



## Social-class parenting practices and their influence on educational outcomes in the United States and Scotland

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### ABSTRACT

Drawing upon Lareau's (2011) work on social class and family life, this study explored social-class differences in children's cognitive outcomes from the United States and Scotland—two nations that share a policy emphasis on parental engagement to reduce the achievement gap. At the same time, the two countries differ in the extent to which such policy orientations are enforced, in the overall levels of socioeconomic inequality, and in the form and extent of welfare support for families and children. We find that parental endeavors are not unequivocally associated with children's outcomes. Findings from our decomposition analyses indicate that some practices of concerted cultivation are positively associated with children's outcomes but that the strength and direction of the relation often depend on children's social background. Moreover, social-class differences in parenting practices are more pronounced and more often statistically significant in the United States than in Scotland.

### 1. Introduction

Educators and policymakers have considered parental involvement—typically defined as parents' school preparation of children, their attendance of school events, and their fulfillment of teacher requests—as a way to improve students' educational performance (Barg, 2019b; Calarco, 2020; Gillies, 2008; Lareau, 2000). Several school districts in the United States, for example, face drastic funding cuts at both the local and state levels, which exacerbates the importance of parent volunteerism and involvement in school reform efforts (Calarco, 2020; Posey-Maddox, 2013). At the same time, social-class differences affect the type and degree of parental involvement in school.

Sociologists have argued that these class differences in parental involvement are one area in which privileged children and their parents maintain their qualitative advantages over others (Barg, 2019b; Calarco, 2011; Carolan, 2016). In particular, Lareau's work (2011) set a scholarly tradition that explains how child-rearing practices are an expression of social class (Davies & Rizk, 2018). Past studies that examine the relation between social class and educational outcomes assume the mechanisms for how class operates. Lareau's important contribution is that she emphasizes class-based cultural logics to explain the advantages middle-class and affluent children receive over their working-class counterparts. Cultural logics, or the sets of beliefs on how

and the degree to which parents should be involved, create differential parental involvement with a child's learning (Lareau, 2011; Lareau & Weininger, 2008). For instance, middle- and upper-class parents are more likely than their working-class counterparts to adopt a “concerted cultivation” approach to parenting, providing their children with highly structured activities that develop their children's talents, which schools tend to reward. Studies show that concerted cultivation influences students' educational outcomes even after controlling for household resources (Barg, 2019b; Bodovski, 2010; Bodovski & Farkas, 2008; Carolan, 2016; Cheadle, 2009).

Despite these insights, researchers often conduct “main effects” or “mediation analysis” where the focus is on the rate of exposure to concerted cultivation (Barg, 2019b; Bodovski & Farkas, 2008; Carolan, 2016; Kraaykamp & Notten, 2016; McCoy et al., 2012). However, an underexplored area of scholarship based on Lareau's seminal work is whether the returns of parental involvement differ across social classes. Even if working-class parents were involved in the same activities as their middle-class counterparts, activating the potency of this type of cultural capital—a person's familiarity with (typically elite) forms of knowledge—requires a socialization process where children need time to decipher the cultural codes of schooling. Therefore, the accumulation of cultural capital may be more synthetic within working-class households (Aschaffenburg & Maas, 1997; Calarco, 2011; Lamont & Lareau,

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1988). As a result, the effectiveness of cultural capital may differ based on social class, even if the amount and type of capital are the same.

This study explores social-class differences in parenting practices and how these practices influence their child's educational outcomes. Few studies simultaneously consider whether the advantages middle- and upper-class children experience in school are due to the possession of concerted cultivation or the superior translation of that capital in school among middle- and upper-class children. This type of comparison allows us to align our analysis with the larger discussion of cultural capital as a form of reproduction or mobility (Aschaffenburg & Maas, 1997; Carolan & Wasserman, 2015; Dumais, 2008; Jæger, 2011; Jæger & Karlson, 2018). Instead of a strong relation between social class and parenting practices (as reproduction would predict), working-class children may benefit from these cultural practices more than their middle-class counterparts (DiMaggio, 1982).

We also update prior quantitative studies of social class and parenting styles using data from individuals born in the 2000s. Most researchers that adopted Lareau's parenting styles used data from the 1990s, the same period Lareau conducted her research (but see Mikus et al., 2021). The newer generation tends to be more racially diverse, ideologically progressive, and technologically savvy than previous generations (Aurini et al., 2020). It is important to consider the power of these cultural distinctions in an era of technological availability and use. Technology can equalize cultural knowledge and family resources or redefine the cultural currency that distinguishes social classes (Selwyn, 2016; Wildhagen, 2010).

Finally, we conducted a cross-national study between the United States and Scotland. Research in social stratification has long compared the social mobility patterns and processes of the United States and the United Kingdom. However, they have largely ignored the heterogeneity within the United Kingdom. For instance, the Scottish Government is responsible for managing its education system. Historically, their national values tend to emphasize an open and meritocratic social structure, which counters the allowance of ascribed factors in the social positioning of individuals in England. Both Scotland and the United States have renewed policy reform that centers around parent-school relationships as a critical component of improving educational standards. However, these nations differ in their racial composition and broad patterns of inequality in family formation, economic inequality, and social mobility.

We guide our analyses based on two research questions. The first is whether parental involvement associated with concerted cultivation is practiced more among the middle and upper class than the working class. This question is common in research regarding Lareau's work and cultural reproduction. The second question is whether the returns of concerted cultivation are better for middle- and upper-class students than their working-class counterparts. Although not readily evaluated when assessing Lareau's arguments (e.g., Barg, 2019b; Bodovski & Farkas, 2008; Carolan, 2016), it is consistent with cultural reproduction theory (Aschaffenburg & Maas, 1997; De Graaf et al., 2000; Jæger & Karlson, 2018). If, instead, working-class students benefit from cultural capital more than middle-class students, the findings would be consistent with cultural mobility (DiMaggio, 1982).

## 2. Literature review

Bourdieu (1977, 1984) proposed a theory of cultural reproduction in which advantaged parents transmit cultural capital to their children. Cultural capital refers to individuals' familiarity and proficiency with cultural codes—such as tastes, dispositions, attitudes, and ways of speaking and relating to others. This type of capital generally refers to the capital of the privileged. Unfortunately, these rules, norms, and expectations are not explicitly taught in schools but rather part of the “hidden curriculum” (Anyon, 1980; Calarco, 2018). Middle- and upper-class children are socialized early on into this culture and enter school with these important social and cultural cues.

Schools have institutionalized cultural capital and contribute to the reproduction of social inequalities (Bourdieu, 1977; Davies & Rizk, 2018; Lamont & Lareau, 1988). Many teachers and principals—who often come from middle- and upper-class backgrounds—tend to value the behavior, styles, and knowledge of the middle class. Educators believe parents should not expect schools solely to educate their children and instead encourage parents to take an active role in confronting and solving educational problems. Middle-class parents often view themselves as equal partners with teachers in promoting their child's education (Lareau, 1987). By contrast, working-class parents see a separation of spheres between the home and school. They express doubts about their contribution to their child's education—something less present among middle-class parents—and tend to rely on the teacher as the sole educator for their child (Lareau, 1987, 2011). In all, cultural reproduction implies a form of rigidity whereby individuals from the working class are less able to benefit from the same experiences as those from the middle and upper class (De Graaf et al., 2000).

### 2.1. Concerted cultivation

Annette Lareau (2002, 2011) builds upon Bourdieu's work by emphasizing the cultural logics of parental involvement and parenting from those of different social standing. These logics dictate the norms and beliefs on how parents are involved in their child's schools. For instance, expert opinion on childrearing has changed considerably over the last two centuries. During the early twentieth century, experts and professionals recommended that parents be more hands-off in their child's cognitive development and instead have them focus on their child's health, hygiene, and obedience (Schaub, 2010). As threats to a child's physical well-being declined, childrearing experts advised parents on a child's social and emotional well-being. Today, toys, television programs, and advertisements portray children as projects requiring their parents' development, education, guidance, and nurturing (Vincent & Ball, 2007). Not surprisingly, parents' childrearing practices have shifted in step with changes to expert opinion on childrearing. During the 1950s, almost half of parents made little effort to participate in activities that fostered their child's cognitive development before the child entered formal schooling; however, this pattern reversed by the end of the twentieth century (Schaub, 2010).

Despite these universal changes to childrearing, middle-class parents tend to alter their behaviors to current parenting trends quicker and more thoroughly than working-class parents (Lareau, 2011; Vincent & Ball, 2007). Therefore, they possess tastes, styles, skills, and knowledge that differ from working-class parents; these cultural resources give them a competitive advantage (Barg, 2019b; Bodovski & Farkas, 2008). For instance, middle- and upper-class parents (especially mothers) are more likely to be involved with their child's school than working-class parents. Part of the reason is that these parents have the time and means to participate. However, knowing about and using these activities as an opportunity to improve—or at the least maintain—their child's status in school requires cultural knowledge. Indeed, studies demonstrate a positive relation between cultural capital and academic performance (Aschaffenburg & Maas, 1997; DiMaggio, 1982; Jæger, 2011; McCoy et al., 2012).

In an ethnographic study of third and fourth graders in the United States, Lareau (2011) contends that parents follow different cultural logics of childrearing based on their social class. These childrearing practices experienced at home lead children to develop class-based beliefs, habits, and preferences. Lareau (2011) shows that middle-class parents follow a pattern of “concerted cultivation,” whereby children are more likely to engage in organized activities that cultivate their talents, cognitive skills, and social skills. The cultivation is “concerted” because middle-class parents make a deliberate effort to stimulate their child's development, typically through organized activities such as sports or school-sponsored clubs (Bodovski, 2010; Lareau, 2011; Weininger et al., 2015). The cultivation is “entitled” in that middle- and

upper-class parents encourage their children to voice their opinions, and parents frequently intervene for their children when issues arise in school (Calarco, 2018; Lareau, 2011).

By contrast, working-class and poor parents are less inclined to consider the concerted development of children as essential to good parenting (Lareau, 2011). Instead, they stress the “accomplishment of natural growth,” defining their responsibilities to their children as providing love, food, comfort, and safety. This emphasis does not suggest that working-class parents care for their children any less than middle-class parents. However, Lareau (2011) finds that working-class parents prefer that their children develop in a more natural and relaxed fashion. Children from this social stratum tend to remain closer to home and spend more time with family and neighborhood peers. They also experience more prolonged leisure time and instigate child-initiated play at greater rates than middle-class children. Working-class parents tend to tell their children what to do through directives rather than persuade them with reasoning—a common practice among middle-class parents. Working-class parents, moreover, were more dependent and adhered to the expertise of teachers, whereas middle-class parents were far more critical and often intervened on behalf of their children (Cheadle & Amato, 2011; Lareau, 2011).

Following Lareau, researchers typically evaluate whether middle-class parents and their children express observed behaviors that align with concerted cultivation at a greater rate than working-class parents. In other words, many researchers conduct “main effects” or “mediation analysis” (Barg, 2019a; Bodovski & Farkas, 2008; Carolan, 2016; Kraaykamp & Notten, 2016; McCoy et al., 2012). After all, Lareau (2011) argues that class-based cultural logics dictate parenting practices. Schools are middle-class institutions, and the expectations of school agents for children and parents are aligned more closely with the middle class than the working class. As a result, reproduction occurs because practices of concerted cultivation are more likely rewarded in schools than practices of natural growth. Therefore, it made sense to examine solely the class difference in the type and intensity of parental involvement because each class conforms to a specific cultural logic—middle-class parents valued participation in organized activities while working-class parents did not.

An understudied argument of cultural reproduction theory regarding concerted cultivation is that because of socialization and the time commitment to embody these forms of capital, it is unreasonable to expect its returns to be the same for working-class parents as for middle-class parents (Aschaffenburg & Maas, 1997; Calarco, 2011; Lamont & Lareau, 1988). Even if working-class parents mimic the parenting behaviors of middle-class parents, teachers can distinguish authentic from inauthentic forms of concerted cultivation. Therefore, the returns to cultural capital would be stronger for middle-class students than working-class students.

Lareau and others did not actively pursue the differential returns of concerted cultivation (but see Dumais, 2006, 2008); however, it is consistent with past quantitative research on cultural capital (Aschaffenburg & Maas, 1997; De Graaf et al., 2000; DiMaggio, 1982; Jæger & Karlson, 2018; Xu & Hampden-Thompson, 2012). Notably, DiMaggio (1982) proposed a cultural-mobility model where the purchasing power of cultural capital is the same regardless of who makes the purchase. This approach allows for the possibility that social class and cultural capital may be weakly correlated, but culture nevertheless significantly influences educational outcomes. This approach further implies that the returns to cultural capital are greater for working-class individuals (Aschaffenburg & Maas, 1997; DiMaggio, 1982; Jæger & Karlson, 2018). Working-class students may benefit from cultural capital more than middle-class students because it makes them “stand out” over their working-class peers who do not possess such capital. Therefore, an interaction effect where concerted cultivation benefits working-class students more than middle-class parents is consistent with cultural mobility.

## 2.2. Comparing the United States and Scotland

Research on social stratification has long compared the social mobility patterns between the United Kingdom and the United States (Davis & Robinson, 1991; Kerckhoff, 1974; Kerckhoff et al., 2001; Lipset, 1963; Long & Ferrie, 2013; Luo, 1998; Rothon et al., 2009; Turner, 1960). Although there is a rich tradition for this comparison, past studies generally focus on England and ignore or downplay other countries in the United Kingdom (Raffe, 2004). For instance, Scotland is an interesting case study compared with the United States regarding parenting practices and school engagement for several reasons.

First, although Scotland and England share similar societal and labor market characteristics, the Scottish Government controls its education system due to devolution. Scotland tends to be more comprehensive in its secondary education system and tends to have greater postsecondary participation rates than England (Iannelli & Paterson, 2007; Raffe, 2004). Second, the national views of Scotland have centered on an open and meritocratic social structure (Iannelli & Paterson, 2007; Raffe, 2004). These views stand in contrast to the national views historically ascribed to Great Britain—elitism, ascription, and particularism—and are similar to the national sentiments of achievement, equalitarianism, and universalism found in the United States (Lipset, 1963; Turner, 1960). Third, the racial composition of Scotland is more homogenous than England or the United States. Minority-ethnic groups make up approximately 4% of the population in Scotland, as compared to 14% in England and Wales, or 35.9% in the United States (Gov.UK, 2020; National Records of Scotland, 2018; United States Census, 2019).<sup>1</sup> Furthermore, the National Records of Scotland (2021) report that 7.4% of people living in Scotland were non-British in 2021. In the United States, the Pew Research Center (2023) estimates that 13.7% of the U.S. population were immigrants in 2018.

Fourth, the Scottish education system is somewhat decentralized, where schools have some decision-making capabilities (e.g., curriculum) (Tett, 2004). The U.S. education system is decentralized, with the power to educate its citizens in the states and local authorities (USNEI, 2008). States exercise direct oversight over most aspects of education. The state’s role in education is similar to the work of ministries of education in countries with centralized education systems (USNEI, 2008). Local communities are organized by school districts and are governed by school boards of elected citizens. Fifth, national policies in both the United States and Scotland nevertheless have emphasized parent–school relationships as a key component of education reform to raise academic standards (Mapp, 2012; McCluskey, 2017; Nawrotzki, 2012; Tett, 2004; U.S. Department of Education, 2018).

Finally, both countries witness intense competition for admission to elite colleges and universities. In 2019, four-year colleges/universities that accept 10% or less of their applicants received 3.2 times the number of applications (22,170) than the average (6,850).<sup>2</sup> Similarly, admission to prestigious ancient universities requires higher entry than other universities in Scotland (Duta et al., 2018). Although grades and the academic curriculum are crucial for entry to elite colleges in the United States and Scotland, elite colleges/universities in the United States also emphasize a “holistic” admissions policy that weighs in an applicant’s extracurricular activities and “life experiences” (e.g., Columbia University in the City of New York, 2023; Dartmouth College, 2023; Harvard University, 2023; Stanford University, 2023). Given the U.S. stratified system, social scientists have argued that elite colleges/universities serve as a blueprint for parental childrearing practices, especially among middle- and upper-class parents (Aurini et al., 2020; Davies

<sup>1</sup> The statistic for the United States represents white, non-Hispanic or Latino.

<sup>2</sup> These are the authors’ calculations using data from the Integrated Postsecondary Education Data System (IPEDS). We also removed the bottom 5% of four-year institutions from the analysis because they received less than 20 applications in 2019.

& Rizk, 2018; Stevens, 2007).

### 3. Data and methods

#### 3.1. Sample

The U.S. and Scottish data sets we use for our study are similar in age (~10 years old) and cohort. The U.S. data came from the Early Childhood Longitudinal Study-Kindergarten Class of 2010–11 (ECLS-K). This data is a nationally representative sample of children attending kindergarten (and thus approximately five years of age) in 2010–11. Children were followed up to the fifth grade, and information was collected annually from children and their families, teachers, schools, and care providers (National Center for Education Statistics, 2020).

Data for Scotland came from Growing Up in Scotland (GUS) (ScotCen, 2019b). Specifically, we used data on Birth Cohort 1, a nationally representative sample of children born in Scotland in 2004–05. Data were collected annually until they were age six and every two years after that. Responses mainly came from the primary caregiver (usually the mother), but as children grew older, they also started to answer questions themselves. In addition, alongside the eighth round of data collection, a separate survey was carried out with the cohort child's Primary 6 teacher (ScotCen, 2019a).

Both ECLS-K and GUS provide information on a child's cognitive, social, emotional, and physical development. Moreover, ECLS-K and GUS research teams collected various socio-demographic information on children and their families. They also provided a rich account of a child's home and school environment, extracurricular activities, and out-of-school care. Furthermore, these data were collected during a time of renewed government interest in parental involvement in schools. Moreover, students in our sample are Generation Z (born after 1996), whereas prior studies use respondents who are either Generation X (born 1965–1980) or Generation Y (born 1981–1996) (e.g., Aurini et al., 2020; Barg, 2019b; Bodovski, 2010; Carolan & Wasserman, 2015; Cheadle & Amato, 2011; Dimock, 2020; Dumais, 2009; Kraaykamp & Notten, 2016).<sup>3</sup>

#### 3.2. Dependent variables

We focused on children's reading and listening assessments, and teacher evaluations around age 10 when they attended fifth grade in the United States and Primary 6 in Scotland. For children in the U.S. sample, we used a measure of reading assessment based on the National Assessment of Educational Progress Reading Frameworks for 2011 and fourth-grade reading standards from Texas, California, New Jersey, Florida, and Virginia (Tourangeau et al., 2018). This reading assessment includes questions measuring basic skills such as letter recognition, vocabulary knowledge, and reading comprehension. For children in the Scottish sample, we used the listening subtest of the WIAT-II (Wechsler Individual Achievement Test) cognitive test (Wechsler, 2005). Children were assessed on receptive vocabulary, sentence comprehension, and expressive vocabulary. We used the Listening Comprehension Standard Score, a normalized transformation of the total raw score derived by adding the raw scores for each of the three items. Although distinct, research shows strong evidence that listening comprehension in children is a direct precursor to their reading comprehension and that the two progressively tend to form a unitary construct (Adlof et al., 2006; Gough & Tunmer, 1986; Hogan et al., 2014).

We included two measures of teacher assessments. The first is students' attitudinal focus and inhibitory control. This measure is a four-item scale ( $\alpha = 0.89$  for the United States and  $\alpha = 0.83$  for Scotland, respectively) based on four student evaluations: distracts easily when

listening to a story, needs to be told to pay attention, plans carefully before doing, and good at following directions. This scale is standardized with a mean of 0 and a standardized deviation of 1. Higher values represent greater focus/control. The second teacher assessment is a dichotomous indicator of whether a student is reading below grade level (Yes = 1).

#### 3.3. Variables of interest

Our primary research interests relate to differences in educational outcomes by SES and how parenting practices explain these differences. We used parental education to measure SES, taking on the highest educational level between the two parents. The variable has the following categories: less educated (up to GCSE/Standard grades in Scotland and up to high school in the United States), medium (up to A levels, Highers and some college in Scotland, and up to some college in the United States), and highly educated (university degree in Scotland and bachelor's or advanced degree in the United States). The empirical analyses presented in this paper compared children whose parents have less education (PE<sub>L</sub> children) and children with highly educated parents (PE<sub>H</sub> children). Typically, SES is a combination of parents' education, income, and occupation. Nevertheless, parental education is a powerful measure of social class as it pertains to Lareau's work (and, to an extent, cultural capital as a whole) (Aschaffenburg & Maas, 1997; Carolan & Wasserman, 2015; Hofferth, 2008). Unlike occupation and income, parental education reflects cultural capital regarding parents' linguistic skills, "proper" interactions with school agents, and overall familiarity with the education system (Barg, 2019a; Weininger et al., 2015).

Lareau's (2011) work on concerted cultivation inspired our choice of parenting practices within households in the United States and Scotland. Five dichotomous variables capture parental involvement in out-of-school activities with their children: visits to museums, libraries, zoos, attendance to concerts, and sporting events. We also included four variables describing parental involvement in school: whether parents participated in school events, volunteered at school, attended parent-teacher conferences, and attended meetings of the Parents and Teachers Associations (PTA/PTO). The last set of three variables relates to a child's extracurricular activities outside school hours: sports; organized clubs; and visual, learning, and performing arts. We included each indicator separately in the model, as preliminary analyses ruled out collinearity issues. Moreover, we found that Cronbach's alpha scores were low when attempting to scale constructs of parenting practices (0.39–0.53).

#### 3.4. Control variables

In all analyses, we controlled for several background characteristics (child's gender, race/ethnicity, home language, number of siblings, household size, family structure, and mother's employment status) to account for differences in the social patterning of ascriptive factors across the two countries. All explanatory variables are measured before the outcome variable, namely in fourth grade for children in the United States and at Sweep 7 for children in Scotland. We also included a premeasure of reading (listening) assessment. We used the score based on the same reading test administered when the child was in kindergarten for the U.S. sample. We used the score based on the Naming Vocabulary sub-test of the British Ability Scale (ScotCen, 2019b) for the Scottish sample when the child was approximately age 5.

We attempted to harmonize the data as best as possible. We located and coded variables similarly for all but one variable for the U.S. and Scottish samples. The exception was the outcome variable: reading assessment in the United States and learning assessment in Scotland. However, we coded the other outcome variable—students' attitudinal focus and inhibitory control—the same. Nevertheless, we refrained from conducting equality tests across these countries because we performed a

<sup>3</sup> Exceptions include Cardona et al. (2015) and McCoy, Bryne, and Banks (2012).

decomposition analysis (see below). This analysis takes the SES gap as 100% and breaks it into different components. Therefore, the results are inherently within a country. Rather, we use the United States and Scotland as two case studies to assess the overall patterns in concerted cultivation in each country.

### 3.5. Methods

This study is concerned with differences in the educational outcomes of children with highly educated parents (PEd<sub>H</sub> children) and children with less-educated parents (PEd<sub>L</sub> children) and the role of parenting practices in explaining these differences. We conducted a Blinder–Oaxaca decomposition analysis to estimate the extent to which parental-education differences in a child’s educational outcomes are due to the social patterning of parenting practices and how much is due to the varying effectiveness of parenting practices for children (Blinder, 1973; Jann, 2008; Oaxaca, 1973). This statistical method serves our purpose as it expresses the educational outcomes of PEd<sub>H</sub> and PEd<sub>L</sub> children, respectively, as two linear models:

$$E(Y_{PEd_H}) = \beta_{PEd_H} X_{PEd_H} + \epsilon_{PEd_H}$$

$$E(Y_{PEd_L}) = \beta_{PEd_L} X_{PEd_L} + \epsilon_{PEd_L} \tag{1}$$

where  $\beta_{PEd_H}$  and  $\beta_{PEd_L}$  represent slope parameters,  $X_{PEd_H}$  and  $X_{PEd_L}$  denote a vector of predictors, and  $\epsilon_{PEd_H}$  and  $\epsilon_{PEd_L}$  represent the error term.

It then decomposes the mean difference between the outcomes of the two sub-groups as follows:

$$E(Y_{PEd_H}) - E(Y_{PEd_L}) = \{E(X_{PEd_H}) - E(X_{PEd_L})\}\beta^*$$

$$+ E(X_{PEd_H})\{\beta^* - \beta_{PEd_H}\} + E(X_{PEd_L})\{\beta_{PEd_L} - \beta^*\} \tag{2}$$

where the  $(\{E(X_{PEd_H}) - E(X_{PEd_L})\}\beta^*)$  represents the part of the difference in mean outcome between PEd<sub>H</sub> and PEd<sub>L</sub> children explained by differences in their level of observed characteristics (endowment effect). In other words, it expresses how much of the parental-education difference in educational outcomes is due to the social patterning of parenting practices. The equation  $(E(X_{PEd_H})\{\beta^* - \beta_{PEd_H}\} + E(X_{PEd_L})\{\beta_{PEd_L} - \beta^*\})$  represents the contribution of difference in the coefficients (coefficients effect). It expresses how much of the gap in educational outcomes is because similar activities might affect children differently based on their parents’ level of education.

We can think of the Blinder–Oaxaca technique as a counterfactual approach. As we showed in Eq. (1), we estimated separate linear models for PEd<sub>H</sub> and PEd<sub>L</sub> children. We can calculate students’ expected reading scores for both social groups from these models, thus estimating the mean difference in reading scores between PEd<sub>H</sub> and PEd<sub>L</sub> students. We also know that PEd<sub>H</sub> children tend to have different endowments—such as smaller household size, number of siblings, unemployed mothers, and parental involvement in school activities—than PEd<sub>L</sub> children.

But what would happen to the reading scores of PEd<sub>L</sub> children if they had the same endowments as PEd<sub>H</sub> children? In other words, we substitute the values we initially used to estimate reading scores from PEd<sub>L</sub> children with values from PEd<sub>H</sub> children. Typically, the counterfactual reading score is higher than the original reading score, and therefore, the parental-education gap in reading scores is also smaller. We attribute the change in the original gap and the counterfactual gap in reading scores to the difference in endowments across social groups. We can further isolate the contribution of each predictor included in the linear model.

We conduct a similar procedure for the coefficient effect. In other words, we perform an analysis based on the counterfactual condition where we observe what would happen to the mean reading score of PEd<sub>L</sub> children if they had the coefficients of the linear model of PEd<sub>H</sub> children. This procedure considers that the returns of the variables in the linear models may not be the same for children from different social groups.

One issue with the Blinder–Oaxaca approach is that it depends on the focal group under observation. In other words, the results are “asymmetric,” where switching the group changes the sign (+ or –) but does not produce the same magnitude of the effects. Our approach to addressing this issue is to base the counterfactual condition on the mean of the pooled sample rather than the sample specific to each subgroup. Thus, our results are relative to the overall mean, leading to “symmetric” results independent of the group we specify.<sup>4</sup>

## 4. Results

Our results section starts by presenting descriptive statistics of our samples (Table 1). We separated the results by country and parental education to provide an overview of differences in the socio-demographic background of children from the two social groups. We also described the social patterning of parental involvement in school and the other practices of concerted cultivation. The second section focuses on the decomposition analysis results (Table 2). This approach enables us to discern whether differences in an educational outcome between PEd<sub>H</sub> and PEd<sub>L</sub> children relate to the social patterning of parenting practices (i.e., endowment effect) or their varying effectiveness depending on the children’s SES (i.e., coefficient effect).

**Table 1**  
Assessment measures and explanatory variables, by country and parental education.

	United States		Scotland	
	Parental education:		Parental education:	
	Low	High	Low	High
Reading score–5th grade	-.44	.46		
Listening score–Primary 6			-.40	.18
Reading score–Kindergarten	-.40	.49		
Naming Vocabulary score–Age 5			-.31	.23
<b>Socio demographic characteristics</b>				
Gender (girl)	.49	.50	.47	.49
Non-white ethnic background	.72	.31	.03	.03
Language at home other than English	.41	.09	.03	.06
Not in a two-parent household	.45	.16	.39	.11
Household size (mean)	4.90	4.60	4.80	4.40
Number of siblings (mean)	1.80	1.50	1.40	1.20
Mother in part-time employment	.19	.25	.49	.57
Mother not in employment	.49	.28	.41	.17
<b>Parents’ out-of-school activities with children</b>				
Visited library/bookstores	.55	.79	.56	.73
Attended concerts	.29	.46	.54	.80
Visited museums	.28	.43	.52	.86
Visited zoos	.40	.40	.57	.76
Attended sport events	.40	.56	.36	.52
<b>Parental involvement in school</b>				
Attended PTA/PTO meeting	.45	.46	.14	.34
Attended parent-teacher conference	.87	.95	.94	.98
Attended school event	.73	.93	.76	.94
Volunteered at school	.29	.68	.30	.50
<b>Extracurricular activities</b>				
Organized athletic activities	.43	.81	.61	.88
Organized clubs or recreational prog	.14	.37	.46	.80
Visual, learning, and performing arts	.27	.59	.26	.44
N	2170	3450	524	1503

Source: Authors’ elaboration of ECLS-K and GUS data.  
All numbers from the U.S. sample are rounded to the nearest 10 due to data-use agreement set by the National Center for Education Statistics.

<sup>4</sup> We use the *oaxaca* command in Stata, which includes a group indicator to address a potential issue when pooling the sample when a portion of the coefficient component of the decomposition inappropriately spills over into the endowment component (Jann, 2008).

**Table 2**  
Blinder–Oaxaca decomposition of differences in educational outcomes between children with less- and highly-educated parents by country.

United States	Endowment			Coefficient		
	Read	FaC	Below	Read	FaC	Below
Overall	.589***	.100***	-.118***	.325***	.265***	-.168***
Prior reading score-Kindergarten	.399***			.064***		
<i>Socio demographic characteristics</i>						
Gender (girl)	.000	.002	.000	-.039 <sup>^</sup>	-.025	.000
Non-white ethnic background	.030**	.004	.004	-.025	-.071*	.012
Language at home other than English	-.025*	-.060***	.000	-.043**	-.024	.002
Not in a two-parent household	.034***	.075***	-.028***	.016	.004	.000
Household size (mean)	.008	.001	-0.006 <sup>^</sup>	.110	-.017	.055
Number of siblings (mean)	.005	-.004	.000	-.020	.050	-.017
Mother in part-time employment	.000	.000	.000	.024 <sup>^</sup>	.032*	-.021***
Mother not in employment	.023***	.005	-.010**	.043 <sup>^</sup>	.053*	-.010
<i>Parents' out-of-school activities with children</i>						
Visited library/bookstores	.016**	.014*	-.006	-.060 <sup>^</sup>	.011	.000
Attended concerts	.008*	.005	-.002	.002	.022	-.004
Visited museums	.003	.002	-.002	.025	.012	-.002
Visited zoos	.000	.000	.000	-.010	-.011	-.001
Attended sport events	-.006 <sup>^</sup>	.006 <sup>^</sup>	.002	-.011	.004	.011
<i>Parental involvement in school</i>						
Attended PTA/PTO meeting	.000	.000	.000	.030	.064***	-.005
Attended parent-teacher conference	-.006*	-0.011***	.008***	-.009	-.067	.034
Attended school event	.040***	.027***	-.017***	-.138**	-.007	.033
Volunteered at school	.013	.016 <sup>^</sup>	-.012*	.014	-.020	-.014
<i>Extracurricular activities</i>						
Organized athletic activities	.022*	.019*	-.020***	-.041	-.006	.006
Organized clubs or recreational prog	.008	-.018***	-.007 <sup>^</sup>	.008	.004	.006
Visual, learning, and performing arts	.018**	.017*	-.022***	.023	.010	-.004
Constant				.365**	.248 <sup>^</sup>	-.250***

  

Scotland	Endowment			Coefficient		
	Listen	FaC	Below	Listen	FaC	Below
Overall	.395***	.167***	-.054***	.187***	.052	-.050*
Prior vocabulary score-Age 5	.256***			.015		
<i>Socio demographic characteristics</i>						
Gender (girl)	-.003	.000	.000	-.125*	.020	-.003
Non-white ethnic background	.001	-.001	.000	.012	.014	-.001
Language at home other than English	.007 <sup>^</sup>	-.002	.001	-.010	.009	.005 <sup>^</sup>
Not in a two-parent household	.002	.055**	.005	-.018	-.034	-.005
Household size (mean)	.011	.026 <sup>^</sup>	-.001	.068	.114	.111
Number of siblings (mean)	-.008	-.004	.001	-.033	.038	-.048
Mother in part-time employment	-.004	-.001	.001	-.027	-.026	-.025
Mother not in employment	.028 <sup>^</sup>	.029 <sup>^</sup>	-.011	.021	.038	-.029
<i>Parents' out-of-school activities with children</i>						
Visited library/bookstores	-.007	.011	-.003	.100 <sup>^</sup>	-.010	-.018
Attended concerts	-.011	-.003	-.004	-.119 <sup>^</sup>	-.025	.064*
Visited museums	.044*	-.006	-.001	.066	.020	-.025
Visited zoos	.006	.001	.015**	.117 <sup>^</sup>	-.027	.010
Attended sport events	-.003	.000	.002	-.023	.046	-.015
<i>Parental involvement in school</i>						
Attended PTA/PTO meeting	.001	-.004	-.003	-.032	-.040 <sup>^</sup>	.014
Attended parent-teacher conference	-.004	.004	-.001	.014	.132	.031
Attended school event	.011	.008	-.006	.005	.309*	-.021
Volunteered at school	.016 <sup>^</sup>	.009	.000	.025	-.012	-.023 <sup>^</sup>
<i>Extracurricular activities</i>						
Organized athletic activities	.025	.042	-.013	-.017	-.144	.011
Organized clubs or recreational prog	.014	-.017	-.014	.011	.216*	-.014
Visual, learning, and performing arts	.015 <sup>^</sup>	.019*	-.011*	.065 <sup>^</sup>	-.015	.002
Constant				.072	-.570	-.073

Notes: ECLS-K (US) and GUS (Scotland). Sample size is 5,620 (ECLS-K) and 2,027 (GUS). Read = Reading assessment, Listen = Listening assessment, FaC = Focus and control, and Below = Reading below average.

<sup>^</sup>  $p < 0.10$ .  
 \*  $p < 0.05$ .  
 \*\*  $p < 0.01$ .  
 \*\*\*  $p < 0.001$  (two-tailed).

4.1. Descriptive results

As expected, Table 1 shows stark differences in children’s school outcomes from different SES, with PED<sub>H</sub> children doing, on average, better than PED<sub>L</sub> children. This finding holds for both the United States and Scotland. The difference in school outcomes exists before children

start primary education and remains after some years of schooling. Children in the two social groups also differed concerning many of their families’ socio-demographic characteristics. In the United States, over 70% of PED<sub>L</sub> children are racialized minorities, and over 40 % of these children reside in multilingual homes, as opposed to 30% and 10 %, respectively, of PED<sub>H</sub> children. The Scottish sample is, on average,

less diverse, where the proportion of racialized minorities and those who reside in a multilingual home are comparably lower than the U.S. sample.

In both countries, approximately 40% of  $PEd_L$  children live in a family configuration that differs from a two-parent household, which is a more typical family formation for  $PEd_H$  children.  $PEd_L$  children tend to grow up in larger families and have more siblings than  $PEd_H$  children. Rates of maternal unemployment are higher among  $PEd_L$  families than among  $PEd_H$  families. Interestingly, levels of maternal unemployment are comparatively higher in  $PEd_H$  families in the United States than in Scotland. Around half of the children in the Scottish sample have mothers who work part-time, with no remarkable difference in parental education.

Table 1 also highlights a clear social pattern of practices of concerted cultivation in both the United States and Scotland. On average, highly educated parents in both countries participate in cultural and leisure activities more often than less-educated parents. They are more frequently involved in the activities of their children's school.  $PEd_H$  children are also more likely to join extracurricular activities outside school hours.

There are, however, noteworthy differences between the two countries. First, a larger proportion of children in Scotland than in the United States participate in extracurricular activities, irrespective of parental education. At the same time, parental-education differences are less pronounced in Scotland than in the United States, particularly pertaining to sports activities. Similarly, we find that larger proportions of children go on outings with their parents in Scotland than in the United States. We observe higher participation levels in visits to museums and zoos, and attendance to concerts but find comparable levels across the two countries in attendance to sports events and visits to libraries and bookstores. The extent of parental participation in school activities also seems comparable across the two countries, although there may be differences in the forms and meaning of participation. The exception is that parents' attendance at PTA/PTO meetings is higher in the United States than in Scotland, which might indicate the greater importance placed on parent lobbying and pressure groups in the United States.

#### 4.2. Decomposition of parental-education differences in students' outcomes

Table 2 shows the results of our decomposition analyses. We report results from the Blinder–Oaxaca decomposition model for each country. The endowment effect represents how much of the outcome difference between  $PEd_H$  and  $PEd_L$  children is explained by distributional differences in the explanatory variables. The coefficient effect represents the parental-education difference in the returns of the explanatory variables. Given that the main objective of this study lies in assessing how practices of concerted cultivation favor the educational outcomes of  $PEd_H$  children over  $PEd_L$  children, we focus on results surrounding these practices.

In the United States, we observe that cultural reproduction through parental involvement mainly occurs through the “better” endowments of  $PEd_H$  children over  $PEd_L$  children. With few exceptions,  $PEd_H$  children participated in these activities at higher rates than  $PEd_L$  children, but the returns were similar for both social groups. We also report that a few out-of-school activities provided advantages for  $PEd_H$ . For example, parental-education differences in attendance to libraries/bookstores and concerts combined account for a modest 4.1% of the endowment effect in reading scores [(0.008 + 0.016) / 0.589]. Moreover, the higher frequency of  $PEd_H$  children visiting libraries/bookstores over  $PEd_L$  children accounts for 14% of the endowment effect of teacher assessment in children's focus and control. Interestingly, visiting museums was not associated with the parental-education gap in educational outcomes.

By contrast, parental involvement in schools is an important factor in educational outcomes in the United States, although again, these benefits mainly reside in endowment rather than coefficient effects. One

exception is that highly educated parents can better translate their attendance at PTA/PTO meetings on teachers' assessment of children's focus and control than less-educated parents. The overrepresentation of highly educated parents who attend school events provides their children an educational advantage over  $PEd_L$  children. For example, the unequal attendance in school events between highly educated and less-educated parents accounts for 14.4% of the endowment effect in the difference in teacher assessment of children reading below average. Inconsistent with cultural reproduction, parents' attendance at school events tempers the parental-education gap in educational outcomes. This finding suggests that most parent–teacher conferences center on issues regarding schooling.

The last set of variables in our empirical analysis accounts for the role of children's exposure to extracurricular activities. Overall, our results support the view that the socialization and learning opportunities that extracurricular activities provide contribute to children's educational outcomes. Moreover, our findings are consistent with Lareau's (2011) concerted cultivation argument, noting that middle-class parents used extracurricular activities as a key identifier for their class-based parenting style. For instance, differences in sports participation between  $PEd_H$  and  $PEd_L$  children partly account for the educational advantage of  $PEd_H$  children. Furthermore, unequal attendance in visual and performing arts such as music partly explains the parental-education difference in educational outcomes where  $PEd_H$  children are more likely to participate in these activities than  $PEd_L$  children.

In Scotland, we found few instances in which parental involvement contributes to the parental-education gap in educational outcomes. Nevertheless, there are a few examples of cultural reproduction. Going to museums is positively associated with listening scores. The higher frequency of participation in this activity for  $PEd_H$  children contributes to 11.1% of the endowment effect in listening scores (0.044 / 0.395). Interestingly, visiting zoos increases teachers rating students as below average in reading. This finding suggests that we would expect greater parental-education disparity in the proportion of teachers rating students as below average had it not been for the overrepresentation of  $PEd_H$  children visiting zoos. Moreover, some evidence suggests that highly educated parents translate their out-of-school activities with children better than less-educated parents, particularly for relatively subjective assessments. Parents attending school events are associated with teachers' evaluation of students' attitudinal focus and inhibitory control more for  $PEd_H$  than  $PEd_L$  students. In other words, the  $PEd_H$  advantage in students' attitudinal focus and inhibitory control in Scotland is not due to their parents attending school events at higher rates than  $PEd_L$ . Rather, highly educated parents receive greater returns in their involvement than less-educated parents. We found a similar result for students' participation in organized clubs or recreational programs.

## 5. Discussion and conclusion

Drawing upon Lareau's (2011) work on social class and family life, this study explored parental-education differences in students' educational outcomes from the United States and Scotland—two nations that share a policy emphasis on parental involvement to reduce the achievement gap. At the same time, the two countries differ in the extent to which such policy orientations are enforced, the overall levels of socioeconomic inequality, the role of extracurricular activities in social stratification and mobility, and the form and scope of welfare support for families and children. Using two comparable, nationally representative cohort studies enabled us to draw a nuanced picture of parenting practices within two study contexts, covering several dimensions of parental involvement and engagement (Goodall & Montgomery, 2014). The longitudinal nature of the data also implied that we could account for children's prior reading/listening assessment, thereby allowing us to estimate the influence of concerted cultivation on children's learning during the school years.

Maintaining a middle-class status may be more costly in the United States than in Scotland, given the higher cost of university attendance (Duta et al., 2018). The expansion of higher education and the fear of downward mobility have led to tremendous competition among highly educated parents for their children to attend the “right” college. This intense competition, coupled with the increasing emphasis on holistic admissions, has made highly educated parents more involved in creating the best possible portfolio for their children to stand out from others (Aurini et al., 2020; Kremer-Sadlik & Fatigante, 2015; Kremer-Sadlik et al., 2010; Stevens, 2007). For example, Snellman et al. (2015) estimate that upper-middle-class students increased their participation in high school sports between 1964 and 1986, whereas working-class students decreased their participation rates. These results suggest government policies that encourage parental involvement may not be enough to mitigate discrepancies in parenting practices by SES, even if there are incentives to do so. Instead, governments may need to intervene directly to increase participation in extracurricular activities for all individuals, such as in the case of sports participation in Scotland (Scottish Government, 2018).

Readers may question whether middle- and working-class parents adhere to these distinct cultural logics that Lareau proposed. Some researchers argue that working-class parents are just as concerned about their children participating in organized school activities as middle-class parents (Bennett et al., 2012; Chin & Phillips, 2004). Therefore, the key driver for the observed class difference in parental involvement is not due to class-specific cultural logics but instead due to resources. Lareau (2011) contends that parenting practices are fluid and not innate to a particular social class. Middle-class parents adopted a cultural logic of childrearing based on expert opinion quicker than working-class parents. However, since Lareau published her seminal work, working-class parents may have “caught up.” Bennett et al. (2012) even explain that working-class parents may have adopted cultural logics—such as the importance of activity participation—similar to middle-class parents a decade after Lareau (2011) interviewed students in the 1990s.

In a 2015 study, Weininger et al. (2015) addressed the charges Bennett et al. (2012) set forth. Specifically, they used quantitative data to evaluate whether material resources and constraints are the main reason middle- and upper-class children participate in organized activities more than working-class children. They tested Bennett et al.’s (2012) finding that schools can equalize students’ participation in organized activities. Weininger et al. (2015) find that while material resources and constraints explain some of the social-class gap in participation in organized activities, cultural orientation also exerts a meaningful influence. Furthermore, they do not find support for the notion that schools serve as equalizers in participation in organized activities. In other words, cultural orientations influence students’ participation in organized activities, whether these activities are at school or elsewhere.

In conclusion, a primary objective of our study was to ascertain whether parenting practices vary by parental education and whether these practices explain the differences in children’s outcomes. Specifically, we were interested in whether the advantages middle- and upper-class children experience in school are due to the possession of concerted cultivation (endowment effect) or the superior translation of this capital in school (coefficient effect). Our descriptive findings provide quantitative evidence supporting Lareau’s (2011) ethnographic account of different parenting practices by SES. In both countries, PED<sub>H</sub> parents show higher levels of participation in school events, activities, and committees, and a greater tendency to engage in cultural and recreational activities with their children. Moreover, they tend to support their children’s development through various extracurricular activities. These parental endeavors, however, are not unequivocally associated with educational outcomes. Findings from our decomposition analyses indicate that some practices of concerted cultivation are, as expected, positively associated with children’s outcomes but that the strength and direction of the relation often depend on parental education.

We found some support for cultural reproduction in the United States. However, the educational advantage of PED<sub>H</sub> children lies mainly in their participation in extracurricular activities and their parents’ school activities. Nevertheless, the weight of evidence shows that PED<sub>H</sub> children are no better at translating their advantage over their PED<sub>L</sub> counterparts. We found the opposite in Scotland. Endowment effects were fewer in Scotland than in the United States, even though the descriptive results show that PED<sub>H</sub> children and their parents participate in out-of-school, extracurricular, and school activities at higher rates than PED<sub>L</sub> children and their parents. We did find some support for cultural reproduction in Scotland, where PED<sub>H</sub> children and parents yield higher returns on their cultural capital than PED<sub>L</sub> children and parents. These results were more prominent when the outcome was more subjective—such as teachers’ assessment of students’ attitudinal focus and inhibitory control—than listening scores.

Despite weaker class identity in the United States than in European countries, these effects are more pronounced and more often statistically significant in the United States than in Scotland. These results may reflect several structural and demographic differences between the United States and Scotland. For instance, our data showed that maternal unemployment is relatively higher for highly educated families in the United States than in Scotland, which provides mothers the opportunity for volunteerism and involvement in their child’s school. Moreover, the Scottish government’s role in promoting and supporting the physical well-being of children may also reflect why extracurricular activities are a weaker explanation for the parental-education gap in reading/listening scores in Scotland than in the United States.

We should weigh the merits of this research against some limitations, primarily imposed by the data. First, we could not compare the same measure of cognitive assessment across the two countries. Based on the literature on the relation between reading and listening comprehension and the similarities of the observed social patterning of the two outcomes, we are confident that this difference should not invalidate our conclusions. Second, we could not include all aspects of parenting practices that theory would have suggested, nor could we adopt a fully longitudinal approach due to discrepancies in data collection between the two studies. Future studies could abandon the comparative approach, favoring a more in-depth analysis based on a single national context.

#### CRediT authorship contribution statement

**Brian P. An:** Data curation, Formal analysis, Investigation, Methodology, Project administration, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing.  
**Francesca Fiori:** Data curation, Formal analysis, Investigation, Methodology, Software, Validation, Visualization, Writing – review & editing.

#### Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

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