is particularly apparent in predicted probabilities of bachelor's degree completion, for which both immigrant Mexican and Asian families exhibit a similar pattern that is opposite of what might be expected. For example, among immigrant Asian families, students with less educated maternal grandparents actually fare better in terms of bachelor's degree attainment compared to their peers with the most educated maternal grandparents. While much has been written about the optimism with which immigrant parents view their children's educational opportunities in the U.S. as the pathway to upward mobility, findings suggest that it is perhaps immigrant families with less advantaged family histories that are most likely to seize upon such opportunities.

Supplemental Analyses by Combined Family Educational History

Supplemental findings testing whether patterns for native and immigrant families hold across different specifications of family educational histories are shown in Appendix Table 1.6. Briefly, supplemental analyses use combined information on family

Figure 1.5. Predicted Values and Probabilities by Maternal Family Educational History and Race/Ethnicity (Immigrant Families)

Figure 5-A. 10th-Grade GPA

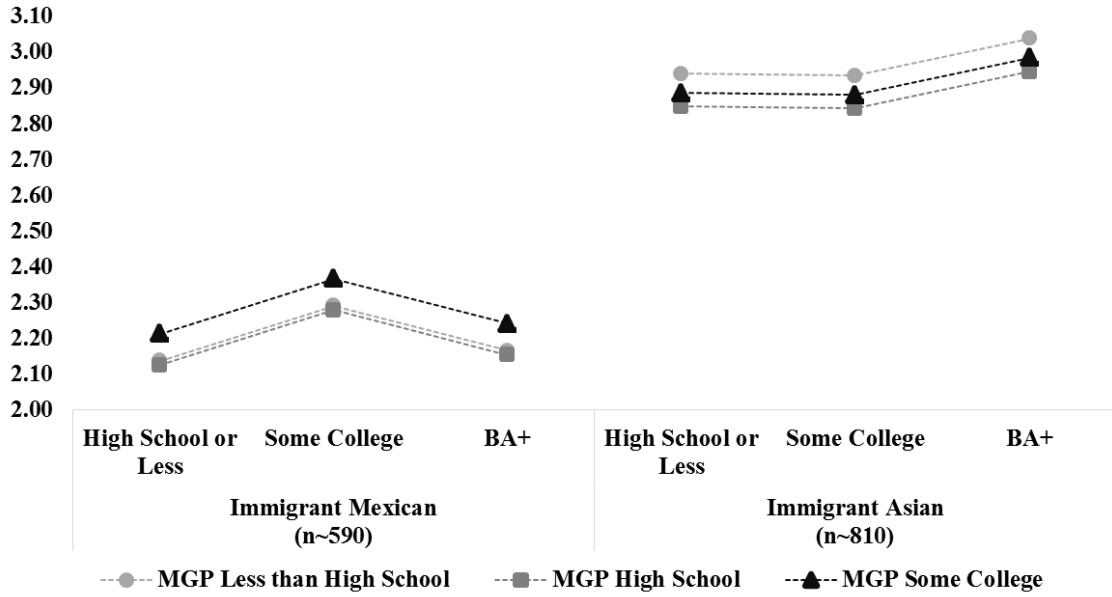
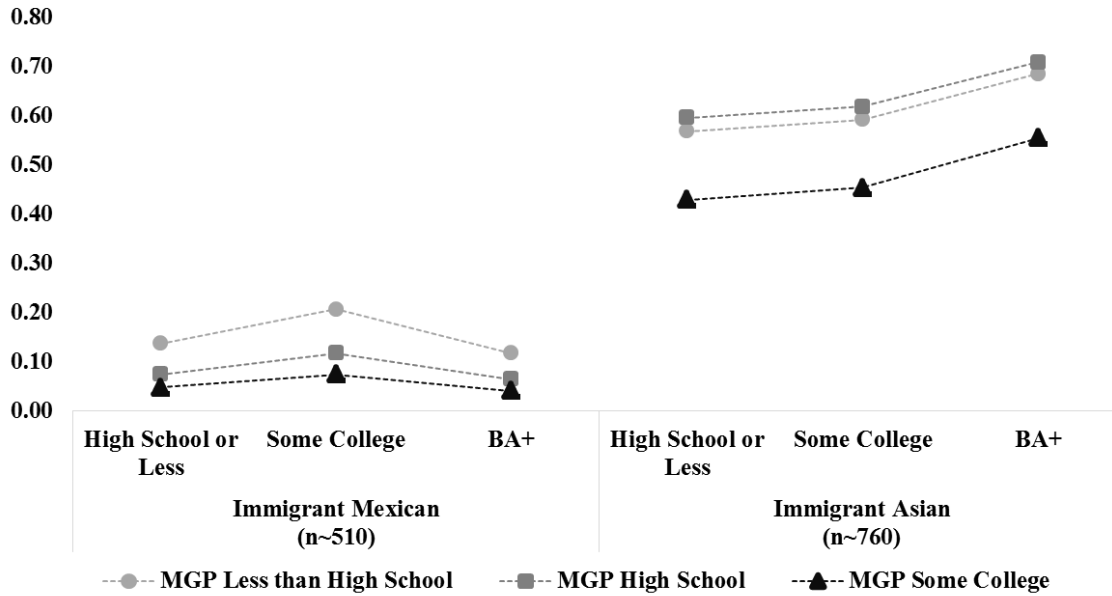


Figure 5-B. Bachelor's Degree Attainment



Note: Predicted values are estimated from regression models (not shown), with all remaining covariates held at their mean values. All Ns rounded to nearest tens per NCES disclosure rules.

educational histories, taking the highest grandparental and parental level of education. Native families are those with at least one native-born parent. Immigrant families include those where both mothers and fathers were foreign-born and where one parent was foreign-born but the nativity of the other parent could not be determined. The modelling strategy is otherwise identical to the main models presented earlier. Under these specifications, positive associations between grandparental education and students' academic achievement (10th-grade GPA) and bachelor's degree attainment are, not surprisingly, still found among native families. Among immigrant families, the only deviation from the main findings is that there is a statistically significant association between having a very highly educated grandparent (with some college experience) and students' 10th-grade GPA. Findings for bachelor's degree attainment among immigrant families are similar to the main findings.

Study Limitations

There are limitations to this study that deserve mention. First, given that the only information about grandparental socioeconomic status collected by ELS:2002 was education, the study has only imperfect measures of grandparental resources. There are resources grandparents may have that are not fully captured by education, and in this case, grandparental education must stand in as a proxy for resources such as wealth and socioemotional support. Future research should seek to understand whether other mechanisms of grandparental effects proposed in the multigenerational perspective work similarly in immigrant families. Another limitation is that grandparental education is not measured in great detail, the lowest category of education being less than high school,

which covers a significant range of years of education. This may be an issue particularly for immigrant families from regions of the world with less developed educational systems or fewer educational opportunities. Recent research has also suggested that rather than an absolute measure of educational attainment, a relative measure placed within the context of immigrants' countries of origin might be more appropriate for understanding immigrant families' social and cultural resources (Feliciano & Lanuza, 2017; Ichou, 2014; Lee & Zhou, 2015). Nevertheless, given the focus on the comparisons of patterns between native and immigrant groups, and that native patterns conform to patterns expected by the multigenerational perspective while immigrant patterns do not, this study still raises an important point about the need to consider family nativity in social reproduction models.

Another limitation to the study is the inability to further disaggregate native and immigrant families by ethnic subgroups. While analyses of the Mexican-origin sample for both native and immigrant families were included, it was not possible to conduct additional analyses of other ethnic groups. Luthra and Soehl (2015) find that intergenerational transmission rates, while generally weaker among immigrant groups, vary significantly by countries of origin. Filipinos and Indians have the highest rates of intergenerational transmission, a finding the authors attribute to the large shares of middle-class professionals with significant resources within these groups. The authors speculate that such groups are more likely to resemble native Whites in social reproduction processes. In contrast, groups such as Koreans, Chinese, and Vietnamese benefit from the resources within their ethnic enclaves, which facilitates the upward

mobility of disadvantaged co-ethnics (see also Lee & Zhou, 2015). Finer analyses of ethnic subgroups for immigrant families would be a fruitful avenue for future research, and could further elucidate patterns of differences between native and immigrant families found in this study.

Discussion and Conclusion

This study examined the associations between grandparents' education and their grandchildren's educational achievement and attainment, specifically whether immigrant and minority families similarly benefit from grandparental education compared to native White families. Findings show that having a more highly educated grandparent is independently associated with higher 10th-grade GPA and a greater likelihood of completing college among adolescents, but largely only for native White families. Students from immigrant and racial minority families do not appear to benefit from having highly educated grandparents in the same way as their native White peers. These findings largely hold for different specifications of family educational history.

Current research on "grandparent effects" propose a variety of economic, social, and cultural resources that may explain why grandparental education continues to play a role in grandchildren's educational outcomes. However, as literature on intergenerational social reproduction has shown, parental resources in immigrant and minority families do not always resemble those in native White families, either in form or in transmission. Structural factors such as persistent racial inequalities and the challenges associated with adapting to a new society may all contribute to different modes and rates of multigenerational and intergenerational transmission of inequalities in minority and

immigrant families. Although the present study is unable to directly assess specific mechanisms through which grandparental education may operate, it nevertheless shows that a focus on race and nativity can advance conceptual understanding of how advantages and disadvantages persist across generations.

Findings from this study also have implications for the long-term well-being of immigrant and minority families in the U.S. Some literature has shown that Black and Latino families are often much less able to maintain family wealth across generations (Killewald, Pfeffer, & Schachner, 2017; Oliver & Shapiro, 2006; Pfeffer & Killewald, 2018), which can have long-term effects on how families fare. The findings from this study that grandparental educational advantages are also not easily transmitted in minority families underscores the relationship between rising socioeconomic and educational inequalities in the U.S. (G. J. Duncan & Murnane, 2011) as well as the continued salience of race/ethnicity for understanding both types of inequalities. For immigrant families, researchers are generally positive about how the children of immigrants will fare, pointing particularly to the great improvements in educational attainment achieved by children when compared to their parents (Alba & Nee, 2003; Kasinitz et al., 2008; Lee & Zhou, 2015; Waters & Pineau, 2015). However, much of this success is attributed to immigrant parents and their relationships with their children (such as their ability to motivate their children) and ethnic communities (such as benefitting from cross-class resources). Whether this can be sustained in immigrant families in a time of growing inequality, when familial resources beyond that of parents may become increasingly important (Bengtson, 2001), is an issue of concern. Researchers have

speculated about the possibility of a “decline” in positive outcomes ranging from health to adolescent attitudes and behaviors among the children of immigrants (Coll & Marks, 2012; Perreira et al., 2006). What this means for the future descendants of immigrant families, who may have fewer familial resources to draw upon, deserves greater conceptual and empirical consideration.

By examining contexts in which patterns of multigenerational social reproduction diverge, this study highlights how family legacies involve not only family socioeconomic background but also racial and immigrant backgrounds. While the popular narrative of the immigrant American Dream is often one of leaving behind origins for a fresh start, this may also mean that more advantaged immigrants are less able to transmit such advantages to their children. Likewise, the inability of minority families, even those with native-born parents, to maintain educational advantages over time suggests the need to examine not only familial mechanisms of social reproduction, but also institutional mechanisms, including discriminatory practices as well as unspoken standards and expectations that prevent minority families from successfully intervening in their children’s education.

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Appendix Table 1.1. Descriptive Statistics for Contextual Measures

	<u>Native Families</u>	<u>Immigrant Families</u>
Contextual Measures		
Average Parental Year of Birth	1957	1957
Two-Biological Parent Family	0.57	0.64
Female	0.5	0.5
Student Year of Birth	1986	1986
Student Race/Ethnicity		
White	0.72	0.17
Black	0.14	0.07
Latino	0.09	0.52
Asian	0.01	0.18
Other	0.05	0.05
Student Immigrant Generation		
First	--	0.42
Second	--	0.58
Third or Higher	1	--
Public School	0.92	0.94
Urban School	0.25	0.45
School 10 th -Grade %FRPL		
<=10%	0.25	0.18
11-30%	0.48	0.38
>30%	0.27	0.45
School 10 th -Grade Class Size		
<200	0.3	0.11
200-399	0.34	0.25
>=400	0.36	0.64
School Region		
Northeast	0.18	0.19
Midwest	0.26	0.13
South	0.36	0.26
West	0.19	0.42
Total N	9,890	2,470

Note: Estimates are based on weighted imputed data. Total N rounded to nearest tens per NCES disclosure rules.

**Appendix Table 1.2. Standard Errors from Weighted OLS Regression Models
Estimating Students' 10th-Grade GPA by Maternal Nativity**

Highest Maternal Grandparent Education (Ref: Less than High School)	Native Families		Immigrant Families	
	Model 1a	Model 2a	Model 1b	Model 2b
High School	-0.03	-0.03	-0.07	-0.07
Some College or More	-0.03	-0.03	-0.06	-0.07
Family Resources				
Maternal Education (Ref: High School or Less)				
Some College		-0.03		-0.07
Bachelor's or More		-0.03		-0.06
Highest Parental Occupational Prestige Score		0.00		0.00
Family Income (Ref: <=\$25k)				
>\$25k-\$35k		-0.04		-0.08
>\$35k-\$75k		-0.03		-0.07
>\$75k		-0.04		-0.10
Family College Savings (Ref: <=\$5k)				
>\$5k-\$20k		-0.03		-0.09
>\$20k		-0.03		-0.08
Mother Conveys College Aspirations		-0.03		-0.06
Parent Academic Advice		-0.01		-0.01
Parent PTO Activities		-0.01		-0.02
Parent-Initiated School Contact		-0.01		-0.02
Background Measures				
Parent Age	0.00	0.00	0.00	0.00
Two-Biological Parent Family	-0.02	-0.02	-0.06	-0.05
Student is Female	-0.02	-0.02	-0.05	-0.05
Student Age	-0.02	-0.02	-0.04	-0.04
Student Race/Ethnicity (Ref: White)				
Black	-0.04	-0.04	-0.13	-0.13
Latino	-0.05	-0.05	-0.09	-0.10
Asian	-0.17	-0.16	-0.09	-0.09
Other	-0.05	-0.05	-0.10	-0.10
Student Immigrant Generation (Ref: First Generation)				
Second Generation			-0.05	-0.08
Public School	-0.05	-0.05	-0.10	-0.09
Urban School	-0.04	-0.03	-0.07	-0.06
School 10th-Grade FRPL % (Ref:<=10%)				
11-30%	-0.04	-0.04	-0.09	-0.08
>30%	-0.05	-0.04	-0.11	-0.11
School 10th-Grade Class Size (Ref:<200)				
201-399	-0.04	-0.04	-0.07	-0.07
>=400	-0.04	-0.04	-0.07	-0.07
School Region (Ref: Northeast)				
Midwest	-0.04	-0.04	-0.11	-0.11
South	-0.04	-0.04	-0.09	-0.10
West	-0.06	-0.05	-0.10	-0.10
	Total N	9,090	2,250	

Note: Ns are rounded to the nearest tens per NCES disclosure rules. Coefficients are shown in Table 1.2.

**Appendix Table 1.3. Standard Errors from Weighted Logistic Regression Models
Estimating Students' Bachelor's Degree Attainment by Maternal Nativity**

Highest Maternal Grandparent Education (Ref: Less than High School)	Native Families		Immigrant Families	
	Model 1a	Model 2a	Model 1b	Model 2b
High School	-0.09	-0.09	-0.18	-0.19
Some College or More	-0.10	-0.10	-0.19	-0.21
Family Resources				
Maternal Education (Ref: High School or Less)				
Some College		-0.07		-0.18
Bachelor's or More		-0.09		-0.19
Highest Parental Occupational Prestige Score		0.00		-0.01
Family Income (Ref: <=\$25k)				
>\$25k-\$35k		-0.13		-0.22
>\$35k-\$75k		-0.11		-0.21
>\$75k		-0.12		-0.26
Family College Savings (Ref: <=\$5k)				
>\$5k-\$20k		-0.08		-0.21
>\$20k		-0.10		-0.23
Mother Conveys College Aspirations		-0.10		-0.20
Parent Academic Advice		-0.02		-0.03
Parent PTO Activities		-0.02		-0.06
Parent-Initiated School Contact		-0.02		-0.05
Background Measures				
Parent Age	0.00	-0.01	-0.01	-0.01
Two-Biological Parent Family	-0.07	-0.07	-0.16	-0.15
Student is Female	-0.06	-0.06	-0.13	-0.13
Student Age	-0.05	-0.05	-0.10	-0.11
Student Race/Ethnicity (Ref: White)				
Black	-0.10	-0.10	-0.32	-0.33
Latino	-0.14	-0.14	-0.24	-0.25
Asian	-0.28	-0.28	-0.22	-0.23
Other	-0.14	-0.14	-0.26	-0.27
Student Immigrant Generation (Ref: First Generation)				
Second Generation			-0.13	-0.15
Public School	-0.11	-0.11	-0.31	-0.30
Urban School	-0.08	-0.08	-0.15	-0.14
School 10th-Grade FRPL % (Ref:<=10%)				
11-30%	-0.09	-0.09	-0.26	-0.24
>30%	-0.10	-0.10	-0.27	-0.27
School 10th-Grade Class Size (Ref:<200)				
201-399	-0.09	-0.08	-0.26	-0.27
>=400	-0.09	-0.09	-0.28	-0.29
School Region (Ref: Northeast)				
Midwest	-0.09	-0.09	-0.23	-0.24
South	-0.09	-0.09	-0.17	-0.18
West	-0.11	-0.10	-0.18	-0.19
	Total N	8,610	2,090	

Note: Ns are rounded to the nearest tens per NCES disclosure rules. Coefficients are shown in Table 1.4.

Appendix Table 1.4. Selected Coefficients from Weighted Regression Models Estimating 10th-Grade GPA (OLS) and Bachelor's Degree Attainment (Logistic) by Combined (Highest) Family Educational History

Highest Grandparent Education (Ref: Less than High School)	10th-Grade GPA					
	Native Families			Immigrant Families		
	Model 1	Model 2		Model 1	Model 2	
High School	0.14	***	0.07	+	0.08	0.05
High School	-0.04		-0.04		-0.08	-0.08
Some College or More	0.32	***	0.13	***	0.24	*** 0.16 *
	-0.04		-0.04		-0.07	-0.07
Total N	9,500			1,880		

Highest Grandparent Education (Ref: Less than High School)	Bachelor's Degree Attainment					
	Native Families			Immigrant Families		
	Model 1	Model 2		Model 1	Model 2	
High School	0.38	***	0.16		-0.10	-0.29
	-0.11		-0.11		-0.21	-0.23
Some College or More	0.88	***	0.29	*	0.16	-0.25
	-0.11		-0.12		-0.19	-0.22
Total N	8,990			1,760		

Note: All Ns rounded to nearest tens per NCES disclosure rules. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10.

Appendix Table 1.5. Selected Coefficients from Weighted OLS Regression Models Estimating 10th-Grade GPA Comparing Analyses with Imputed Values Versus Listwise Deletion

		10 th -Grade GPA											
		Native Families						Immigrant Families					
		Imputed Values			Listwise Deletion			Imputed Values			Listwise Deletion		
Highest Maternal GP Education		Model 1a	Model 2a	Model 1b	Model 2b	Model 1c	Model 2c	Model 1d	Model 2d				
Ref: Less than High School													
High School		0.13 ***	0.07 *	0.13 ***	0.08 **	0.06	0.02	0.07	0.01				
		-0.03	-0.03	-0.03	-0.03	-0.07	-0.07	-0.07	-0.07				
Some College or More		0.27 ***	0.09 **	0.27 ***	0.10 **	0.18 **	0.06	0.22 ***	0.08				
		-0.03	-0.03	-0.03	-0.03	-0.06	-0.07	-0.06	-0.07				
Maternal Education													
Ref: High School or Less													
Some College			0.07 **		0.09 **		0.07		0.04				
			-0.03		-0.03		-0.07		-0.07				
Bachelor's or Higher			0.30 ***		0.31 ***		0.16 **		0.19 **				
			-0.03		-0.03		-0.06		-0.07				
	Total N	9,090			8,060			2,250			1,740		

Note: All Ns rounded to nearest tens per NCES disclosure rules. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10.

Appendix Table 1.6. Selected Coefficients from Weighted Logistic Regression Models Estimating Bachelor's Degree Attainment Comparing Analyses with Imputed Values Versus Listwise Deletion

		Bachelor's Degree Attainment									
		Native Families				Immigrant Families					
		Imputed Values		Listwise Deletion		Imputed Values		Listwise Deletion			
Highest Maternal GP Education		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Ref: Less than High School											
High School		0.47 ***	0.31 ***	0.48 ***	0.34 ***	0.04	-0.14	0.00	-0.22		
		-0.09	-0.09	-0.09	-0.09	-0.18	-0.19	-0.21	-0.21		
Some College or More		0.81 ***	0.32 **	0.80 ***	0.34 **	0.16	-0.29	0.05	-0.41 +		
		-0.10	-0.10	-0.10	-0.10	-0.19	-0.21	-0.20	-0.22		
Maternal Education											
Ref: High School or Less											
Some College			0.23 **		0.19 *		0.19		0.15		
			-0.07		-0.08		-0.18		-0.20		
Bachelor's or Higher			0.64 ***		0.60 ***		0.36 +		0.40 +		
			-0.09		-0.09		-0.19		-0.22		
	Total N	8,610		7,700		2,090		1,610			

Note: All Ns rounded to nearest tens per NCES disclosure rules. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10.

Chapter 2

Learning the Rules of the Game: Native-Immigrant Differences in How Maternal Social Origins Relate to Parental Involvement

Abstract

While parental involvement in schools is often lauded as an opportunity to improve educational outcomes, research has shown that certain forms of involvement may actually be mechanisms through which educational inequalities are reproduced. However, existing work has overlooked how parental social origins and family nativity influence parental involvement in their children's education. This study examines the relationship between maternal social mobility trajectories and different forms of parental involvement at home and in schools, focusing on a comparison of patterns between native and immigrant families. Using data from the Education Longitudinal Study of 2002 (ELS:2002), the study defines four trajectories of maternal social mobility based on maternal social origins (as measured by maternal grandparents' education) and attainment (as measured by maternal education) for a nationally representative sample of students (n=12,350). Findings show that maternal social origins continue to be associated with the aspirations parents have for their children and how they interact with their children's schools in native families but are a much less relevant factor in immigrant families. Results shed light on legacies of inequalities associated with social origins and nativity in how families interact with dominant institutions such as schools.

Introduction

In an era of widening social inequalities, increasing competition for quality educational resources, and anxiety around social mobility (Duncan & Murnane, 2011), parental involvement and intervention in their children's education has attracted significant attention from researchers and policymakers (Fan & Chen, 2001; Jeynes, 2012; Robinson & Harris, 2014). Recent education reform efforts have emphasized the importance of parental involvement (Baquedano-López, Alexander, & Hernandez, 2013; Epstein, 2005), reasoning that given the right policies and interventions, parents will become more capable and schools more accommodating. However, focusing on increasing parental involvement in schools in a bid to improve educational outcomes ignores the significant research showing that such involvement can actually exacerbate longstanding inequalities in education (Baquedano-López et al., 2013; Carreón, Drake, & Barton, 2005; Lareau, 2000a; McNeal, 1999).

Researchers have argued that family interactions with schools are strongly shaped by the institutional standards of appropriate or desirable parental involvement imposed by schools and other institutions (Lareau & Calarco, 2012; Lareau & Weininger, 2003). Institutional expectations may vary from setting to setting, but in the U.S., standards for parental involvement are shaped by the values and sensibilities of a predominantly middle-class and White teaching force (deBrey et al., 2019; Lareau, 2011). Parents from similar backgrounds are much more at ease meeting such standards while parents from differing backgrounds struggle to do so. Research focusing on social class differences in parental involvement, for example, has highlighted the sense of discomfort and distrust

that sometimes characterizes working-class and poor families' interactions with their children's schools (Weininger & Lareau, 2003). Similarly, research finds that immigrant parents feel less welcome than native parents in their children's schools (Turney & Kao, 2009). Though sometimes drawing from different theoretical perspectives, such studies nonetheless share a common theme: disadvantaged parents differ in their levels of school-based involvement not because they do not care about their children's education but rather because they experience considerable challenges interacting with schools as dominant institutions.

Research has also begun to focus on how parents instill in their children particular ways of interacting with institutions (Calarco, 2018; Streib, 2011). Lareau (2011, 2015), for example, argues that middle-class children are taught early on how to interact with institutions with a "sense of entitlement" that carries on through adulthood. The logical conclusion is that the social class milieu in which an individual is raised strongly predicts how that individual will interact with institutions in later life. Surprisingly, little research extends this notion to parents themselves. Studies largely focus on parents' current social class as a determinant of their parenting practices and rarely acknowledge the potential impact of parental social origins, particularly in cases where there is a change between the two (i.e., cases of parental upward and downward mobility). As such, it is unclear whether parent-school relationships are informed largely by parents' social class attainment or whether they continue to be influenced by parents' social class origins. Indeed, a small number of studies provide glimpses of the continued relevance of parental

social origins for how they raise their children (Calarco, 2018; Dumais & Nichols, 2016; Roksa & Potter, 2011; Streib, 2015).

While the limited literature on the persistence of social origins on parenting practices raises compelling questions about how families interact with educational institutions, such literature has largely failed to address other instances of cultural mismatches between families and institutions. Notably, the nearly one-in-four families in the U.S. with immigrant parents (Fortuny, Capps, Simms, & Chaudry, 2009) may experience challenges to adapting to their new cultural context, regardless of their social class histories. These challenges may shape how they interact with their children's schools, which are often one of the first institutions they come into contact with in the U.S. (Perreira, Chapman, & Stein, 2006). For example, Cherng and Ho (2018) find that in contrast to the strong patterns of differences by social class observed in native families, immigrant families show smaller class differences in their support for their children's education. Thus, while social origins and attainment may play significant roles in the parenting logics of native families, they may matter less for immigrant families.

Parental involvement with their children's schools continues to be a central concern for policymakers and researchers. Yet it is increasingly clear that not all families interact with educational institutions in a similar manner and that family-school relationships are shaped by family experiences beyond that of their current social class status, such as parental social origins and histories of migration. This study thus compares the influence of social origins on parental involvement in children's education between native and immigrant families, drawing on nationally representative data from

the Education Longitudinal Study of 2002 (ELS:2002). Maternal social origins (as measured by maternal grandparents' education) and attainment (as measured by maternal education) are combined to create maternal social mobility trajectories, which capture whether mothers maintained high status, were upwardly mobile, downwardly mobile, or maintained low status. To understand whether parental origins and nativity broadly shape parenting strategies or whether they matter most for how parents engage with institutions, measures of parental home- and school-based involvement are examined, the former consisting of parental aspirations and academic advice provided by parents and the latter encompassing participation in parent-teacher organizations (PTOs) and parent-initiated school contact. Findings show that while maternal social origins have a lingering influence on parental involvement in native families, they play a less central role in immigrant families. Moreover, this pattern is most pronounced when examining school-based involvement, highlighting both the reproduction of cultural advantages in native families and the disadvantages in immigrant families.

Social Class and Parent-School Relationships

Research has shown that parental socioeconomic status (SES) shapes parenting practices and the amount of contact parents have with their children's schools (Baker & Stevenson, 1986; Davis-Kean, 2005; Kim & Schneider, 2005; Ream & Palardy, 2008; Roscigno & Ainsworth-Darnell, 1999; Sui-Chu & Willms, 1996). Studies find, for example, that parental SES is positively associated with parents' aspirations and expectations for their children (Davis-Kean, 2005; Dumais, 2006). Baker and Stevenson (1986) find that maternal education is positively correlated with greater contact with

schools, through school events, meetings with teachers, and parent-teacher conferences (Baker & Stevenson, 1986). Similarly, Sui-Chu and Willms (1996) and Ream and Palardy (2008) both find that lower-SES parents have fewer discussions with their children about academic matters, are less likely to visit or have contact with their children's schools, and are less likely to participate in parent-teacher organizations.

What accounts for such differing rates of parental involvement, particularly with their children's schools? While economic resources no doubt play a role (for example, the ability of parents to take time away from work to attend school activities), another perspective involves the cultural capital embodied in parents – namely, their ability to engage with their children's education and schools more effectively and with greater ease. Based on the work of Bourdieu, embodied cultural capital is conceived as a set of deeply internalized behaviors and attitudes (*a habitus*), strongly influenced by social class, that governs how individuals behave, including in their interactions with institutions (Bourdieu, 1986; Lamont & Lareau, 1988; Swartz, 1997). Middle-class parents, whose methods of parenting closely align with teachers, are much more comfortable and sociable in their interactions with their children's schools, while working-class and poor parents experience discomfort in and sometimes distrust towards schools (Lareau, 1987, 2011; Weininger & Lareau, 2003). In a similar vein, Calarco (2018) argues that middle-class parents teach their children to interact with their schools using “strategies of influence,” including being assertive in asking for help, while working-class parents teach their children “strategies of deference,” such as respecting their teachers. In short, middle-class parents' involvement with their children's schools is

often more proactive and interventionist, while working-class and poor parents' involvement is more limited and sometimes more reluctant.

Social Mobility and Parenting

Scholars working in the cultural reproduction tradition have asserted two important arguments about the association between family socioeconomic backgrounds and parental involvement with their children's education: 1) that social class differences are partly attributable to the differing sensibilities or *habitus* parents have toward interacting with their children's schools and that 2) parents pass on similar dispositions to their children, resulting in the reproduction of class-based interactions with institutions. Indeed, these conclusions comport with the theoretical conception of *habitus* as occurring through deep and early socialization (Bourdieu, 1986; Dumais, 2006). Following this perspective of early socialization, one must also conclude that how parents interact with dominant institutions such as their children's schools depends not only on their current social class position but also on the class in which they were raised – that is, their social origins. For families with parents who were raised in one class milieu who then go on to attain a different social class status (i.e., upwardly mobile or downwardly mobile parents), the differences between social origins and social attainment may lead to qualitatively different forms of parental involvement compared to families where parents experienced little change in social environments.

However, little empirical work has focused on the experiences of socially mobile parents, much less their interactions with institutions. In an ethnographic study of poor, working-class, and middle-class families, Lareau (2011) highlights differences between

grandparents and parents in child-rearing practices in families where parents were upwardly mobile, arguing that “as parents’ own social class position shifts, so do their cultural beliefs and practices in child-rearing” (p. 251). However, Lareau also notes that the relatively few cases with socially mobile families limit the generalizability of this argument. Moreover, while upwardly mobile parents may have greater economic resources to support the “concerted cultivation” parenting style favored by middle-class parents, such as involvement in extracurricular and enrichment activities, it is unclear whether such parents necessarily experience a shift in how they engage with their children’s education and schools, which would arguably require a greater cultural change.

Other qualitative work has offered some limited evidence that upwardly mobile parents do differ in their approaches to parenting compared to other middle-class parents. Calarco’s (2018) ethnographic account of the strategies employed by middle-class parents that are imparted to their children provides a brief but elucidating example of the upwardly-mobile middle-class Carson family. Though the Carsons had significant economic resources, neither parent was college-educated and Calarco describes the family as having “complicated relations to class-based parenting styles” (p.54): though more involved in structured activities for her son compared to working-class parents, Mrs. Carson tended to follow the lead of her middle-class counterparts and had less stringent postsecondary expectations for her high-achieving son. Streib’s (2015) work on cross-class marriages provides additional evidence that upwardly mobile mothers maintain an attitude toward parenting that is more consistent with their “blue-collar” origins than their new middle-class status: among middle-class college-educated mothers,

those with “blue-collar” origins tended to adopt a more laissez-faire parenting style that stood in contrast to the managerial style preferred by those with “white-collar” origins. The latter were more likely to manage their children’s time, activities, and behaviors while the former, despite having similar levels of education, were more ambivalent about such practices. However, since Calarco’s (2018) study focuses generally on middle-class families, rather than socially mobile families, and Streib’s (2015) study examined many different aspects of cross-class marriages, their studies only provide hints as to how social origins shape parental interactions with their children’s schools.

Overall, quantitative work has yielded mixed evidence regarding the role of parental social origins on parental school involvement, though studies have not so clearly distinguished between types of such involvement, some of which likely require greater effort or comfort with schools. Roksa and Potter (2011) examined differences by maternal family educational histories in parental engagement with “concerted cultivation,” a combination of enrolling children in extracurricular activities, parental involvement in schools, and parent-child discussion. Using data on the educational attainment of mothers (attainment) and maternal grandmothers (origins), they classify families as “stable” middle- or working-class (where maternal origins and attainment were consistent) or as “new” middle- or working-class (where maternal origins and attainment differed). They find that new middle-class mothers did not differ from stable middle-class mothers in the level of “concerted cultivation” they engaged in, after controlling for additional sociodemographic and family characteristics, but that new working-class mothers engaged in more “concerted cultivation” than their stable

working-class counterparts in this respect. That is, among working-class mothers, those with more advantaged social origins were more likely to adopt the sorts of parenting styles associated with middle-class families despite their downward mobility. However, their single measure of “concerted cultivation” combines parenting strategies within the home (e.g., speaking with their children) and the school (e.g., attending school events), making it difficult to assess how parents interact with institutions more specifically.

Dumais and Nichols (2016) take a similar approach to classifying maternal social mobility, defining three groups of mothers: 1) “Both HS” (both mothers and maternal grandparents had at most a high school degree), 2) “Continuing-Generation” (both mothers and at least one maternal grandparent attained at least a bachelor’s degree), and 3) “First-Generation” (mothers attained at least a bachelor’s degree but maternal grandparents had at most a high school degree). Consistent with Roksa and Potter (2011), they find that after accounting for family and sociodemographic factors (such as income and race/ethnicity), college-educated mothers with different social origins (i.e., “First-Generation” and “Continuing-Generation” mothers) were similar in their levels of school involvement and college expectations for their children, though Continuing-Generation mothers did enroll their children in more activities and had more books at home.

However, Dumais and Nichols (2016) do not include downwardly mobile mothers in their study, and similar to Roksa and Potter (2011), their study relies on a combined measure of school involvement in multivariate analyses, leaving it unclear whether differences by maternal social origins might persist for more proactive forms of parental involvement, such as initiating contact with schools. Thus, despite some suggestive

evidence that maternal social origins may play a role in parental involvement beyond that of mothers' own educational attainment, studies have been limited in their examination of different forms of parental involvement, particularly those that require significant interactions with schools as institutions.

Parental Involvement in Immigrant Families

Taken together, the literature on parental social origins suggests that family histories beyond parents' current social status shape how parents engage with their children's education and schools. Families thrust into a new cultural context that differs from the one in which they were raised may never fully adopt the attitudes and behaviors (i.e., *habitus*) of their new position. Though there has been significant focus on how social class shapes *habitus*, relatively little work examines how immigration, which similarly involves significant changes in families' cultural context, might result in different patterns of relationships between social class and parenting strategies, particularly those involving interactions with educational institutions. While social class may shape how native families interact with their children's schools, in immigrant families interactions may be shaped more by parents' shared experiences as newcomers to the U.S.

Indeed, a large body of literature finds that immigrant parents often report lower levels of involvement with their children's schools (Crosnoe, Ansari, Purtell, & Wu, 2016; Kao & Rutherford, 2007; Kao & Tienda, 1995; Lim, 2012; Pong, Hao, & Gardner, 2005; Terriquez, 2012; Turney & Kao, 2009), a finding that generally persists even when accounting for socioeconomic resources. Studies have also cited common reasons for

why immigrant parents, regardless of their socioeconomic status, appear to be less involved with their children's schools, including language barriers, lack of information and communication from schools, feeling unwelcome in schools, and even different cultural norms around the appropriateness of venturing into their children's schools, which some immigrant groups perceive as the domain of educators and not families (García Coll et al., 2002; Hill & Torres, 2010; Lim, 2012; Peña, 2000; Perreira et al., 2006; Turney & Kao, 2009). Despite their lower involvement within schools, immigrant parents are heavily involved in their children's education, often within the home (Calzada et al., 2014; Carreón et al., 2005; Louie, 2004, 2012; Portes & Rumbaut, 2001; Suárez-Orozco, Suárez-Orozco, & Todorova, 2008; Zhou & Bankston, 1994). In particular, a bevy of research finds that immigrant parents have very high and consistent aspirations for their children's education, an optimism that is sometimes especially pronounced among lower-SES immigrant families (Glick & White, 2004; Hill & Torres, 2010; Kao & Tienda, 1995; Pong et al., 2005; Raleigh & Kao, 2010; Roubeni, Haene, Keatley, Shah, & Rasmussen, 2015).

Though there is relatively little work focused explicitly on social class differences in parental involvement among immigrant families, there is evidence suggesting that levels of parental involvement and aspirations are relatively similar across immigrant families from different class backgrounds. In interviews with working- and middle-class immigrant families, Louie (2012) finds that their children similarly view their parents as supportive within the home but much less able to advocate for them in schools, a finding Louie notes echoes those of studies on working-class native families. Cherng and Ho

(2018) find smaller differences by maternal education in parental participation in school activities, parent-initiated school contact, and academic expectations among immigrant families compared to differences among native White families. They argue that immigrant parents share a particular *habitus* that guides their parental involvement, one that is based more on their status as newcomers to the U.S. rather than on social class. Notably, their findings of smaller social class differences in immigrant families holds for school-based involvement and expectations but not in parent-child interactions within the home (such as academic discussions). This suggests that while there may be common class-based differences in how parents interact with their children across native and immigrant families, it is in interactions with institutions such as schools that nativity become highly salient. However, Cherng and Ho (2018) focus on maternal education and do not account for maternal social origins. It is possible that separating the most advantaged families (those with highly educated mothers with advantaged social origins) would yield patterns of class differences more consistent with native families. It is also possible that even accounting for maternal social origins would still result in consistent differences in class-based patterns in parental school-based involvement between native and immigrant families.

Study Motivation

While parental involvement in schools is often lauded as an opportunity to improve educational outcomes, research has shown that certain forms of involvement may actually be mechanisms through which existing educational inequalities are reproduced. Work in the cultural reproduction tradition emphasize class-based

differences in how parents navigate schools as institutions, but have overlooked how the social origins parents were raised in may be a lingering influence in how they interact with their children's schools. The small body of literature on parental social mobility and parenting lends support to the relevance of examining parental social origins in conjunction with their social attainment but has tended to focus on parent-child interactions, providing less insight into family-school relationships. Moreover, little work addresses another significant source of cultural change – immigration – that strongly shaped how parents interact with their children's schools. Existing work on immigrant parents' involvement in their children's education generally find lower levels of school-based involvement, often due to real and perceived barriers, but also significant optimism towards and moral support for their children's education. Yet it remains unclear whether such patterns will persist when more fully accounting for family social background – that is, taking into account parental social origins in addition to social attainment. This study thus examines the relationship between maternal social mobility trajectories and different forms of parental involvement at home and in schools, focusing on a comparison of patterns between native and immigrant families.

Data and Methods

Data

This study draws on data from the Education Longitudinal Study of 2002 (ELS:2002), conducted by the National Center for Education Statistics (NCES), which followed a nationally representative sample of students who were 10th-graders in 2002. Students as well as their parents were surveyed in the base year of the study. The sample

was restricted to cases in which both parents and students responded to their respective base year surveys and that were not missing information on maternal nativity. This resulted in a total sample size of approximately 12,350 cases (Ns are rounded to the nearest tens throughout, per NCES disclosure rules), with about 9,890 native families (83 percent) and 2,470 immigrant families (17 percent).

Measures

Maternal Social Mobility Trajectories: This study focuses on maternal social origins and attainment. Mothers in the U.S. remain the primary caregivers of children and are often tasked with responsibilities related to parenting, including fostering relationships with other parents and their children's schools (Lareau, 2000b; Small, 2009; Weininger, Lareau, & Conley, 2015), and many studies of parental involvement focus on the role of mothers (Cherng & Ho, 2018; Crosnoe et al., 2016; Streib, 2015; Terriquez, 2012). On a practical level, focusing on maternal social mobility is consistent with strategies used in prior quantitative studies (Dumais & Nichols, 2016; Roksa & Potter, 2011), which allows for a clearer comparison of findings across studies.

Using a combination of maternal social origins and social attainment, four categories of social mobility are defined. Maternal social origins are measured by maternal grandparents' level of education – lower social origins are those where the highest level of educational completed by maternal grandparents was high school or less and high social origins are those where maternal grandparents had at least some college experience (whether a degree was completed or not). Social attainment is similarly measured by mothers' own level of education, although to take into account the

expansion of educational opportunities as well as the overall rise in educational credentials, lower social attainment for mothers is defined by not having attained a bachelor’s degree and high social attainment as having attained at least a bachelor’s degree. The four social mobility trajectories resulting from the combination of social origins and attainment are shown in Table 2.1. Briefly, mothers from lower social origins and lower social attainment are considered Low Status Maintainers. Mothers with high social origins and high social attainment are considered High Status Maintainers. Downwardly Mobile mothers are those from high social origins but with lower social attainment. Lastly, Upwardly Mobile have lower social origins but high social attainment.

Table 2.1. Maternal Social Mobility Trajectories Derived from Social Origins and Social Attainment

	Maternal Grandparent has HS or less	Maternal Grandparent has Some College
Mother has <BA	Low Status Maintainer	Downwardly Mobile
Mother has BA+	Upwardly Mobile	High Status Maintainer

Parental Involvement: A total of four broad types of parental involvement are examined. Two types of parental involvement, parental aspirations and parental advice, are considered home-based involvement because they do not necessarily involve contact with schools. *Parental college aspirations* is a dichotomous measure of whether or not parents want their child to complete at least a bachelor’s degree. *Parental academic advice*, is measured by three items asking how often parents provided advice or information about: 1) selecting courses or programs at school, 2) plans and preparation for college entrance exams, and 3) applying to college or other schools after high school.

“Often” responses were coded as ‘1’ while “Never” and “Sometimes” responses were coded as ‘0’.

The two remaining categories of parental involvement are considered school-based. This includes involvement with school parent-teacher organizations (PTOs) and contacting schools. *PTO involvement* is captured by four items asking whether parents: 1) belong to the school’s PTO, 2) attend meetings of the PTO, 3) take part in the activities of the PTO, and 4) act as a volunteer at the school. ‘Yes’ responses were coded ‘1’ and “No” responses were coded ‘0’. *Parent-initiated school contact* consists of four items asking parents how many times they contacted the school about: 1) their child’s school program for the year, 2) their child’s plans after leaving high school, 3) their course selection for entry into college or other postsecondary schools, and 4) volunteering in their child’s school (such as through fundraising or chaperoning). Parents who reported contacting the schools “Once or twice,” “Three or four times,” or “More than four times” were coded as ‘1’ while those who responded “None” were coded ‘0’. While these measures are sometimes defined as social capital, they can also be considered measures of cultural capital in that they demonstrate to some extent the ease or familiarity with which parents interact with institutions. That is, one can consider parents’ willingness or ability to engage with their children’s schools as determined by their stock of cultural capital, which then fosters beneficial forms of social capital through connections to other parents, teachers, and school administrators.

Family Nativity: Family nativity is determined by the place of birth of mothers – mothers born in the U.S. (including Puerto Rico) are considered native mothers while those born outside the U.S. are considered immigrant mothers.

Contextual Measures: Because parental involvement may be influenced by other factors beyond maternal social mobility trajectories, additional family, student, and school characteristics are taken into account. Family characteristics that are likely associated with parental involvement include family income, parental occupational prestige (highest), maternal employment, family composition, and parental age (mean). While the present study does not seek to address a causal link between parental involvement and student outcomes, meta-analyses generally find that parental involvement is positively associated with student outcomes (Fan & Chen, 2001; Jeynes, 2012). Thus, student 10th-grade GPA is taken into account to reveal patterns of parental involvement net of student academic performance. Additional student characteristics included in analyses are race/ethnicity and gender. Lastly, because literature suggests that opportunities for parental involvement and developing social ties are linked to institutional features (Coleman, 1987; Small, 2009; Sui-Chu & Willms, 1996), a number of school characteristics including school type, urbanicity, the percentage of students receiving free or reduced price lunch, 10th-grade class size (enrollment), and the region in which the school is located are taken into account..

Analytic Strategy

To understand whether parental involvement varies by maternal social mobility trajectories and whether patterns differ by maternal nativity, a series of logistic regression

models are estimated separately for native and immigrant families. First, binary logistic regression models are estimated for each of the specific items that comprise the four categories of parental involvement examined: parental aspirations, parental academic advice, PTO involvement, and parent-initiated school contact. The advantage of this approach is the ability to test whether the association between maternal social mobility trajectories and parenting logics are consistent across different behaviors and activities, particularly those that are more intensive, such as seeking to volunteer in schools. However, to provide more easily interpretable results, ordinal logistic regression models are used to estimate the likelihood of parents providing more academic advice, engaging in more PTO involvement, and initiating more school contact.

To highlight the role of maternal social origins and social attainment, comparisons are made first with High Status Maintainers as the reference group and second with Low Status maintainers as the reference group. This allows for comparisons between families with similarly educated mothers who have different social origins (i.e., Low Status Maintainers versus Downwardly Mobile and Upwardly Mobile versus High Status Maintainers), the primary focus of this study. Predicted probabilities based on the ordinal logistic regression models are also estimated to facilitate interpretation. All analyses were conducted using Stata 14 and are weighted to account for the sampling design of ELS:2002. Missing data were handled using multiply imputed using predictive mean matching ($k=5$). A total of five datasets were imputed.

Findings

Descriptive Findings

Table 2.2 presents weighted descriptive statistics for primary study measures by maternal nativity. Remaining descriptive statistics for contextual measures are shown in Appendix Tables 2.1-2.2. For both native and immigrant families, the majority are status maintainers – that is, they have mothers whose social attainment (i.e., maternal level of education) is consistent with their social origins (i.e., maternal grandparent’s level of education). Among native families, half have Low Status Maintainer mothers and 16 percent have High Status Maintainer mothers. Among immigrant families, two-thirds (66 percent) have mothers who are Low Status Maintainers and about 11 percent have mothers who are High Status Maintainers. Nearly a quarter (23 percent) of native families and 13 percent of immigrant families have mothers who are Downwardly Mobile – mothers whose educational attainment was relatively lower than that of their parents. For both native and immigrant families, about 10 percent have Upwardly Mobile mothers – mothers who are college-educated but whose own parents were not. In total, nearly one-third of native families and about a quarter of immigrant families have mothers whose social attainment differs from their social origins, a distinction often overlooked in existing research.

The majority of both native families (86 percent) and immigrant families (91 percent) have parents who want their children to complete college. Generally, about half of parents in both native and immigrant families frequently provide advice to their children about course selection, college entrance exams, and postsecondary education.

Table 2.2. Descriptive Statistics for Primary Study Measures

Maternal status trajectory	Native Families	Immigrant Families
Low status maintainer	0.51	0.66
Downwardly mobile	0.23	0.13
Upwardly mobile	0.1	0.1
High status maintainer	0.16	0.11
Parents have college aspirations	0.86	0.91
Parental Academic Advice		
Courses	0.56	0.51
College exams	0.45	0.54
Postsecondary plans	0.47	0.53
Mean num. of advice types	1.25	1.27
PTO involvement		
Member	0.26	0.16
Meetings	0.32	0.47
Activities	0.29	0.21
Volunteer	0.31	0.15
Mean num. of PTO activity types	1.15	0.98
Parent contact with school		
School program	0.41	0.28
Courses	0.28	0.18
Postsecondary plans	0.21	0.17
Volunteer opportunities	0.29	0.17
Mean num. of contact types	1.18	0.79
	N	9,890
		2,470

Note: Estimates are based on weighted imputed data. Ns rounded to nearest tens per NCES disclosure rules.

Parental PTO involvement and contact with schools is lower. Between a quarter and a third of native parents and between about one-fifth and one-half of immigrant parents are involved with different aspects of school PTOs. Lastly, about one-fifth to two-fifths of parents in native families and one-fifth to one-third of parents in immigrant families initiate various types of contact with their child’s schools. In general, for both native and immigrant families, fewer parents engage in the types of parenting logics that are arguably more intensive, such as those requiring them to be in or to contact schools.

But among such activities – for example, volunteering in school or enquiring about volunteering activities – typically a greater share of parents in native families (about one-third for both activities) participate than do parents in immigrant families (less than one-fifth for both activities).

Maternal Social Mobility Trajectories and Parental Involvement

Tables 2.3-2.4 present, as odds ratios, a summary of findings regarding the likelihood of expressing each aspect of parental involvement by maternal nativity, with comparisons to High Status Maintainers shown in Panel 1 and comparisons to Low Status Maintainers shown in Panel 2. Odds ratios less than 1 indicate a lower likelihood of the outcome and odds ratios greater than 1 indicate a greater likelihood. Full results are presented in Appendix Tables 2.3-2.6.

Overall, differences by maternal social mobility trajectories in parental home-based involvement are most consistent among native families and less apparent among immigrant families. In native families, those with Low Status Maintainer and Downwardly Mobile mothers are less likely to have college aspirations for their child (52 percent and 30 percent lower odds, respectively) compared to those with High Status Maintainer mothers. The relevance of maternal social origins is also apparent in native families when comparing families with Low Status Maintainer mothers to those with Downwardly Mobile mothers (who have similar levels of education but more advantaged social origins): the odds of the latter having college aspirations for their child are nearly 1.5 times greater than the odds for the former. Moreover, native families with High Status Maintainer mothers are most likely to provide children with advice about course

selection, though there are no differences detected for advice about college exams or postsecondary plans.

Different patterns of findings for parental home-based involvement emerge for immigrant families. Among immigrant families no differences in parental college aspirations are observed by maternal social mobility trajectories – immigrant parents in families with less socially advantaged mothers are as likely as their counterparts in families with High Status Maintainer mothers are to have college aspirations for their children. With the exception of providing advice about college exams, and only then when compared to the least advantaged families (i.e., those with Low Status Maintainer mothers), higher maternal social origins and attainment are not as strongly associated with parental academic advice in immigrant families. In short, native families where mothers have more advantaged social origins are more ambitious about their children’s education, having higher aspirations and providing more academic guidance, while parents in immigrant families are similarly ambitious across maternal social mobility trajectories.

The relevance of maternal social origins for school-based parental involvement in native families is also apparent. For example, the odds of parents in families with Upwardly Mobile mothers volunteering in their child’s schools are about 25 percent lower than the odds for families with High Status Maintainer mothers, although in both types of families mothers are college-educated. The former are also less likely to contact schools about their children’s school program for the year or to enquire about volunteering opportunities. Moreover, compared to their counterparts in families with

Table 2.3. Odds Ratios from Binary Logistic Regression Models Estimating Parental Involvement (Native Families)

Native Families	Panel 1.					Panel 2.				
	Ref: High Status Maintainers					Ref: Low Status Maintainers				
	Low Status Maintainers	Downwardly Mobile	Upwardly Mobile	Downwardly Mobile	Upwardly Mobile					
Parents have college aspirations	0.48 ***	0.70 *	0.82	1.46 ***	1.70 **					
Parental Academic Advice										
Courses	0.76 **	0.82 *	0.79 *	1.07	1.03					
College Exams	0.84 +	0.87	0.90	1.03	1.06					
Postsecondary education	0.88	0.90	0.92	1.03	1.05					
PTO Involvement										
Member	0.59 ***	0.75 **	0.84 +	1.27 **	1.42 ***					
Attend Meetings	0.92	0.96	1.07	1.04	1.16					
Attend Activities	0.76 **	0.86	0.91	1.13	1.20 +					
Volunteer	0.61 ***	0.74 **	0.74 **	1.22 **	1.21 *					
Parent-Initiated School Contact										
School Program	0.48 ***	0.54 ***	0.61 ***	1.12 +	1.28 **					
Course Selection	0.68 ***	0.86	0.85	1.27 **	1.27 *					
Postsecondary Plans	0.69 ***	0.72 ***	0.90	1.04	1.31 **					
Volunteering	0.67 ***	0.76 **	0.75 **	1.14 +	1.12					

Note: Coefficients are shown in Appendix Tables 2.1-2.6. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10.

Table 2.4 Odds Ratios from Binary Logistic Regression Models Estimating Parental Involvement (Immigrant Families)

Immigrant Families	Panel 1.			Panel 2.		
	Ref: High Status Maintainers			Ref: Low Status Maintainers		
	Low Status Maintainers	Downwardly Mobile	Upwardly Mobile	Downwardly Mobile	Upwardly Mobile	
Parents have college aspirations	0.93	1.01	1.90	1.08	2.05	
Parental Academic Advice						
Courses	0.79	0.97	1.00	1.22	1.25	
College Exams	0.81	1.49	1.52	1.84 **	1.86 **	
Postsecondary education	0.91	1.26	0.84	1.38	0.91	
PTO Involvement						
Member	0.59 *	0.72	1.07	1.23	1.84 *	
Attend Meetings	0.76	0.95	0.91	1.23	1.20	
Attend Activities	0.68	0.63 +	0.73	0.93	1.08	
Volunteer	0.76	0.64	0.70	0.83	0.92	
Parent-Initiated School Contact						
School Program	0.64 *	0.69	0.94	1.08	1.48 +	
Course Selection	0.71	0.91	1.00	1.28	1.40	
Postsecondary Plans	0.70	0.91	1.06	1.30	1.52	
Volunteering	1.01	1.34	1.70 +	1.32	1.70 *	

Note: Coefficients are shown in Appendix Tables 2.1-2.6. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10.

Low Status Maintainer mothers, parents in families with Downwardly Mobile mothers – who have similar levels of education but more advantaged social origins – are more likely to be PTO members, to volunteer in schools, and to contact schools about their children’s course selection.

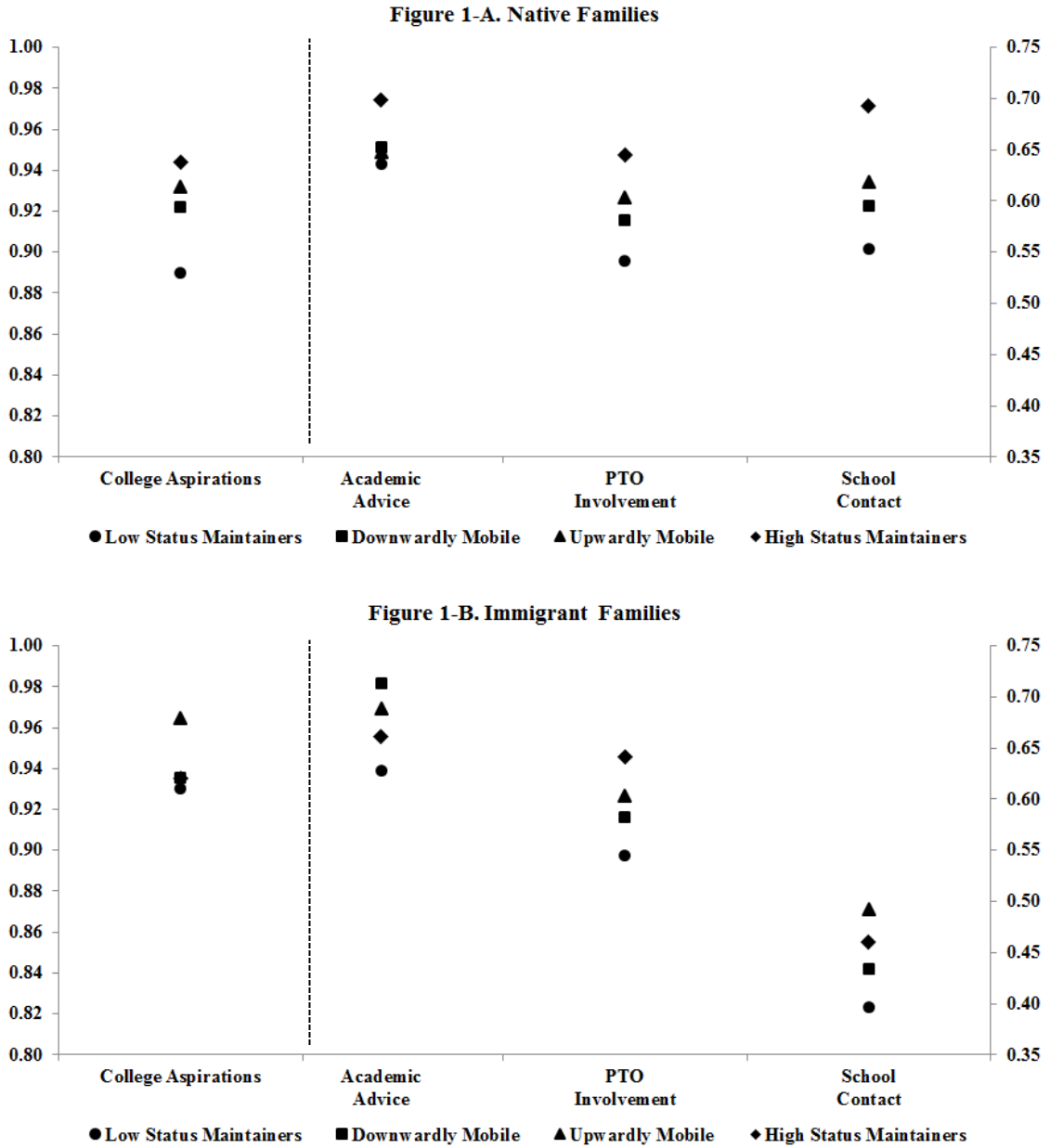
In immigrant families, there are few differences in PTO involvement and parent-initiated school contact across maternal social mobility trajectories. In fact, the few statistically significant differences are found between mothers with different levels of education. Specifically, immigrant families with Low Status Maintainer mothers, who are not college educated, are less likely to contact schools about the school program compared to those with High Status Maintainer mothers, who are college-educated, and less likely to contact schools about volunteering opportunities compared to Upwardly Mobile mothers, who are also college-educated. Thus, the few differences observed in school-based parental involvement among immigrant families tend to be due more to differences in maternal education rather than social origins. In contrast, maternal social origins continue to influence how parents engage with their children’s schools in native families.

In alternative analyses of parenting logics, summative measures of parental academic advice (range: 0 to 3), PTO involvement (range: 0 to 4), and school contact (range: 0 to 4) were analyzed in ordered logistic regression models. Models estimate the likelihood of parents engaging in more types of each form of parental involvement. Predicted probabilities by maternal social mobility trajectories were estimated from the ordered logistic regression models for the summative measures and from the binary

logistic regression model for parental college aspirations, holding all other covariates at their mean values. Full model results are available in Appendix Table 2.7. Figure 2.1 graphs the predicted probabilities, by maternal social mobility trajectories, of parents: 1) having college aspirations, 2) providing at least one type of academic advice frequently, 3) participating in at least one PTO activity, and 4) initiating at least one type of contact with their children's schools. Probabilities for parental college aspirations are graphed on the left axis; all other probabilities are graphed on the right axis.

Comparing parents in families where mothers are similarly educated but differ in their social origins reveals consistent differences related to maternal social origins but generally only among native families. For example, although both Upwardly Mobile and High Status Maintainer mothers have at least a college education, the probability that parents in native families with Upwardly Mobile mothers, who have lower social origins, will initiate contact with their children's schools is about 7 percentage points lower than the probability for their counterparts in families with High Status Maintainer mothers (0.62 and 0.69, respectively). The corresponding comparison among immigrant families reveals no difference in the likelihood of contacting schools and even suggests a reversal of findings in that families with Upwardly Mobile mothers have higher predicted probabilities of contacting schools than do families with High Status Maintainer mothers (0.49 and 0.46, respectively). Thus, while maternal social origins shape patterns of interactions between parents and schools for native families – a finding that is apparent even among college-educated mothers who are largely assumed to be the most involved – they appear to play a lesser role in immigrant families.

Figure 2.1. Predicted Probabilities of Parental Involvement by Maternal Social Mobility Trajectories and Nativity



Note: Predicted probabilities are estimated from models shown in Appendix Table 2.7, with all remaining covariates held at their mean values.

The comparison of predicted probabilities also reveals differences in patterns of parental involvement by maternal nativity. While all parents have fairly high probabilities of wanting their child to complete college, there is more variation in native families depending upon maternal social mobility trajectories, in contrast to the consistently high college aspirations found across parents in immigrant families. Immigrant parents' probabilities of engaging with school PTOs are more on par with their native counterparts. However, the probabilities of immigrant parents initiating contact with their children's schools are much lower than the probabilities for native families. For example, among immigrant parents, those from families with Upwardly Mobile mothers have the highest predicted probability of contacting their children's schools (0.49), a probability that is lower than that predicted for parents in native families with Low Status Maintainer mothers. Also of note is the magnitude of differences in probabilities between the most and least advantaged families: in native families, the difference in predicted probabilities of contacting schools between families with High Status Maintainer mothers and those with Low Status Maintainer mothers is about 14 percentage points, while in immigrant families there is a corresponding difference of only 6 percentage points.

Study Limitations

There are limitations to the present study that merit discussion. First, the study was constrained in the types of parental involvement examined, given the limited measures available in ELS:2002. While the distinction between home- and school-based types of parental involvement yielded findings that support the overarching argument concerning inequalities in how families interact with institutions, a fuller examination of

additional forms of parental involvement would likely prove illuminating. In particular, the widely-cited typology of parental involvement developed by Epstein includes greater parental involvement in school decision-making processes at the district-level (Bower & Griffin, 2011; Epstein, 2005), which would be an ideal type of involvement to assess how parents interact with institutions. Second, this study cannot directly assess the factors that lead immigrant parents and mothers with less advantaged social origins to have fewer interactions with their children's schools. Prior studies suggest a combination of structural and cultural challenges, ranging from ability to take time away from work to feeling welcome or comfortable in schools, as likely reasons, but future research should certainly consider which are the most relevant and whether reasons (and their relative importance) vary by family nativity. Finally, while research suggests that Latino and Asian parents alike share a common view respect for teachers that often precludes them from intervening in schools (Hill & Torres, 2010; Lim, 2012; Suárez-Orozco et al., 2008), much more work can be done to examine ethnic and social class variations in this belief among immigrant families.

Discussion and Conclusion

While prior research has established strong association between parents' attained social class and their parenting styles, very little work has considered parental origins as a source of difference in parental involvement. And although immigrant families' status as newcomers in the U.S. places them in positions similar to those of socially mobile families in terms of navigating a new cultural environment, there is a paucity of research on how social class may or may not shape immigrant parents' involvement with their

children's schooling. To address these empirical and theoretical gaps, this study examined how maternal experiences with social mobility are related to their parenting logics and whether patterns of relationships are similar for native and immigrant families. Findings show that maternal social origins continue to be associated with the aspirations parents have for their children and how they interact with their children's schools in native families but are a much less relevant factor in immigrant families.

This study took as a starting point a central premise in cultural models of reproduction: that social class strongly shapes the embodied cultural capital of parents such that higher SES parents are much more familiar and comfortable with the forms of parental involvement valued by dominant institutions such as schools. However, in highlighting the experiences of socially mobile families and immigrant families, the study argues that differences in parental involvement are rooted in experiences other than parents' current social class status, namely their social origins and histories of immigration. Findings thus contribute to theories of cultural reproduction in three ways: 1) providing evidence that the *habitus* of parents is not fully explained by their own level of education but likely has roots in their own upbringings, 2) affirming the importance of understanding cultural capital relative to interactions with institutions, where differences in parental involvement are the most apparent, and 3) highlighting contexts such as immigration where there are cultural "mismatches" between families and schools that are not fully explained by measures of social class alone.

Findings have a number of implications. First, considering parental social origins in both qualitative and quantitative research is a useful analytic lens for examining

inequalities that may otherwise go undetected. Ongoing concern over inequalities in education (Duncan & Murnane, 2011) and anxiety over whether middle-class families can maintain their status (Cooper, 2014) highlight the need to better understand the position of upwardly mobile families, who may be more precariously positioned than other middle-class families. Second, the study provides insight into how institutions such as schools can effectively facilitate parental involvement. Differences in school engagement by maternal social class mobility and nativity were less apparent when offered through a structured format – such as a parent-teacher organization – than through more informal channels like parent-initiated school contact. Schools that create accessible and welcoming venues for parental involvement can help ameliorate some of the disadvantages associated with lower social origins and immigrant status (Epstein, 1986; Marschall, Shah, & Donato, 2012). Likewise, schools should also be mindful of the potential influence of informal channels of parental involvement that may perpetuate inequalities. Finally, in comparing patterns among native and immigrant families, findings from this study call for a more malleable approach to understanding theoretical concepts such as *habitus* that have largely been discussed in terms of social class. Rather than viewing *habitus* solely within the dynamics of social class change, researchers should consider other contexts, such as immigration, where families must adapt to new cultural environs and where their prior cultural resources may no longer apply.

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Appendix Table 2.1. Descriptive Statistics for Contextual Measures (Family and Student Characteristics)

Family characteristics	Native Families	Immigrant Families
Family income category		
Lowest	0.18	0.36
2nd Lowest	0.11	0.17
2nd Highest	0.42	0.31
Highest	0.29	0.16
Highest parental occupational prestige	51.75	44.96
Mother works full-time	0.63	0.51
Family composition		
Mother & Father	0.56	0.62
Mother & Other guardian	0.15	0.1
Father & Other guardian	0.03	0.03
Two guardians	0.03	0.04
Single guardian	0.24	0.21
Mean year of birth	1957	1957
Student characteristics		
10th-grade GPA	2.57	2.43
Race/ethnicity		
White	0.72	0.17
Black	0.14	0.07
Latino	0.09	0.52
Asian	0.01	0.18
Other	0.05	0.05
Female	0.5	0.5
N	9,890	2,470

Note: Estimates are based on weighted imputed data. Total N rounded to nearest tens per NCES disclosure rules.

Appendix Table 2.2. Descriptive Statistics for Contextual Measures (School Characteristics)

School characteristics	Native Families	Immigrant Families
Public school	0.92	0.94
Urban school	0.25	0.45
FRPL %		
0-10%	0.23	0.16
11-30%	0.43	0.33
31-100%	0.24	0.41
Missing	0.09	0.1
10th-grade enrollment		
1-199	0.3	0.11
200-399	0.34	0.25
400-700+	0.36	0.64
Region		
Northeast	0.18	0.19
Midwest	0.26	0.13
South	0.36	0.26
West	0.19	0.42
N	9,890	2,470

Note: Estimates are based on weighted imputed data. Total N rounded to nearest tens per NCES disclosure rules.

**Appendix Table 2.3. Coefficients from Binary Logistic Regression Models
Estimating Parental College Aspirations by Maternal Nativity**

Maternal social mobility trajectories	Native Families		Immigrant Families	
Ref: High status maintainer				
Low status maintainer	-0.74	***	-0.07	
Downwardly mobile	-0.35	*	0.01	
Upwardly mobile	-0.2		0.64	
Ref: Low status maintainer				
Downwardly mobile	0.38	***	0.08	
Upwardly mobile	0.53	**	0.72	
Family characteristics				
Family income category (Ref: Lowest)				
2nd lowest	0.27	*	0.66	*
2nd highest	0.39	***	0.2	
Highest	1.04	***	0.57	
Highest parental occupational	0.02	***	0.01	
Mother works full-time	-0.01		0.08	
Family composition (Ref: Mother & Father)				
Mother & other guardian	0.03		0.05	
Father & other guardian	-0.81	***	-0.72	+
Two guardians	-0.41	+	-0.56	
Single guardian	0.17	+	0.63	*
Parent age (mean)	0		0.01	
Student characteristics				
10th-grade GPA	0.79	***	0.53	***
Race/ethnicity (Ref: White)				
Black	1.2	***	1.44	*
Latino	0.36	*	0.36	
Asian	1.34		0.65	+
Other	0.26		0.3	
Female	0.28	***	0.17	
School characteristics				
Public school	-0.69	***	-1.38	*
Urban school	0.38	**	-0.19	
School FRPL% (Ref: 0-10%)				
11-30%	-0.17		-0.2	
31-100%	-0.45	*	-0.15	
Missing	-0.12		0.25	
10th-grade enrollment (Ref: 1-199 students)				
200-399 students	0.13		-0.04	
400-700+ students	0.3	*	0.34	
School region (Ref: Northeast)				
Midwest	-0.28	+	-1.12	**
South	0.05		-1.06	**
West	-0.13		-0.87	*
	N	9,890	2,470	

Note: All Ns rounded to nearest tens per NCES disclosure rules. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10.

Appendix Table 2.4. Coefficients from Binary Logistic Regression Models Estimating Parental Academic Advice by Maternal Nativity

Maternal social mobility trajectories	Course Selection Advice		College Exams Advice		Postsecondary Advice	
	Native Families	Immigrant Families	Native Families	Immigrant Families	Native Families	Immigrant Families
Ref: High status maintainer						
Low status maintainer	-0.27 **	-0.23	-0.18 +	-0.21	-0.13	-0.09
Downwardly mobile	-0.20 *	-0.03	-0.14	0.40	-0.10	0.23
Upwardly mobile	-0.23 *	0.00	-0.11	0.42 +	-0.08	-0.18
Ref: Low status maintainer						
Downwardly mobile	0.07	0.20	0.03	0.61 **	0.03	0.32
Upwardly mobile	0.03	0.22	0.06	0.62 **	0.05	-0.09
Family characteristics						
Family income category (Ref: Lowest)						
2nd lowest	0.12	-0.03	-0.10	-0.13	0.11	-0.03
2nd highest	0.07	-0.13	0.07	-0.46 *	0.16 +	-0.17
Highest	0.12	0.03	0.25 *	-0.64 **	0.29 **	-0.20
Highest parental occupational	0.00	0.01 +	0.00	0.01 +	0.00	0.01 +
Mother works full-time	-0.05	0.13	0.03	-0.03	-0.02	0.11
Family composition (Ref: Mother & Father)						
Mother & other guardian	-0.17 *	0.16	-0.11	0.06	0.04	0.33
Father & other guardian	-0.12	-0.04	-0.12	-0.54	0.06	0.31
Two guardians	-0.11	0.19	0.09	-0.16	0.26	0.16
Single guardian	-0.09	0.01	-0.02	-0.43 *	0.08	-0.23
Parent age (mean)	0.01 *	0.00	0.01 **	0.00	0.01 *	0.02 +
Student characteristics						
10th-grade GPA	-0.02	0.01	0.14 ***	0.08	0.05	0.03
Race/ethnicity (Ref: White)						
Black	0.38 ***	0.10	0.70 ***	0.00	0.62 ***	0.09
Latino	0.21 *	-0.07	0.34 ***	-0.36 +	0.49 ***	0.04
Asian	0.03	-0.54 **	0.12	-0.30	-0.31	-0.03
Other	0.29 *	0.15	0.30 *	-0.19	0.36 **	0.21
Female	0.02	-0.06	0.04	-0.01	0.14 *	0.03
School characteristics						
Public school	0.10	-0.14	-0.06	0.09	-0.08	0.07
Urban school	0.03	-0.17	0.00	-0.07	0.05	-0.16
School FRPL% (Ref: 0-10%)						
11-30%	-0.03	-0.14	0.11	-0.26	-0.06	-0.55 *
31-100%	-0.10	0.02	0.14	-0.09	0.05	-0.41 +
Missing	-0.04	-0.02	0.24 +	-0.55 *	0.09	-0.14
10th-grade enrollment (Ref: 1-199 students)						
200-399 students	0.19 **	0.22	-0.01	0.05	0.06	-0.27
400-700+ students	0.17 *	0.13	-0.02	0.27	-0.03	0.01
School region (Ref: Northeast)						
Midwest	-0.08	-0.18	-0.26 **	-0.49 *	-0.20 +	-0.63 **
South	0.15 +	0.29 +	0.22 **	0.23	0.16 *	-0.10
West	0.02	0.27 +	-0.23 *	0.13	-0.09	-0.07
N	9,010	2,010	7,590	1,760	7,330	1,750

Note: All Ns rounded to nearest tens per NCES disclosure rules. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10.

Appendix Table 2.5. Coefficients from Binary Logistic Regression Models Estimating Parental PTO Involvement by Maternal Nativity

	PTO Member		Attend PTO Meetings		Participate PTO Activities		Volunteer in School		
	Native Families	Immigrant Families	Native Families	Immigrant Families	Native Families	Immigrant Families	Native Families	Immigrant Families	
Maternal social mobility trajectories									
Ref: High status maintainer									
Low status maintainer	-0.53 ***	-0.53 *	-0.08	-0.27	-0.27 **	-0.39	-0.5 ***	-0.27	
Downwardly mobile	-0.29 **	-0.33	-0.04	-0.05	-0.15	-0.47 +	-0.3 **	-0.45	
Upwardly mobile	-0.17 +	0.07	0.07	-0.09	-0.09	-0.31	-0.3 **	-0.35	
Ref: Low status maintainer									
Downwardly mobile	0.24 **	0.21	0.04	0.21	0.12	-0.07	0.2 **	-0.19	
Upwardly mobile	0.35 ***	0.61 *	0.15	0.18	0.18 +	0.08	0.19 *	-0.08	
Family characteristics									
Family income category (Ref: Lowest)									
2nd lowest	0.52 ***	0.08	0.15	0.00	0.39 ***	-0.11	0.29 **	0.1	
2nd highest	0.67 ***	0.29	0.13	-0.09	0.24 **	-0.09	0.25 **	0.44 *	
Highest	1.14 ***	0.52 *	0.32 **	-0.33 +	0.43 ***	-0.01	0.53 ***	0.35	
Highest parental occupational	0.01 ***	0.02 *	0.00	0.00	0.01 ***	0	0.01 **	0.02 **	
Mother works full-time	-0.21 **	-0.28 +	-0.09	-0.13	-0.12 +	-0.12	-0.19 **	-0.3 +	
Family composition (Ref: Mother & Father)									
Mother & other guardian	-0.36 ***	0.21	-0.04	-0.08	-0.15	-0.04	-0.4 ***	0.16	
Father & other guardian	-1.01 ***	0.23	-0.38 *	0.14	-0.58 **	-0.19	-0.78 ***	-0.62	
Two guardians	-0.36 *	-0.22	-0.12	-0.73 *	0.03	-0.16	-0.58 **	0.15	
Single guardian	-0.12	0.06	-0.12	-0.27 +	-0.29 ***	-0.36 *	-0.54 ***	-0.26	
Parent age (mean)	-0.02 ***	-0.04 **	0.00	0.01	-0.01	0	-0.01	0	
Student characteristics									
10th-grade GPA	0.18 +	0.41	0.80 ***	1.09 ***	0.62 ***	0.58 +	0.23 *	-0.14	
Race/ethnicity (Ref: White)									
Black	-0.33 *	-0.33	0.43 ***	0.78 ***	0.12	0.32	-0.19	-0.24	
Latino	0.16	-0.07	-0.06	0.39 *	-0.39 +	0.03	0.11	-0.17	
Asian	0.11	-0.22	0.21	0.35	0.04	0.56 +	-0.05	0.25	
Other	0.16 ***	0.14	-0.01	-0.04	0.21 ***	0.1	0.27 ***	0.17	
Female	0.06	-0.11	-0.01	-0.06	-0.03	0.02	0.11 +	-0.01	
School characteristics									
Public school	-0.35 *	-0.02	-0.54 ***	-0.96 ***	-0.62 ***	-0.6 *	-0.67 ***	-0.64 *	
Urban school	0.06	0.17	0.14 +	0.11	-0.04	0.11	-0.17 *	-0.12	
School FRPL% (Ref: 0-10%)									
11-30%	-0.33 *	-0.22	-0.03	0.13	-0.21 *	-0.13	-0.21 *	-0.27	
31-100%	-0.46 **	-0.38	-0.02	0.28	-0.34 **	0	-0.27 **	-0.2	
Missing	-0.43 +	-0.36	0.10	0.16	-0.18	-0.12	-0.19	-0.57	
10th-grade enrollment (Ref: 1-199 students)									
200-399 students	0.11	-0.22	-0.17 *	-0.10	-0.24 ***	-0.4	-0.35 ***	-0.4 +	
400-700+ students	0.40 **	-0.10	-0.17 *	-0.09	-0.37 ***	-0.7 *	-0.43 ***	-0.59 *	
School region (Ref: Northeast)									
Midwest	-0.21	-0.02	0.08	-0.32	0.13	0.01	0.35 ***	1.14 ***	
South	0.60 ***	-0.01	0.46 ***	-0.28 +	0.23 *	0.08	0.49 ***	0.87 **	
West	-0.19	-0.11	0.06	-0.38 *	0.05	-0.05	0.42 ***	0.76 **	
	N	9,670	2,400	9,680	2,410	9,600	2,380	9,630	2,380

Note: All Ns rounded to nearest tens per NCES disclosure rules. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10.

Appendix Table 2.6. Coefficients from Binary Logistic Regression Models Estimating Parent-Initiated Contact with Schools by Maternal Nativity

	School Program		Course Selection		Postsecondary Plans		Volunteering	
	Native Families	Immigrant Families	Native Families	Immigrant Families	Native Families	Immigrant Families	Native Families	Immigrant Families
Maternal social mobility trajectories								
Ref: High status maintainer								
Low status maintainer	-0.73 ***	-0.45 *	-0.39 ***	-0.34	-0.37 ***	-0.36	-0.40 ***	0.01
Downwardly mobile	-0.62 ***	-0.37	-0.15	-0.09	-0.33 ***	-0.09	-0.27 **	0.29
Upwardly mobile	-0.49 ***	-0.06	-0.16	0.00	-0.10	0.06	-0.29 **	0.53 +
Ref: Low status maintainer								
Downwardly mobile	0.11 +	0.08	0.24 **	0.25	0.04	0.26	0.13 +	0.28
Upwardly mobile	0.25 **	0.39 +	0.24 *	0.34	0.27 **	0.42	0.11	0.53 *
Family characteristics								
Family income category (Ref: Lowest)								
2nd lowest	-0.03	0.39 +	0.01	-0.03	-0.01	-0.36	0.12	-0.43 +
2nd highest	0.15 +	0.26	0.14	-0.09	0.04	-0.09	0.11	-0.06
Highest	0.21 *	0.54 **	0.34 **	-0.11	0.12	-0.11	0.29 *	0.01
Highest parental occupational	0.01 **	0.01	0.01 **	-0.01	0.00	0.01	0.01 ***	0.01
Mother works full-time	0.04	-0.06	-0.14 *	0.08	-0.13 *	-0.06	0.01	-0.08
Family composition (Ref: Mother & Father)								
Mother & other guardian	-0.05	0.33	-0.05	0.18	-0.07	-0.09	-0.35 ***	-0.25
Father & other guardian	-0.08	-0.01	-0.20	-0.40	-0.20	-0.04	-0.65 ***	-0.38
Two guardians	-0.09		-0.17	0.19	-0.12	0.49 +	-0.45 *	0.23
Single guardian	-0.16 *	0.18	-0.24 **	-0.02	-0.17 +	0.06	-0.38 ***	-0.32 +
Parent age (mean)	-0.01 **	-0.01	-0.01 *	0.00	0.00	0.00	0.00	0.00
Student characteristics								
10th-grade GPA	-0.17 ***	-0.08	0.07 *	0.02	0.03	-0.01	0.29 ***	0.13
Race/ethnicity (Ref: White)								
Black	0.42 ***	0.31	0.33 **	-0.27	0.36 ***	-0.45	0.21 *	0.01
Latino	0.21 *	-0.25	0.17	-0.51 *	0.25 *	-0.06	0.13	-0.25
Asian	-0.32	-0.73 ***	0.10	-0.58 **	-0.66 +	-0.72 **	-0.39	-0.24
Other	0.25 *	0.17	0.13	-0.42	0.32 **	-0.30	0.13	0.03
Female	-0.10 +	-0.15	-0.07	-0.01	-0.12 *	-0.02	0.08	0.12
School characteristics								
Public school	0.09	-0.30	0.22 *	0.02	0.18	0.12	-0.56 ***	-0.87 **
Urban school	-0.03	-0.08	-0.05	-0.17	-0.11	-0.11	0.03	0.17
School FRPL% (Ref: 0-10%)								
11-30%	-0.15 +	0.24	0.00	0.10	-0.05	0.07	-0.13	0.48 +
31-100%	-0.19 *	-0.03	-0.21 *	-0.11	-0.04	0.16	-0.20 +	0.42
Missing	-0.01	0.07	0.11	0.09	0.07	0.14	-0.02	0.40
10th-grade enrollment (Ref: 1-199 students)								
200-399 students	0.00	0.13	-0.03	-0.02	-0.05	-0.19	-0.37 ***	0.09
400-700+ students	-0.06	-0.05	-0.03	-0.22	-0.14	-0.32	-0.49 ***	-0.29
School region (Ref: Northeast)								
Midwest	-0.09	0.16	0.16 +	0.96 **	0.14	0.27	0.23 *	0.45 +
South	-0.10	0.17	0.35 ***	0.54 *	0.16 +	-0.03	0.36 ***	0.24
West	0.17 +	0.44 *	0.21 *	0.81 **	0.32 **	0.34	0.36 **	0.32
N	9,530	2,350	9,520	2,340	9,490	2,330	9,550	2,350

Note: All Ns rounded to nearest tens per NCES disclosure rules. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10.

Appendix Table 2.7. Coefficients from Ordered Logistic Regression Models Estimating Likelihood of Parents Engaging in More of Each Type of Parental Involvement by Maternal Nativity

Maternal social mobility trajectories	Academic Advice			PTO Involvement			Parent-Initiated School Contact		
	Native Families	Immigrant Families		Native Families	Immigrant Families		Native Families	Immigrant Families	
Ref: High status maintainer									
Low status maintainer	-0.28 ***	-0.14		-0.43 ***	-0.40 +		-0.60 ***	-0.26	
Downwardly mobile	-0.21 *	0.24		-0.27 ***	-0.25		-0.43 ***	-0.10	
Upwardly mobile	-0.23 *	0.13		-0.18 *	-0.16		-0.33 ***	0.13	
Ref: Low status maintainer									
Downwardly mobile	0.07	0.39 *		0.16 **	0.15		0.17 **	0.16	
Upwardly mobile	0.05	0.27		0.25 **	0.24		0.27 ***	0.39 +	
Family characteristics									
Family income category (Ref: Lowest)									
2nd lowest	0.07	-0.16		0.30 ***	-0.02		0.03	0.05	
2nd highest	0.12 +	-0.29 *		0.27 ***	0.07		0.11	0.14	
Highest	0.28 **	-0.27 +		0.61 ***	0.14		0.28 ***	0.21	
Highest parental occupational	0.00 *	0.02 **		0.01 ***	0.01		0.01 ***	0.01	*
Mother works full-time	0.00	0.11		-0.16 **	-0.18 +		-0.04	-0.01	
Family composition (Ref: Mother & Father)									
Mother & other guardian	-0.12 +	0.23		-0.25 ***	0.04		-0.17 *	0.10	
Father & other guardian	-0.06	-0.31		-0.74 ***	0.08		-0.31 *	-0.06	
Two guardians	-0.07	0.22		-0.35 *	-0.43		-0.25 +	0.40 +	
Single guardian	-0.06	-0.21 +		-0.31 ***	-0.21		-0.27 ***	0.02	
Parent age (mean)	0.01 ***	0.00		-0.01 *	0.00		-0.01 *	-0.01	
Student characteristics									
10th-grade GPA	0.10 ***	0.12 +		0.15 ***	0.06		0.03	-0.02	
Race/ethnicity (Ref: White)									
Black	0.68 ***	0.20		0.55 ***	0.69 **		0.39 ***	0.05	
Latino	0.38 ***	-0.05		0.06	0.39 *		0.23 **	-0.32	
Asian	-0.02	-0.22		0.08	0.06		-0.43	-0.64 ***	
Other	0.32 **	0.23		0.06	0.30		0.25 **	-0.10	
Female	0.09 +	0.02		0.04	-0.07		-0.06	-0.04	
School characteristics									
Public school	0.01	0.03		-0.65 ***	-0.85 ***		-0.07	-0.36	
Urban school	0.04	-0.19 +		0.01	0.03		-0.03	-0.11	
School FRPL% (Ref: 0-10%)									
11-30%	-0.01	-0.34 +		-0.23 *	-0.12		-0.08	0.24	
31-100%	-0.01	-0.24		-0.29 **	0.00		-0.22 *	0.15	
Missing	0.03	-0.32		-0.19	-0.17		0.01	0.20	
10th-grade enrollment (Ref: 1-199 students)									
200-399 students	0.09	0.08		-0.22 **	-0.25		-0.13 *	0.07	
400-700+ students	0.08	0.22		-0.19 *	-0.34 +		-0.19 **	-0.18	
School region (Ref: Northeast)									
Midwest	-0.22 **	-0.44 *		0.13	-0.01		0.10	0.51 *	
South	0.22 **	0.18		0.48 ***	-0.02		0.17 *	0.28	
West	-0.10	0.15		0.13	-0.11		0.27 **	0.54 **	
N	9,450	2,240		9,810	2,430		9,670	2,390	

Note: All Ns rounded to nearest tens per NCES disclosure rules. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10.

Chapter 3

Making the Grade: The Role of Maternal Social Origins and Nativity in Teacher Evaluations of Families

Abstract

Family cultural capital that benefits their children's educational outcomes rests on its value in relation to the institutional standards of evaluations set by schools. Research has shown that social class strongly influences how teachers perceive parental involvement and student ability. However, because successful interactions with institutions often require significant cultural knowledge, it is unclear whether families who experience a change in social status – whether through social mobility or immigration – are as familiar with and successful in meeting institutional standards. This study examines variations in teacher perceptions of parents and students by maternal social mobility trajectories (which combine maternal social attainment and social origins), focusing on comparisons of patterns between native and immigrant families. Using nationally-representative data from the Education Longitudinal Study of 2002 (ELS:2002) (n=9,490), this study finds significant variations in teacher perceptions of native families by maternal social attainment and origins. Among immigrant families, maternal social mobility trajectories generally play a weaker role in explaining teacher perceptions. Findings emphasize the importance of critically assessing institutional standards of evaluation in schools as a potential mechanism through which educational inequalities persist.

Introduction

Teacher perceptions of students and their parents play an important role in shaping the quality of education students receive (Diamond, Randolph, & Spillane, 2004; Ho & Cherng, 2018; Rist, 1970; Warren, 2002). However, teacher perceptions are not based purely on the performance of students but are instead influenced by the broader social context that determines what institutions such as schools expect from families. Because institutional standards by which families are evaluated favor what is found among the dominant mainstream (Croizet, Goudeau, Marot, & Millet, 2017), families outside the mainstream continue to be at a disadvantage when interacting with such institutions. To understand how institutions such as schools that are meant to level the playing field are nevertheless able to perpetuate social inequalities requires a deeper understanding of how they perceive different types of families.

While a significant body of research has shown that family ability to meet such institutional standards varies by social class (Lareau & Calarco, 2012; Lareau & Weininger, 2003), little work has examined whether the cultural familiarity required to successfully navigate institutions can be acquired by upwardly mobile families. While researchers have begun to take an interest in how class origins informs parenting strategies, most studies have focused on beliefs and behaviors upwardly mobile parents enact within the home (Streib, 2015), and there has been relatively less attention paid to how socially mobile families interact with institutions. Parents with differing social origins and social attainment may vary in how they choose to raise their children, but in order for such differences to yield educational benefits for their children, they must still

meet the standards of educational institutions. Thus, teacher evaluations of families are critical to understanding how class-based parenting strategies actually translate into cultural resources.

However, other family characteristics also complicate the relationship between families and schools. In particular, both immigrant parents and their children may be less likely to understand or feel comfortable with the institutional standards of schools. Studies have shown that teachers do not perceive immigrant parents to be as involved in their children's education, which can negatively impact their children's educational outcomes (Ho & Cherng, 2018; Suárez-Orozco, Suárez-Orozco, & Todorova, 2008). However, what can be concluded about the role of social class in shaping teacher evaluations is limited in such literature. Because immigrant parents may share challenges in adapting to the standards set by U.S. schools, social class differences in teacher evaluations may not be as sharply defined in immigrant families as they are in native families. On the other hand, it is possible that immigrant families with advantaged social backgrounds experience greater success in navigating schools. That is, perhaps there is a universal middle-class approach to interacting with institutions that can successfully cross borders.

Because family background matters for how students are perceived by their teachers, beyond their academic performance, teacher perceptions of families are an important but relatively understudied form of educational inequality. To understand whether teacher perceptions of families are consistent with broader social inequalities, this study examines differences in teacher evaluations of parental involvement and

student ability by maternal social mobility trajectories (which combine maternal social attainment and social origins), focusing on whether patterns vary by maternal nativity. Using nationally-representative data from the Education Longitudinal Study of 2002 (ELS:2002), this study finds that among native families, differences in teacher perceptions are most apparent between students with less educated mothers and those with college-educated mothers, with few differences by maternal social origin, except regarding teacher recommendations from students, where significant variations by maternal social origins are observed. Among immigrant families, maternal social mobility trajectories generally play a weaker role in explaining teacher perceptions of parents and students.

Cultural Capital and Institutional Standards of Evaluation

While there are different theoretical approaches to assessing Bourdieu's concept of cultural capital in educational settings (Davies & Rizk, 2018), the one taken by the present study relies on Lareau and Weininger's (2003) articulation of cultural capital as operating in relation to institutionalized standards embedded within specific social contexts (what Bourdieu describes as *fields*). To understand how schools become sites for social reproduction requires a "double vision" that simultaneously keeps institutional standards and families efforts to meet such standards in perspective (p. 586). In the field of formal education, such institutionalized standards shape teacher expectations for and perceptions of parents and students. For parents and students to successfully convert their actions and attitudes (what Bourdieu considers a part of *habitus*) into cultural capital, they must experience a *habitus-field* congruence (Edgerton & Roberts, 2014).

Educational inequalities can emerge when certain families are out-of-sync with the evaluative standards of schools.

Incongruence with the institutional standards of schools is likely to occur because schools are suffused with implicit cultural norms that more closely match the dominant mainstream (Croizet et al., 2017), a problem further compounded by increasingly standardized assessment measures. Lareau and Weininger (2003), for example, argue that parents are often evaluated by criteria established by “professionals and semi-professionals” who value more proactive approaches to parenting but pay little regard to variations in parental ability to meet such standards (p. 589). Thus, while schools and teachers have preferences for the types of involvement they expect from their students’ parents, not all parents share or comply with such expectations. Likewise, teacher evaluations of students are not neutral but rather are susceptible to the influence of broader social stratifying factors (Blanchard & Muller, 2015; Farkas, 2003; Rist, 1970). Moreover, because school evaluative standards and rules are not always consistent or explicit (Calarco, 2018; Lareau, Evans, & Yee, 2016), it requires significant cultural knowledge on the part of parents and students to successfully navigate interactions with such institutions.

Social Class and Teacher Perceptions of Families

Research that emphasizes the role of institutional standards has tended to focus on variations in social class among families and how this impacts both parent and student interactions with schools. Qualitative research has shown that poor and working-class parent interactions with teachers and schools differ markedly from those of their middle-

class counterparts (Lareau, 1987, 2000, 2011; Lareau & Calarco, 2012; Lareau & Cox, 2011; Reay, 2004). Such research consistently finds that middle-class parents demonstrate “certainty, self-assurance and an ability to counter opposing viewpoints” (Reay, 2004, p. 77) while working-class parents exhibit discomfort and frustration when interacting with schools and teachers (Lareau, 1987, 2011). Moreover, middle-class parents are more “ready, willing, and able to intervene with official in institutions” on behalf of their children than are working-class parents (Lareau & Cox, 2011, p. 157), and are more often adept in securing advantages for their children through such interventions, such as placement into gifted programs (Lareau, 2000; Lareau & Calarco, 2012). These findings are supported by quantitative work as well. Dumais, Kessinger, and Ghosh (2012) find that the number of times parents volunteer in schools is consistently and positively associated with teacher ratings of young children’s language and literacy skills, learning behaviors, and interpersonal skills, but only for White, college-educated parents and not for White high-school educated parents. These social class differences manifest in language as well: Lareau and Calarco (2012, p. 75) note that working-class parents tend to use the term “the school” when describing communication with schools and teachers, suggesting a “faceless, bureaucratic institution,” while middle-class parents use the names or even nicknames of principals and teachers, demonstrating a more casual and personal relationship.

Just as schools have specific expectations for parents, they also favor certain characteristics from students that can affect their educational experiences. In one early study, Rist (1970) observed a kindergarten classroom in an all-black school serving a

poor neighborhood, finding that the teacher had an “ideal type” of student possessing characteristics associated with the middle-class, such as usage of “Standard American English” and “ease of interaction” with adults (p. 422). These preferences shaped how the teacher grouped students, students’ physical placement in the classroom, and the amount and quality of attention given to students. More recently, Calarco’s (2018) work has shown that even when teacher expectations do not always consistently favor middle-class students, such students nevertheless remain more likely to reap educational benefits. Based on a longitudinal ethnography of elementary students, Calarco finds that teachers have shifting and often unarticulated expectations of students, at times expecting more proactive middle-class strategies of seeking help and at other times expecting the more deferential approaches adopted by working-class students. Despite this “inconsistent curriculum,” middle-class children on balance still received more attention, assistance, and accommodation from their teachers compared to their working-class peers. Importantly, Calarco emphasizes that such advantages accrued to middle-class children not only because they met the standards of teachers but also because middle-class parents and children were willing and able to make and pursue requests beyond what was “fair or required” (p. 80). In other words, middle-class families demonstrated what Lareau and Weininger (2003) consider a central component of cultural capital – the ability to “impose” favorable standards of evaluation within schools.

Researchers have also begun to assess differences in parenting strategies by parental social origins, largely focusing on variations within the middle-class (Dumais & Nichols, 2016; Roksa & Potter, 2011; Streib, 2013). This relatively smaller body of work

emphasizes the persistent influence of the social class milieu in which parents were raised on their levels of parental involvement and for their children's educational outcomes. For example, Roksa and Potter (2011) find that at baseline, students with upwardly mobile mothers (mothers who attained relatively more education compared to their own mothers) have lower reading and math scores than students with mothers who were raised and remained middle-class, but such differences were no longer statistically significant once measures of parental involvement and other sociodemographic characteristics were taken into account. Students with downwardly mobile mothers (who attained relatively less education compared to their own mothers), however, remained at an advantage compared to their peers with mothers who were raised and remained working-class. However, Roksa and Potter (2011) focus on test scores makes it difficult to assess how parental social origins might influence teacher perceptions of students. Dumais and Nichols (2016) similarly find no differences in math scores between children with upwardly mobile and consistently middle-class mothers, net of parental involvement and sociodemographic controls. However, they do find that teacher ratings of children's language and literacy skills were lower for children with upwardly mobile mothers compared to their peers with college-educated mothers and grandmothers. Findings thus suggest that teacher *perceptions* of student ability may be more likely to vary by family social class background than students' tested ability.

There are a number of reasons why families who are not middle-class or are newly middle-class may struggle to meet teachers' standards. For one, the "rules of the game" for how parents can or should intervene in their children's schooling are complex

and oftentimes opaque. Even middle-class parents with significant knowledge and other resources can experience challenges and setbacks in their efforts (Lareau et al., 2016). Second, upwardly mobile mothers may continue to favor child-rearing practices and interaction styles that are not in keeping with teacher expectations (Calarco, 2018; Streib, 2015). These may not only result in differences between parents but also in differences between students in how they engage with schools. Calarco (2018), for example, describes the cases of one upwardly mobile mother who emphasized character traits such as “respect, responsibility, and hard work” (p. 55) that manifested in her son’s occasional unwillingness to seek help from teachers, a behavior that stands in stark contrast to the often entitled help-seeking found among other middle-class families. Even when less advantaged parents receive “cultural mentoring” from middle-class parents that may provide a positive result or a change in behavior, such instances are rare and working-class parenting logics remain predominant (Lareau & Calarco, 2012).

Teacher Perceptions of Immigrant Families

Just as working-class and minority families may struggle with meeting such standards, so might immigrant families, who are tasked with navigating what is likely a completely foreign educational system. While researchers have explored whether factors beyond social class also shape family interactions with schools and teacher perceptions, much of the literature in the U.S. focuses on racial differences in family interactions and teacher perceptions (DeCastro-Ambrosetti & Cho, 2005; Farkas, 2003; Lareau & Horvat, 1999; Riegle-Crumb & Humphries, 2012). Lareau and Horvat (1999), for example, describe instances in which Black parents, grappling with the long-term consequences of

racially segregated schools, struggled with adhering to the conventions of parental intervention deemed appropriate by their children's schools. Though Black parents' interactions with their children's school were in many ways consistent with institutional norms of parents as involved advocates for their children, some were seen as overly critical of schools and thus not perceived favorably by teachers. Nevertheless, it is apparent that Black parents demonstrated considerable familiarity with strategies for engaging with their children's school.

However, unlike native minority families, immigrant families may lack familiarity with the often unspoken expectations of institutions. Studies have found that immigrant parents report less involvement with their children's schools (Kao & Rutherford, 2007; Pong, Hao, & Gardner, 2005; Terriquez, 2012), often because they face significant barriers (Reay, 2004; Turney & Kao, 2009). Although Crosnoe, Ansari, Purtell, and Wu (2016) find no difference in the relationship between maternal level of education and their cultural capital (including levels of school involvement) between immigrant Latina mothers educated in the U.S. or in Latin America, they do not assess variations in how mothers' involvement is received by institutions. Put within the cultural capital framework, immigrant parents are less likely to possess the highly specific knowledge required to navigate interactions with institutions with great success (Blackledge, 2001; Leopold & Shavit, 2013). In a qualitative study of Bangladeshi immigrant mothers in the United Kingdom and their efforts to engage with their children's schools, Blackledge (2001, p.365) finds that even when teachers acknowledged that they were "trying to make people have a set of rules which are really

middle-class white rules,” they nevertheless seemed to accept as inevitable that immigrant parents would have to adapt to such standards in order for their children to succeed. Rather than developing strategies that built on the strengths of the immigrant mothers, teachers instead sought to ensure that Bangladeshi families adhered to the standards of the “white middle-classes.” From the perspective of institutions, immigrant parents’ are thus viewed uninvolved in their children’s education (Quiocho & Daoud, 2006; Suárez-Orozco et al., 2008).

Research also suggests that the children of immigrants do not benefit from parental involvement as much as their peers with native parents do and that teachers perceptions of and relationships with them are also not as favorable (Blanchard & Muller, 2015; Cherng, 2017; Ho & Cherng, 2018; Leopold & Shavit, 2013). Ho and Cherng (2018) find that even after taking into parent self-reports of their level of involvement in schools, teachers are less likely to perceive immigrant parents as highly involved compared to native parents. Moreover, teacher perceptions of parental involvement were linked to student outcomes, including grades and teacher recommendations of students. Leopold and Shavit’s (2013) study of immigrants in Israel tested whether parental cultural capital (maternal reading habits, cultural tastes, and “competence” in Israeli culture) is similarly beneficial for students’ test scores and grades in immigrant and native families. They find that the relationship between maternal cultural capital and student test scores does not vary by family nativity. In other words, in terms of test scores, the children of immigrant parents benefit as much from maternal cultural capital as do their peers with native parents. However, they find a negative interaction between

immigrant mothers and competence in Israeli culture for student grades. The authors conclude that for immigrant families, cultural capital “does not travel well” and that the adverse outcomes of this are more likely to be reflected in measures of student performance that depend in part on teacher perceptions, such as grades. In short, the interactions of immigrant parents and their children with institutions such as schools are not as likely to be comfortable or familiar compared to native families, resulting in less favorable perceptions from teachers.

Study Motivation

How cultural capital contributes to educational inequalities is highly salient in the U.S., as rising inequalities between families places vulnerable families at greater risk of falling behind (Cooper, 2014; Duncan & Murnane, 2011). Research following Lareau and Weininger’s (2003) call to focus on family ability to meet the institutional standards of schools has shown that teacher expectations of parental involvement and children’s behavior favor the middle-class, to the benefit of their children. However, because successful interactions with institutions often require significant cultural knowledge, it is unclear whether upwardly mobile middle-class families are as familiar with such rules as other middle-class families. Studies find that upwardly mobile parents often retain attitudes toward parenting more like the working-class, which might result in teachers perceiving them less favorably than other middle-class parents. Likewise, immigrant families, regardless of their social class background, face challenges in adapting to the institutional standards set by U.S. schools, yet few studies in the U.S. systematically focus on teacher perceptions of such families. To address the limitations in existing

research, this study examines variations in teacher perceptions of parents and students by maternal social mobility trajectories, focusing on comparisons of patterns between native and immigrant families.

Data and Methods

Data

Data come from the Education Longitudinal Study of 2002 (ELS:2002), conducted by the National Center for Education Statistics (NCES), a nationally representative sample of students who were in the 10th-grade in 2002. The base year of the study included surveys from students, their parents, and their English and math teachers. Approximately 30 students were selected for participation from over 750 schools, and an average of about a dozen teachers who taught the selected 10th-graders were surveyed per school. The weighted response rate for students in the base year was about 87 percent, and of those, about 92 percent had matching teacher surveys completed (Ingels, Pratt, Rogers, Siegel, & Stutts, 2004). The sample is restricted to students who completed a survey in the base year and who also had surveys completed by both their English and math teachers. In addition, students whose maternal nativity could not be determined were removed from the sample. This yielded an analytic sample of about 7,770 native families and 1,720 immigrant families (Ns rounded to the nearest tens throughout per NCES disclosure rules).

Measures

Maternal Social Mobility Trajectories: Four categories of maternal social mobility are defined using a combination of maternal social origins (as measured by

maternal grandparents' level of education) and maternal social attainment (as measured by maternal level of education). Mothers with lower social origins are those whose most educated parents completed high school but went no further in education while mothers with high social origins are those who had at least one parent with some college experience (whether a degree was completed or not). In order to account for the expansion of educational opportunities as well as the overall rise in educational credentials, different criteria were used to measure lower and higher social attainment: mothers with lower social attainment include those who did not attain a bachelor's degree while mothers with high social attainment completed at least a bachelor's degree. These criteria and the resulting four social mobility trajectories are shown in Table 3.1. Briefly, mothers with lower social origins and lower social attainment are considered Low Status Maintainers. Downwardly Mobile mothers are those with high social origins but lower social attainment. Upwardly Mobile mothers are those with lower social origins but high social attainment. Lastly, mothers with high social origins and high social attainment are considered High Status Maintainers.

Table 3.1. Maternal Social Mobility Trajectories Derived from Social Origins and Social Attainment

	Maternal Grandparent has HS or less	Maternal Grandparent has Some College
Mother has <BA	Low Status Maintainer	Downwardly Mobile
Mother has BA+	Upwardly Mobile	High Status Maintainer

Teacher Perceptions of Parental Involvement: Both English and math teachers of ELS:2002 10th-graders were asked “How involved are the parents of this student in his/her academic performance?” with responses including Very Involved, Somewhat involved, Not involved, and Don’t Know. Teacher perceptions of parental involvement is a dummy measure based on whether any teacher responded “Very involved” to the item. All other responses, including ‘Don’t Know’ were coded as ‘0’.

Teacher Ratings of Student Writing Ability: English teachers were asked to rate four components of student writing ability, including 1) organization of ideas, 2) grammar, 3) use of detail, and 4) analytical, critical, or creative thinking. The NCES-created composite variable combining the various aspects of writing ability was standardized to a mean of zero and a standard deviation of one, with higher values indicating greater teacher-rated writing ability.

Teacher Academic Expectations of Student: Both English and math teachers were asked how far they expect each of their students to get in school. If teachers reported expectations of at least a bachelor’s degree, the measure was coded as ‘1’. Responses indicating less than a bachelor’s degree were coded as ‘0’.

Teacher Recommendations for Student: English and math teachers were asked if they have recommended the student for “academic honors, advanced placement, or honors classes.” Students who were recommended by their respective teachers were coded ‘1’ and those who were not were coded ‘0’.

Family Nativity: Family nativity is defined by maternal nativity. Native families have mothers born in the U.S. (including Puerto Rico) while immigrant families have mothers born outside the U.S.

Contextual Measures: Additional family, student, teacher, and school characteristics are taken into account. Family characteristics include family income, parental occupational prestige (highest), maternal employment, family composition, and parental age (mean). In addition, two summative indicators of parents' self-reported involvement were included: parent-teacher organization (PTO) involvement and parent-initiated contact with schools. PTO involvement includes four items asking whether parents: 1) belong to the school's PTO, 2) attend meetings of the PTO, 3) take part in the activities of the PTO, and 4) act as a volunteer at the school. Parent-initiated contact with schools includes four items asking parents how many times they contacted the school about: 1) their child's school program for the year, 2) their child's plans after leaving high school, 3) their course selection for entry into college or other postsecondary schools, and 4) volunteering in their child's school (such as through fundraising or chaperoning).

Multivariate models also take into account student race/ethnicity and gender. In models using English teacher surveys, student scores from the verbal section of the standardized test administered as part of ELS:2002 were used. In models of math teacher responses, student scores from the math section were used. Student test scores from the NCES assessment are arguably a more objective measure of student facility in the subject matter and at the very least are not based on teacher perceptions. As such, they

approximate student ability. A number of teacher and school characteristics are also included. Teacher race/ethnicity, gender, education, and years of teaching experience are taken into account. School characteristics include school type, urbanicity, the percentage of students receiving free or reduced price lunch, 10th-grade class size (enrollment), and the region in which the school is located.

Analytic Strategy

Multivariate regression analyses are used to examine how maternal social origins and social attainment are related to teacher evaluations of parents and students. Models are estimated separately for native and immigrant families to allow for a comparison of maternal social mobility patterns by nativity. Note that while English teachers were asked to rate students' writing ability, math teachers were not asked to do the same for students' math skills. Thus, analyses focus on English teachers' responses, though analyses of math teachers' responses to otherwise comparable measures are included in Appendix Table 3.5. First, a logistic regression model estimates the likelihood of English teachers perceiving parents as very involved in their children's education and whether differences by maternal social mobility trajectories exist even net of parental self-reports of involvement. Next, to assess whether teacher perceptions of students are based purely on their performance or if other factors play a role, a linear regression model is used to estimate English teachers' ratings of student writing ability, taking into account student verbal scores from standardized tests. Lastly, logistic regression models estimate the likelihood of teachers having college expectations for their students and recommending

students for academic honors, again after controlling for student test scores and other contextual measures.

Across models, comparisons relative to the most advantaged families – those with High Status Maintainer mothers – and to the least advantaged families – those with Low Status Maintainer mothers – are shown. This allows for comparisons between families with mothers who have similar education levels as well as between mothers who have similar social origins. To facilitate interpretation, predicted values and probabilities are estimated from the regression models and presented in figures. All analyses were conducted using Stata 14 and are weighted to account for the sampling design of ELS:2002. Missing data were handled using multiply imputed using predictive mean matching (k=5), with a total of five imputed datasets.

Findings

Descriptive Findings

Descriptive statistics for primary study measures are shown in Table 3.2. Additional descriptive statistics for contextual measures are available in Appendix Tables 3.1-3.2. Of note are the differing social origins of similarly educated mothers. For both native and immigrant families, about three-fourths have mothers who did not complete college. Among those families, though, substantial portions are Downwardly Mobile mothers who come from more advantaged backgrounds (22 percent for native families and 15 percent for immigrant families). Similarly, among the roughly one-fourth of native and immigrant families with college-educated mothers, almost half have Upwardly Mobile mothers who come from less advantaged origins. Such variations in maternal

social origins, which potentially matter for how families are evaluated by educational institutions, are often overlooked in existing studies.

Table 3.2. Descriptive Statistics for Primary Study Measures

Maternal social mobility trajectory	Native Families	Immigrant Families
Low status maintainer	0.52	0.63
Downwardly mobile	0.22	0.15
Upwardly mobile	0.1	0.1
High status maintainer	0.16	0.13
Teacher Perceives Parents as Very Involved	0.21	0.12
Teacher-Rated Student Writing Ability	0.07	-0.07
Teacher College Expectations	0.51	0.52
Teacher Recommended Student	0.23	0.22
	N	7,770
		1,720

Note: Estimates are based on weighted imputed data. Ns rounded to nearest tens per NCES disclosure rules.

Maternal Status Mobility Trajectories and Teacher Evaluations of Parents and Students

Table 3.3 present results from models estimating teacher evaluations of parental involvement and student writing ability. Without accounting for any additional characteristics beyond maternal social mobility trajectories (model not shown), students with High Status Maintainer mothers in native families are the most likely to have parents that are seen by English teachers as very involved. In immigrant families, only those with Low Status Maintainer mothers and Downwardly Mobile mothers are at a disadvantage (model not shown). Taking into account all remaining family, student, teacher, and school characteristics – including parents’ self-reports of PTO involvement and school contact – native families where mothers were not college-educated (i.e., Low Status Maintainer and Downwardly Mobile mothers) remained less likely to be viewed as highly

Table 3.3. Coefficients from Binary Logistic Regression Models Estimating English Teacher Perceptions of Parental Involvement and Linear Regression Models Estimating English Teacher Ratings of Student Writing Ability by Maternal Nativity

Maternal social mobility trajectories	Parents Very Involved		Rated Writing Ability			
	Native Families	Immigrant Families	Native Families	Immigrant Families		
Ref: High status maintainer						
Low status maintainer	-0.37	**	-0.22	-0.16	***	-0.10
Downwardly mobile	-0.38	**	-0.41	-0.11	**	-0.18
Upwardly mobile	-0.10		0.16	-0.01		-0.11
Ref: Low status maintainer						
Downwardly mobile	-0.01		-0.19	0.05	+	-0.08
Upwardly mobile	0.27	*	0.38	0.14	***	-0.01
Family characteristics						
Family income category (Ref: Lowest)						
2nd lowest	0.30	+	0.47	-0.01		0.01
2nd highest	0.36	**	0.31	0.08	*	0.10
Highest	0.41	*	0.66	0.11	*	0.09
Highest parental occupational	0.01	*	0.00	0.00		0.00
Mother works full-time	0.04		0.02	-0.02		0.00
Family composition (Ref: Mother & Father)						
Mother & other guardian	-0.25	*	0.19	-0.05		0.00
Father & other guardian	-0.36		-0.42	0.00		0.12
Two guardians	-0.59	*	0.88	-0.18	**	0.06
Single guardian	-0.26	*	0.26	-0.08	*	-0.05
Parent age (mean)	-0.03	***	-0.01	-0.01	**	0.00
PTO Involvement	0.17	***	0.24	0.01		0.04
Parent-Initiated School Contact	0.15	***	0.23	0.00		0.00
Student characteristics						
Verbal Test Score	0.02	***	0.03	0.05	***	0.04
Race/ethnicity (Ref: White)						
Black	-0.36	**	-0.10	-0.09	*	-0.19
Latino	-0.33	*	-0.53	-0.04		-0.21
Asian	-0.65	+	-0.04	0.00		0.03
Other	-0.23		0.74	-0.12	*	-0.19
Female	0.07		0.10	0.28	***	0.30
School characteristics						
Public school	-0.17		-0.47	0.04		-0.06
Urban school	0.00		0.10	0.05		-0.04
School FRPL% (Ref: 0-10%)						
11-30%	0.38	**	-0.13	0.01		0.03
31-100%	0.47	**	0.10	0.07		0.14
Missing	0.09		0.36	0.01		-0.12
10th-grade enrollment (Ref: 1-199 students)						
200-399 students	-0.18	+	0.30	0.07	+	0.15
400-700+ students	-0.44	***	0.00	0.06		0.13
School region (Ref: Northeast)						
Midwest	0.20		-0.48	0.02		0.15
South	-0.02		0.17	0.02		0.25
West	0.12		-0.04	0.11	*	0.26
Teacher characteristics						
Race/ethnicity (Ref: White)						
Black	0.29		0.46	0.11	*	-0.03
Latino	0.37		-0.13	-0.03		0.10
Asian	-0.02		-0.19	-0.27	+	-0.25
Other	0.62	*	-0.29	0.26	***	0.03
Female	0.09		0.11	0.02		0.01
Graduate degree	0.03		0.22	0.03		0.05
Years of teaching experience	0.01	+	-0.01	0.00	*	0.00
	N	7,720	1,700	7,460		1,660

Note: All Ns rounded to nearest tens per NCES disclosure rules. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10. Standard errors are shown in Appendix Table 3.3.

engaged in their children's education compared to families with High Status Maintainer mothers and their children's education compared to families with High Status Maintainer mothers and families with Upwardly Mobile mothers no longer differed. In other words, among native families with college-educated mothers, once difference in parent-reported involvement are taken into account (along with other contextual measures), teacher perceptions of parental involvement no longer differed by maternal social origins. In immigrant families, no statistically significant differences remain after accounting for additional covariates.

Similar patterns of differences by maternal social mobility trajectories in native and immigrant families are observed for English teachers' ratings of students' writing abilities. In native families, net of additional background characteristics, students who have mothers who are not college-educated have lower teacher ratings of writing ability compared to their peers with High Status Maintainer mothers. Students with Low Status Maintainer mothers and those with Downwardly Mobile mothers have teacher-rated writing ability score about 16 percent and 11 percent of a standard deviation lower, respectively, than the scores of their peers with High Status Maintainer mothers. Notably, these differences persist even after taking into account students' verbal scores from standardized tests. However, teachers did not rate the writing ability of students with Upwardly Mobile mothers any differently than their peers with High Status Maintainer mothers. In immigrant families, differences in teacher ratings of student writing ability by maternal social mobility trajectories are not observed.

Somewhat different patterns emerge when examining English teacher expectations of students (Table 3.4). While native and immigrant families differed in the association between maternal social mobility trajectories and English teachers' perceptions of parental involvement and student writing ability, similar patterns for native and immigrant families are found concerning English teachers' expectations of students. In native families, similar findings as with previous outcomes are found – teachers are less likely to expect students with Low Status Maintainer and Downwardly Mobile mothers to complete college relative to their peers with High Status Maintainer mothers. Moreover, the coefficient for students with Upwardly Mobile mothers is negative (though not statistically significant), suggesting some difference in English teachers' expectations of middle-class students whose mothers come from different social origins. These same patterns are found among immigrant families: teachers are less likely to have college expectations for students whose mothers do not have a college education and the coefficient for those with Upwardly Mobile mothers is negative (though not statistically significant).

The previous three outcomes have focused largely on teacher perceptions of families. The final outcome examined instead touches upon teacher actions that result from their perceptions – whether or not English teachers recommended students for academic honors or advanced courses (Table 3.4). Here, clear patterns of differences are revealed for native families. Students with High Status Maintainer mothers are more likely to have been recommended by their English teachers compared to their peers whose mothers do not have a college education (i.e., Low Status Maintainer and

Table 3.4. Coefficients from Binary Logistic Regression Models Estimating English Teacher Expectations of and Recommendations for Students by Maternal Nativity

Maternal social mobility trajectories	College Expectations				Recommended Student			
	Native Families		Immigrant Families		Native Families		Immigrant Families	
Ref: High status maintainer								
Low status maintainer	-0.52	***	-0.66	*	-0.45	***	-0.11	
Downwardly mobile	-0.36	**	-0.78	*	-0.30	*	-0.06	
Upwardly mobile	-0.17		-0.51		-0.30	*	-0.41	
Ref: Low status maintainer								
Downwardly mobile	0.16	+	-0.12		0.15		0.05	
Upwardly mobile	0.35	**	0.15		0.16		-0.30	
Family characteristics								
Family income category (Ref: Lowest)								
2nd lowest	0.10		-0.01		-0.16		0.14	
2nd highest	0.35	**	0.10		0.03		0.17	
Highest	0.57	***	0.09		0.11		-0.25	
Highest parental occupational prestige	0.01	*	0.01		0.01	*	0.01	
Mother works full-time	0.11		-0.09		-0.08		-0.14	
Family composition (Ref: Mother & Father & other guardian)								
Mother & other guardian	-0.39	***	-0.37		-0.36	**	-0.46	
Father & other guardian	-0.35	+	-0.05		-0.70	*	-1.36	*
Two guardians	-0.77	***	-0.94	*	-0.87	*	-0.33	
Single guardian	-0.34	***	-0.15		-0.13		-0.09	
Parent age (mean)	-0.03	***	-0.01		-0.01		-0.01	
PTO Involvement	0.13	***	0.15	*	0.06		0.07	
Parent-Initiated School Contact	-0.02		-0.06		0.07	*	-0.05	
Student characteristics								
Verbal Test Score	0.11	***	0.08	***	0.12	***	0.12	***
Race/ethnicity (Ref: White)								
Black	0.05		-0.21		-0.27	+	-0.27	
Latino	-0.24	+	-0.48	+	-0.40	*	-0.62	*
Asian	0.37		0.57	*	-0.87	+	0.18	
Other	-0.22		-0.22		-0.33		-0.18	
Female	0.48	***	0.33	*	0.66	***	0.76	***
School characteristics								
Public school	-0.45	**	-0.33		0.53	*	0.12	
Urban school	0.15		0.15		0.25	+	-0.22	
School FRPL% (Ref: 0-10%)								
11-30%	-0.19	+	-0.28		0.26		0.13	
31-100%	0.08		0.07		0.42	*	1.01	***
Missing	-0.03		-0.48		0.54	*	0.63	+
10th-grade enrollment (Ref: 1-199)								
200-399 students	0.31	**	0.26		-0.10		-0.07	
400-700+ students	0.25	*	0.05		-0.08		-0.16	
School region (Ref: Northeast)								
Midwest	-0.37	**	-0.06		0.03		0.02	
South	-0.27	*	0.60	*	0.45	*	0.51	+
West	-0.36	*	0.33		0.24		0.38	
Teacher characteristics								
Race/ethnicity (Ref: White)								
Black	0.29		0.23		-0.51		0.44	
Latino	0.59	*	0.82	*	-0.10		-0.35	
Asian	0.51	+	-1.19	*	0.60		-0.60	
Other	0.02		-0.46		0.56		-0.18	
Female	0.11		0.09		0.19		0.00	
Graduate degree	0.16	+	0.03		0.15		0.18	
Years of teaching experience	-0.01	**	0.00		0.01	+	0.01	
	N	7,680	1,690		6,730		1,540	

Note: All Ns rounded to nearest tens per NCES disclosure rules. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10. Standard errors are shown in Appendix Table 3.4.

Downwardly Mobile mothers) as well as their peers whose mothers are college-educated but from lower social origins (i.e., Upwardly Mobile mothers), even after accounting for students' verbal test scores. However, among immigrant families, differences by maternal social mobility trajectories are not observed.

To facilitate interpretation of findings, predicted values of English teachers' ratings of student writing ability are presented in Figure 3.1. Predicted values are estimated from the models shown in Table 3.3, with all remaining covariates held at their mean values. A clear pattern of differences in English teacher ratings of student writing ability by maternal social origins and social attainment is apparent among native families. While students with college-educated mothers (i.e., High Status Maintainer and Upwardly Mobile mothers) have similar predicted values of teacher-rated writing skills, students whose mothers did not complete college are rated significantly lower in their writing abilities by their English teachers. Among immigrant families, while students with High Status Maintainer mothers have the highest teacher ratings of writing ability, comparisons to other families are less clear-cut than among native families – for example, in immigrant families, those with Low Status Maintainer mothers do not have the lowest teacher ratings of writing ability – and the differences are not statistically significant. Moreover, English teachers' ratings of student writing ability are much lower for students from immigrant families.

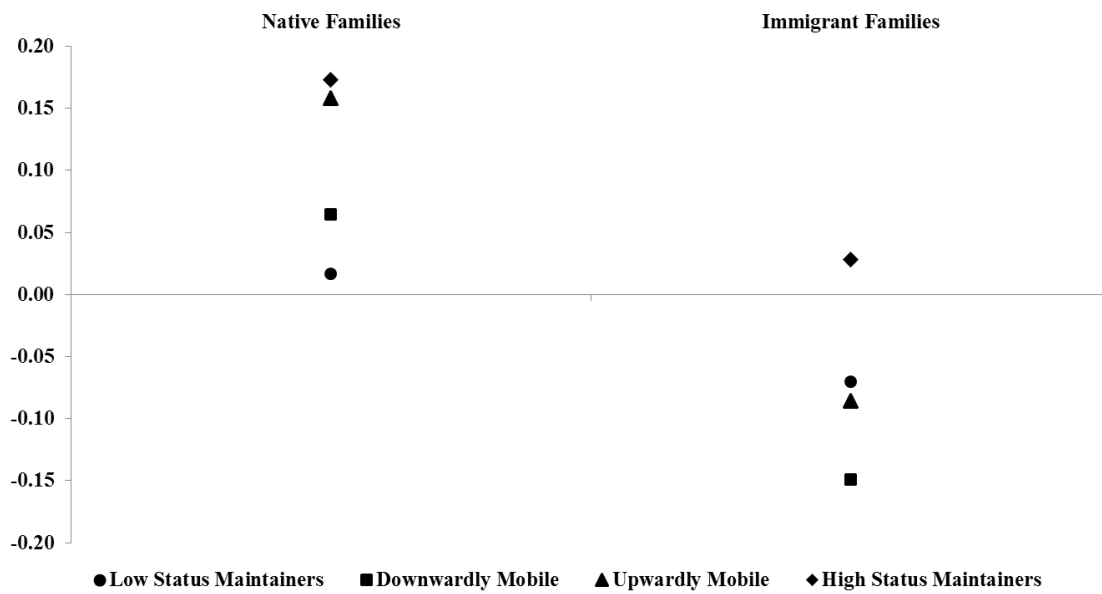
Predicted probabilities by maternal social mobility trajectories and nativity of English teachers viewing parents as very involved, having college expectations of students, and recommending students are shown in Figure 3.2. Predicted probabilities are

estimated from the models shown in Tables 3.3-3.4, with all remaining covariates held at their mean values. Probabilities for English teachers' college expectations for students are plotted on the left axis while probabilities for teacher recommendations and perceptions of parental involvement (which tend to be lower) are plotted on the right axis.

For both immigrant and native families, similar patterns by maternal social mobility trajectories in the predicted probability of English teachers having college expectations for students are seen. In both types of families, English teachers are most likely to have college expectations for students with High Status Maintainer mothers and least likely to have such expectations for students with mothers who are less educated or from lower social origins than High Status Maintainer mothers. However, different patterns by maternal nativity are evident in teacher recommendations of students. For example, among native families there is a difference of 6 percentage points the probability of being recommended by English teachers between students with Low Status Maintainer mothers and those with High Status Maintainer mothers (0.14 versus 0.20, respectively). The corresponding difference in immigrant families is only 2 percentage points (0.15 versus 0.17, respectively). Moreover, the pattern of differences by maternal social mobility trajectories is less clear among immigrant families – for example, students with Upwardly Mobile mothers rather than those with Low Status Maintainer mothers have the lowest predicted probability of being recommended by their English teachers.

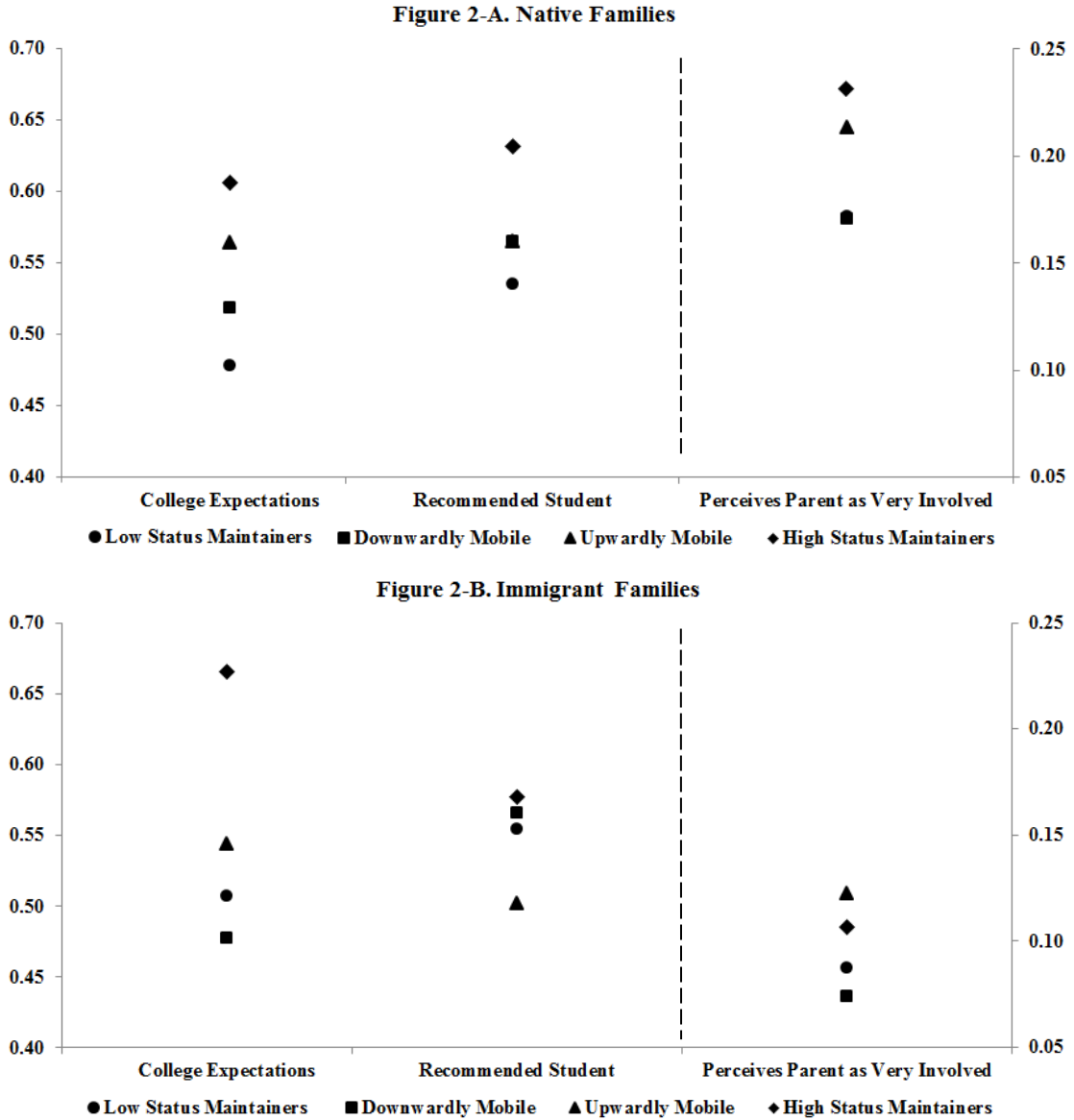
Lastly, while there is clear divide between college-educated mothers and less-educated mothers in terms of teacher perceptions of parental involvement among native families, such a divide is not apparent among immigrant families. For example, the

Figure 3.1. Predicted Values of English Teacher Ratings of Student Writing Ability by Maternal Nativity



Note: Predicted values are estimated from models shown in Table 3.3, with all remaining covariates held at their mean values.

Figure 3.2. Predicted Probabilities of Teacher Perceptions of Parents and Students by Maternal Nativity



Note: Predicted values are estimated from models shown in Tables 3.3-3.4, with all remaining covariates held at their mean values.

probability of parents in native families with Low Status Maintainer mothers being perceived by their children's English teachers as very involved in their education is about 6 percentage points lower than the probability for those with High Status Maintainer mothers (0.17 versus 0.23, respectively). Among immigrant families, the corresponding difference is only 2 percentage points (0.09 versus 0.11, respectively). Again, patterns by maternal social mobility trajectories – that is, advantages associated with higher maternal social origins and social attainment – are more consistent among native families than immigrant families. Overall, the probabilities of parents in native families being perceived by English teachers as very involved in their children's education are higher than the probabilities for immigrant families. Notably, the probability of parents in native families with High Status Maintainer mothers being perceived as highly involved is more than twice that of their counterparts in immigrant families (0.23 versus 0.11, respectively).

Study Limitations

There are some limitations to the present study that deserve attention. First, although the study shows consistent patterns of teacher perceptions of parents and students varying by maternal social mobility trajectories and family nativity, the exact standards by which teachers judge families remain unclear. Prior literature suggests particular aspects of parental engagement and student help-seeking that are favored by teachers (Calarco, 2018; Lareau, 2000), but more work is needed in this area. Second, the underlying mechanisms behind differences in teacher perceptions cannot be directly assessed with the measures available. At least one finding – teachers varying perceptions

of parents' involvement which persists even after accounting for how involved parents report being – suggests differences at the more micro-level. That is, even if all parents were to have the same amount of involvement with their children's schools, the quality of such involvement would still depend on institutional standards that favor some groups over others (Lareau & Horvat, 1999). Detailed qualitative research in this vein that pays attention to both family social origins and nativity is needed. Lastly, while the study included a number of teacher characteristics, teachers' own social background was unavailable. Researchers have argued that teacher-student congruence by class and race is important for understanding teacher perceptions of students (Alexander, Entwisle, & Thompson, 1987). As with other work, this study largely presumes that teachers by definition are middle-class, though their origins may not be. Thus, there may be variations in teacher perceptions by teachers' own social class histories that are unobservable in the present study.

Discussion and Conclusion

Drawing upon literature on cultural capital, social class and mobility, and immigrant families, this study examined how maternal social mobility trajectories, comprised of maternal social origins and social attainment, relate to teacher evaluations of parents and students in native and immigrant families. Findings show that maternal social mobility trajectories are related to how families are evaluated by educators, but largely only among native families. Differences are most apparent when comparing mothers with differing levels of education – that is, comparisons between mothers with and without a college education – highlighting the importance of maternal social

attainment. Nevertheless, for some findings, the relevance of maternal social origins are revealed – notably in the likelihood of students receiving teacher recommendations. Opposite of patterns found among native families, among immigrant families, maternal social origins and social attainment are not associated with teacher perceptions of parental involvement, teacher perceptions of student writing ability, or teacher recommendations.

Prior work has shown that the institutional standards by which families are measured typically benefit middle-class families. This study expands on such literature by focusing on how a change in status – whether due to social mobility or immigration – can place families in the undesirable position of learning how to successfully interact with dominant institutions. Because institutional standards and criteria for evaluating parents and students can be vague (Calarco, 2018; Christianakis, 2011), families that lack the requisite resources to learn about such standards or to persist in engaging with their children’s schools are unlikely to “make the grade” in teacher’s eyes. Findings from this study make it clear that a critical “double vision” (Lareau & Weininger, 2003) that seeks to uncover the institutional standards present in schools as well as other gatekeeping institutions is necessary for understanding how some forms of educational inequalities persist despite attempts to improve the performance of students. The general lack of differences in teacher evaluations by maternal social mobility trajectories observed in immigrant families also suggests that researchers should think beyond social class to other factors that are important for understanding family-school relationships.

Findings from this study have implications for how schools seek to improve family-school relationships. Rather than viewing institutional standards as the ideal or indeed only appropriate way for parents and students to demonstrate their engagement in education, schools should seek out strategies that minimize the unease such families may feel in their interactions. This may involve having very clear and justifiable expectations of parental involvement and equitable policies for student behavior and accommodations. For students from less-advantaged backgrounds as well as those from immigrant families, teachers are important “cultural brokers” who provide crucial help and guidance that can mean the difference between succeeding academically or falling behind (Fernández-Kelly, 2008; Lareau, 2015; Smith, 2008). That they are potentially judged less favorably by institutional standards risks exacerbating educational inequalities in already vulnerable families.

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Appendix Table 3.1. Descriptive Statistics for Contextual Measures (Family and Student Characteristics)

Family characteristics	Native Families	Immigrant Families
Family income category		
Lowest	0.17	0.33
2nd Lowest	0.11	0.16
2nd Highest	0.43	0.32
Highest	0.29	0.19
Highest parental occupational prestige	51.77	45.50
PTO involvement	1.20	1.02
Parent contact with school	1.18	0.82
Mother works full-time	0.62	0.51
Family composition		
Mother & Father	0.57	0.64
Mother & Other guardian	0.15	0.10
Father & Other guardian	0.03	0.03
Two guardians	0.02	0.04
Single guardian	0.23	0.19
Mean year of birth	1957	1957
Student characteristics		
Verbal Test Score	51.62	47.63
Race/ethnicity		
White	0.74	0.20
Black	0.13	0.08
Latino	0.08	0.46
Asian	0.00	0.21
Other	0.05	0.05
Female	0.50	0.50
N	7,770	1,720

Note: Estimates are based on weighted imputed data. Ns rounded to nearest tens per NCES disclosure rules.

Appendix Table 3.2. Descriptive Statistics for Contextual Measures (Teacher and School Characteristics)

Teacher Characteristics	Native Families	Immigrant Families
Race/ethnicity		
White	0.90	0.82
Black	0.06	0.04
Latino	0.02	0.10
Asian	0.01	0.02
Other	0.02	0.02
Female	0.75	0.70
Graduate Degree	0.49	0.54
Years of Teaching Experience	9.67	7.98
School characteristics		
Public school	0.91	0.92
Urban school	0.24	0.40
FRPL %		
0-10%	0.24	0.20
11-30%	0.44	0.33
31-100%	0.23	0.39
Missing	0.09	0.08
10th-grade enrollment		
1-199	0.32	0.14
200-399	0.36	0.31
400-700+	0.32	0.56
Region		
Northeast	0.18	0.17
Midwest	0.27	0.14
South	0.37	0.30
West	0.18	0.39
N	7,770	1,720

Note: Estimates are based on weighted imputed data. Ns rounded to nearest tens per NCES disclosure rules.

Appendix Table 3.3. Standard Errors from Binary Logistic Regression Models Estimating English Teacher Perceptions of Parental Involvement and Linear Regression Models Estimating English Teacher Ratings of Student Writing Ability by Maternal Nativity

	Parents Very Involved		Rated Writing Ability	
	Native Families	Immigrant Families	Native Families	Immigrant Families
Maternal social mobility trajectories				
Ref: High status maintainer				
Low status maintainer	-0.12	-0.30	-0.04	-0.09
Downwardly mobile	-0.14	-0.34	-0.04	-0.12
Upwardly mobile	-0.12	-0.34	-0.05	-0.12
Ref: Low status maintainer				
Downwardly mobile	-0.11	-0.35	-0.03	-0.12
Upwardly mobile	-0.12	-0.30	-0.04	-0.10
Family characteristics				
Family income category (Ref: Lowest)				
2nd lowest	-0.16	-0.43	-0.04	-0.08
2nd highest	-0.14	-0.28	-0.04	-0.06
Highest	-0.16	-0.32	-0.05	-0.09
Highest parental occupational	0.00	-0.01	0.00	0.00
Mother works full-time	-0.07	-0.22	-0.03	-0.06
Family composition (Ref: Mother & Father)				
Mother & other guardian	-0.12	-0.35	-0.03	-0.10
Father & other guardian	-0.22	-0.50	-0.06	-0.14
Two guardians	-0.25	-0.35	-0.06	-0.13
Single guardian	-0.13	-0.28	-0.04	-0.07
Parent age (mean)	-0.01	-0.02	0.00	-0.01
PTO Involvement	-0.03	-0.09	-0.01	-0.02
Parent-Initiated School Contact	-0.03	-0.10	-0.01	-0.03
Student characteristics				
Verbal Test Score	0.00	-0.01	0.00	0.00
Race/ethnicity (Ref: White)				
Black	-0.13	-0.47	-0.04	-0.13
Latino	-0.16	-0.31	-0.05	-0.09
Asian	-0.36	-0.25	-0.16	-0.08
Other	-0.17	-0.42	-0.06	-0.13
Female	-0.07	-0.20	-0.02	-0.05
School characteristics				
Public school	-0.18	-0.32	-0.06	-0.11
Urban school	-0.12	-0.21	-0.04	-0.07
School FRPL% (Ref: 0-10%)				
11-30%	-0.14	-0.31	-0.04	-0.09
31-100%	-0.16	-0.39	-0.05	-0.10
Missing	-0.21	-0.45	-0.07	-0.12
10th-grade enrollment (Ref: 1-199 students)				
200-399 students	-0.10	-0.26	-0.04	-0.11
400-700+ students	-0.13	-0.26	-0.04	-0.10
School region (Ref: Northeast)				
Midwest	-0.13	-0.29	-0.05	-0.09
South	-0.12	-0.26	-0.04	-0.09
West	-0.19	-0.26	-0.05	-0.10
Teacher characteristics				
Race/ethnicity (Ref: White)				
Black	-0.21	-0.50	-0.05	-0.11
Latino	-0.28	-0.56	-0.09	-0.12
Asian	-0.58	-0.60	-0.15	-0.16
Other	-0.29	-0.67	-0.08	-0.16
Female	-0.10	-0.21	-0.04	-0.08
Graduate degree	-0.09	-0.22	-0.03	-0.06
Years of teaching experience	0.00	-0.01	0.00	0.00
	N	7,720	7,460	1,660

Note: All Ns rounded to nearest tens per NCES disclosure rules. Coefficients are shown in Table 3.3.

Appendix Table 3.4. Standard Errors from Binary Logistic Regression Models Estimating English Teacher Expectations of and Recommendations for Students by Maternal Nativity

Maternal social mobility trajectories	College Expectations		Recommended Student	
	Native Families	Immigrant Families	Native Families	Immigrant Families
Ref: High status maintainer				
Low status maintainer	-0.12	-0.30	-0.12	-0.31
Downwardly mobile	-0.13	-0.37	-0.15	-0.38
Upwardly mobile	-0.15	-0.43	-0.14	-0.38
Ref: Low status maintainer				
Downwardly mobile	-0.08	-0.26	-0.13	-0.33
Upwardly mobile	-0.13	-0.31	-0.13	-0.33
Family characteristics				
Family income category (Ref: Lowest)				
2nd lowest	-0.12	-0.22	-0.18	-0.30
2nd highest	-0.11	-0.21	-0.14	-0.28
Highest	-0.13	-0.27	-0.16	-0.31
Highest parental occupational prestige	0.00	-0.01	0.00	-0.01
Mother works full-time	-0.07	-0.16	-0.09	-0.18
Family composition (Ref: Mother &				
Mother & other guardian	-0.09	-0.29	-0.13	-0.33
Father & other guardian	-0.19	-0.47	-0.28	-0.61
Two guardians	-0.22	-0.38	-0.34	-0.52
Single guardian	-0.10	-0.21	-0.12	-0.23
Parent age (mean)	-0.01	-0.02	-0.01	-0.02
PTO Involvement	-0.03	-0.07	-0.04	-0.09
Parent-Initiated School Contact	-0.03	-0.08	-0.03	-0.08
Student characteristics				
Verbal Test Score	0.00	-0.01	-0.01	-0.01
Race/ethnicity (Ref: White)	0.05	-0.21	-0.27	-0.27
Black	-0.12	-0.39	-0.16	-0.42
Latino	-0.14	-0.27	-0.19	-0.27
Asian	-0.50	-0.26	-0.45	-0.25
Other	-0.18	-0.36	-0.20	-0.37
Female	-0.07	-0.14	-0.08	-0.16
School characteristics				
Public school	-0.14	-0.35	-0.24	-0.30
Urban school	-0.10	-0.18	-0.15	-0.20
School FRPL% (Ref: 0-10%)				
11-30%	-0.10	-0.26	-0.18	-0.22
31-100%	-0.12	-0.27	-0.21	-0.29
Missing	-0.16	-0.34	-0.22	-0.35
10th-grade enrollment (Ref: 1-199				
200-399 students	-0.10	-0.27	-0.14	-0.26
400-700+ students	-0.11	-0.27	-0.16	-0.28
School region (Ref: Northeast)				
Midwest	-0.11	-0.26	-0.17	-0.32
South	-0.11	-0.23	-0.18	-0.31
West	-0.16	-0.26	-0.20	-0.32
Teacher characteristics				
Race/ethnicity (Ref: White)				
Black	-0.20	-0.35	-0.33	-0.43
Latino	-0.26	-0.33	-0.31	-0.58
Asian	-0.30	-0.55	-0.47	-0.39
Other	-0.28	-0.55	-0.35	-0.77
Female	-0.10	-0.19	-0.13	-0.22
Graduate degree	-0.08	-0.17	-0.11	-0.19
Years of teaching experience	0.00	-0.01	-0.01	-0.01
N	7,680	1,690	6,730	1,540

Note: All Ns rounded to nearest tens per NCES disclosure rules. Coefficients are shown in Table 3.4.

Appendix Table 3.5 Coefficients from Binary Logistic Regression Models Estimating Math Teacher Perceptions

Maternal social mobility trajectories	Parents Very Involved		College Expectations		Recommended Student		
	Native Families	Immigrant Families	Native Families	Immigrant Families	Native Families	Immigrant Families	
Ref: High status maintainer							
Low status maintainer	-0.51 ***	-0.32	-0.48 ***		0.00	-0.55 *	
Downwardly mobile	-0.37 **	-0.24	-0.54 ***		-0.09	-0.66 +	
Upwardly mobile	-0.05	-0.33	-0.31 *		-0.14	-0.16	
Ref: Low status maintainer							
Downwardly mobile	0.14	0.07	-0.07		-0.10	-0.11	
Upwardly mobile	0.46 ***	-0.01	0.17		-0.14	0.39	
Family characteristics							
Family income category (Ref: Lowest)							
2nd lowest	0.13	0.12	0.34 **	0.07	-0.16	0.09	
2nd highest	0.38 **	-0.09	0.48 ***	-0.03	-0.09	0.31	
Highest	0.54 ***	0.30	0.80 ***	0.06	0.10	-0.18	
Highest parental occupational prestige	0.00	0.02 +	0.01 *	0.00	0.00	-0.01 +	
Mother works full-time	-0.10	-0.29	-0.09	0.02	-0.07	-0.05	
Family composition (Ref: Mother & Father)	-0.02 **	0.00	-0.02 **	0.00	-0.01	0.04 **	
Mother & other guardian	-0.01	-0.02	-0.01	-0.02	-0.01	-0.02	
Father & other guardian	-0.21 +	-0.41	-0.41 ***	-0.36	-0.55 ***	-0.62 +	
Two guardians	-0.41	0.50	-0.28	-0.41	-0.41	0.08	
Single guardian	0.06	0.39	-1.14 ***	-0.78 *	-0.64 +	-1.25 **	
Parent age (mean)	-0.44 ***	0.12	-0.28 **	-0.16	-0.25 +	-0.43 +	
PTO Involvement	0.17 ***	0.10	0.09 **	0.06	0.06	0.00	
Parent-Initiated School Contact	0.15 ***	0.11	-0.01	-0.09	0.02	0.17 *	
Student characteristics							
Verbal Test Score	0.29 ***	0.38 **	1.75 ***	1.45 ***	2.09 ***	1.40 ***	
Race/ethnicity (Ref: White)							
Black	-0.22	0.39	0.23 +	0.13	0.37 +	0.23	
Latino	-0.37 *	0.24	0.21	-0.53 +	0.19	-0.26	
Asian	0.25	0.24	-0.93 *	0.05	1.16 +	0.48 *	
Other	-0.12	0.55	0.22	-0.17	0.11	-0.02	
Female	0.08	0.36	0.75 ***	0.56 ***	0.49 ***	0.76 ***	
School characteristics							
Public school	0.31 +	-0.45	-0.69 ***	-1.04 **	-0.04	-0.16	
Urban school	-0.03	-0.11	0.40 ***	0.11	0.32 *	0.34	
School FRPL% (Ref: 0-10%)							
11-30%	0.21	-0.09	0.00	0.20	0.16	0.41	
31-100%	0.01	-0.42	-0.07	0.17	0.55 *	0.47 +	
Missing	0.13	0.42	0.02	-0.55 +	0.55 *	0.48	
10th-grade enrollment (Ref: 1-199 students)							
200-399 students	-0.35 **	-0.03	0.27 **	0.21	-0.28 +	-0.22	
400-700+ students	-0.55 ***	-0.70 *	0.14	-0.15	-0.26	-1.01 ***	
School region (Ref: Northeast)							
Midwest	0.30 *	0.22	-0.13	-0.35	-0.14	0.37	
South	0.20 +	0.20	-0.18	-0.37	0.19	0.30	
West	0.21	0.15	-0.36	-0.50 +	-0.20	-0.27	
Teacher characteristics							
Race/ethnicity (Ref: White)							
Black	-0.01	0.54	0.87 ***	0.00	0.35	-0.19	
Latino	0.37	0.05	0.47 *	1.06 ***	0.33	0.51	
Asian	-0.69 +	-0.18	0.63 *	0.46	-0.55	0.39	
Other	-0.44	0.38	0.22	0.16	-0.41	0.05	
Female	0.15 +	0.11	0.21 **	-0.03	0.37 **	-0.19	
Graduate degree	-0.14	0.23	-0.04	0.24	0.30 **	0.39	
Years of teaching experience	0.01	-0.01	-0.01 *	0.01	0.00	0.01	
	N	7,700	1,710	7,680	1,700	6,800	1,560

Note: All Ns rounded to nearest tens per NCES disclosure rules. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10.