# ORIGINAL ARTICLE

# Adolescents' future in the balance of family, school, and the neighborhood: A multidimensional application of two theoretical perspectives

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Funding information FP7 Ideas: European Research Council, Grant/Award Number: 615159 **Objective:** Family, school, and neighborhood contexts provide cultural resources that may foster children's ambitions and bolster their academic performance. Reference group theory instead highlights how seemingly positive settings can depress educational aspirations, expectations, and performance. We test these competing claims.

**Methods:** We test these claims using the British Avon Longitudinal Study of Parents and Children (N = 4968).

**Results:** Results are broadly in line with the cultural resource perspective. However, important exceptions to this pattern point to reference group processes for children from low-educated parents, whose academic aspirations are especially low when they either attended an affluent school or lived in an affluent neighborhood—but not both, and for children from highly educated parents attending poor schools, whose realistic expectations of the future are higher than their peers in affluent schools.

**Conclusion:** The resource perspective strongly predicts adolescents' (ideas about) education, but reference group processes also play an important role in neighborhoods and schools.

#### **KEYWORDS**

adolescents, ALSPAC, cultural resource perspective, education, neighborhood effects, reference group theory, United Kingdom

Recent research calls attention to the divergent school and labor market trajectories in the transition to adulthood of Europe's youth (Brzinsky-Fay 2007; Buchmann and Kriesi 2011; Buchmann and Solga 2016; Schoon and Lyons-Amos 2016; Sikora, Evans, and Kelley 2019). Meanwhile, across the Atlantic, researchers are making great advances in describing the long-lasting consequences of poverty for adolescent development (Alvarado 2016; Chetty et al. 2014; Duncan and Murnane 2011; Hicks et al. 2018; Levy, Owens, and Sampson 2019; Shonkoff and Phillips 2000). Combining these two processes, in

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this article, we study the impact of childhood environment on adolescents' academic performance and their aspirations and expectations for the future. Shedding a new light on a classic concern in the sociology of stratification, we ask: How are adolescents' aspirations, expectations, and school performance shaped by the multidimensional socioeconomic context of their family, school, and neighborhood life? Most studies analyze either the role of family, school, or neighborhood contexts or focus on a combination of neighborhood and school effects (see e.g., De Vuijst and van Ham 2019; for the Netherlands, see Sykes and Musterd 2011; for the United States, Wodtke and Parbst 2017; and for Finland, see Kauppinen 2008). Ours is among the first to consider the overall impact of the multidimensional context of adolescence, specifically combining all three contexts into one interactive structure.

Theoretically, social contexts provide children with cultural resources that may foster their ambitions. Such is the case when young people find themselves in a supportive family environment where their talents are nourished and skills developed, which cultivate a positive expectation of their future. Lareau's qualitative research empirically describes how this is true for (upper) middle-class children in the U.S. context, whereas, precisely, this kind of support may be absent in the working-class and poor families (Lareau 2011). Jæger and Breen (2016) generalize these findings to students across the country based on the National Longitudinal Survey of Youth. The theoretical focus on cultural resources has been extended to the broader context of childhood, highlighting the importance of school and neighborhood environments (Lareau and Goyette 2014; Owens 2016). Research in the United States and Europe alike describes how adolescents' school performance and views of their future are (positively) shaped by social networks in schools and neighborhoods, the availability of positive role models, and negatively impacted by violence and other sources of stress and anxiety (Chetty, Hendren, and Katz 2016; De Vuijst and van Ham 2019; Kling, Hendren, and Katz 2005; Nieuwenhuis and Hooimeijer 2016; Paulle 2013; Raabe and Wölfer 2019; Sharkey and Elwert 2011). Socioeconomic school segregation—from elementary school (Owens 2017) to university (Gelbgiser 2021)-means that valuable cultural resources that are available to middle-class children are often unavailable to poor and working class youth (Bischoff and Owens 2019; Boterman et al. 2019; Saporito 2017).

A competing theoretical perspective instead highlights how seemingly positive settings may depress educational performance as well as aspirations and expectations of the future. Reference group theory posits that children's views of self are based on comparison processes and are inextricably linked to their reference group (Davis 1966; Merton 1949; Stouffer 1949). As such, young people who find themselves surrounded by high-achieving peers may come to think of their own competencies and potential in a much more negative light than those whose social networks are more diverse—or those who positively stand out amid low-achieving peers. These processes, and their implications, have been powerfully described by studies in education (Chmielewski, Dumont, and Trautwein 2013; Destin et al. 2012; Thijs, Verkuyten, and Helmond 2010) and have informed research on neighborhood settings, where scholars find a higher occurrence of internalizing problem behavior in more affluent environments (Karraker 2014; Merolla 2017; Nieuwenhuis et al. 2017; Singh-Manoux, Adler, and Marmot 2003).

This article empirically explores these competing claims drawing on the school and neighborhood trajectories of 4968 British children followed from birth to adolescence who participated in the Avon Longitudinal Study of Parents and Children (ALSPAC). In addition to the full sample, for which we have access to school records, we study aspirations and expectations for a subsample of 3208 adolescents who were interviewed in more detail. Our research aims to make three contributions to the literature. First, rather than assume that aspirations and school performance are related, we directly assess both. Second, we expand on existing research by describing adolescents' school performance and outlook at the intersection of three kinds of context (family, school, and neighborhood). Third, we take a longitudinal perspective to consider the impact of adolescents' childhood context as they look ahead. In what follows, we discuss the empirical and theoretical background to conceptualize two alternative sets of expectations for how context impacts adolescents' views of the future. We then present our data and methodological strategy for testing these expectations, before presenting our findings. We conclude by discussing implications for research, theory, and practice.

	School		
Neighborhood	Low	High	Family
Low	1 (21 percent)	2 (2 percent)	Low
High	3 (4 percent)	4 (7 percent)	Low
Low	5 (13 percent)	6 (3 percent)	High
High	7 (9 percent)	8 (41 percent)	High

TABLE 1 Multidimensional configuration of adolescents' social environment

Note: "Low" and "high" refer to settings characterized by low and high socioeconomic status (SES), respectively. Percentages give the share of respondents in our sample for each category.

# THEORETICAL BACKGROUND

Studying the impact of trajectories and institutions must start from a systematic framework of the kind of settings adolescents are exposed to in this formative stage of their social and cognitive development. Prior research has established the importance of three institutions in this respect: family, neighborhoods, and schools. While one family, neighborhood, or school is different from the next in myriad ways, most scholars agree that the socioeconomic dimension is of most consequence (Bronfenbrenner 1979; Duncan and Murnane 2011; Lareau 2011; Shonkoff and Phillips 2000; Toft 2018). Specifically, in examining the role of family, school, and neighborhood in adolescent development, we must look at the socioeconomic resources (education and income) available to adolescents, from their families and through peers in their neighborhoods and schools. In addition to considering the availability of socioeconomic resources, we can think of neighborhoods and schools as generally characterized by low or high socioeconomic status (SES). The socioeconomic composition of neighborhoods and schools, in other words, determines both the availability of resources to adolescents, growing up, and the extent to which they are exposed to peers and adults who are similarly positioned-or not. The social capital available through social networks in schools and neighborhoods drives the differential opportunity structures in contexts with different SES levels (Galster 2011). It is the combination of these dimensions that marks a person's experiences, and their vantage point on the social world.

Table 1 schematically describes the possible combinations of socioeconomic resources available to adolescents from their families and through peers and adults in their neighborhoods and schools. The percentages give the share of respondents in our empirical sample for each cell. We apply this multidimensional socioeconomic framework to assess competing hypotheses derived from the cultural resource perspective and reference group theory. For instance, compare an adolescent growing up in a low SES family and neighborhood attending a low SES school (Scenario 1) with her neighborhood friend from a similarly low SES family who attends a high SES school (Scenario 2): How do these two friends' different school experiences inform their view of self and society—and how do they make sense of the fact that they are going to different schools in the first place? Or consider a young person growing up in a socioeconomically privileged family, living in a high SES neighborhood and attending a low SES school (Scenario 7). How does this students' privileged background impact her interactions with classmates from low SES backgrounds? What do her classmates see, think, and feel when they hang out after school in the high SES neighborhood?

Cultural reproduction theory posits that one path through which status is reproduced across generations is by the resources parents provide their children (Bourdieu and Passeron 1977; Lamont and Lareau 1988). In one of the most empirically grounded studies in this theoretical tradition, Lareau (2011) distinguishes between middle-class and working-class modes of childrearing. The two modes of childrearing, she shows, lead to differences in skills, attitudes, and orientation. The result of these modes of childrearing is that working-class children tend to develop a sense of constraint regarding their future, whereas middleclass children develop a sense of entitlement. These differences in aspirations and (realistic) expectations are exacerbated by the fact that middle-class children and their parents often seek and receive special attention and treatment from teachers and school administrations (Calarco 2014, 2018; Lareau, Evans, and Yee 2016) and by the fact that working-class and middle-class children are likely to attend socioeconomically segregated schools and live in neighborhoods where they are surrounded by similarly minded children (Fiel 2015; Lareau and Goyette 2014; Owens 2016). Based on this perspective, we hypothesize that academic performance, aspirations, and expectations are highest where the combined socioeconomic, family, neighborhood, and school resources are highest (Scenarios 6–8) and lowest where they are lowest (Scenarios 1—3). Where resources are lowest, students perform worst, and expect and aspire to little; but when resources are abundant, students will aim high, expect much and perform well in school.

An alternative perspective, going back to reference group theory (Merton, 1949; Stouffer 1949), emphasizes the importance of reference groups and comparison processes in the development of aspirations and expectations (Davis 1966; Marsh 1987; Marsh and Hau 2003). Focusing primarily on schools, the bigfish-little-pond hypothesis posits that children's self-concept, academically and more broadly, depends on who they compare themselves to. The implication is that children who previously thought of their academic abilities and potential in favorable terms may develop a less favorable self-concept when they find themselves in a new environment with more high-performing peers. Similarly, children's self-concept is expected to grow more positive when their peers seem less talented than they are. Research describes such processes in schools across Europe, for students in early adolescence (Thijs, Verkuyten, and Helmond 2010) and adolescence (Chmielewski, Dumont, and Trautwein 2013; Loyalka, Zakharov, and Kuzmina 2018). Similar processes are described in the U.S. context when examining racial disparities in schools (Crosnoe 2009; Goldsmith 2011). In neighborhoods, these processes have mainly been studied with internalizing problem behavior outcomes such as anxiety and depression; however, the evidence points in the same direction (Kessler et al. 2014; Lund and Dearing 2012; Nieuwenhuis et al. 2017). These studies lead us to suspect that the big-fish-little-pond hypothesis can also apply to the neighborhood level.

This perspective informs an alternative hypothesis: When children from lower socioeconomic backgrounds find themselves a minority in affluent schools and neighborhoods, their academic performance, aspirations, and expectations suffer (Scenario 4); conversely, when children from affluent backgrounds find themselves in settings where they positively stand out (Scenario 5), we would expect a boost in performance, aspirations, and expectations.

# METHODOLOGY

# Data

To test these hypotheses and describe the relative importance of family, school, and neighborhood contexts, we draw on British panel data from the ongoing ALSPAC. The study recruited 14,541 pregnant women in the county of Avon, the United Kingdom, who were expecting to give birth between April 1, 1991, and December 31, 1992. An additional enrolment included 713 more children. The total sample consisted of 15,458 fetuses, of which 14,701 were alive at age 1 (Boyd et al. 2013; Fraser et al. 2013). We obtain educational test results and aggregated neighborhood and school information by linking ALSPAC data on children's school and neighborhood histories to the Annual School Census and the National Pupil Database. Our analysis of academic performance is based on a sample of 4968 adolescents for whom both residential and educational information was available. We additionally study the subset of 3208 adolescents who participated in a questionnaire administered in school year 11 (age 15/16), for whom detailed information is available regarding their aspirations and expectations for the future. Please note that the study website contains details of all the data that is available through a fully searchable data dictionary at <<u>http://www.bris.ac.uk/alspac/researchers/data-access/data-dictionary/></u>. Our attitudinal variables are based on a block of questions posed to students in spring before their final year of high school (age 15/16), after which they take their final exam, the results of which determine whether or not they qualify for higher education. We measure aspirations as adolescents' response, on a 4-point scale ranging from "not at all important" to "very important," to the question of how important it is for them to get results that would qualify them for higher education (5 General Certificate of Secondary Education (GCSE) at C or above). We measure expectations as their assessment of how likely they believe they will qualify, on a 4-point scale from "not at all likely" to "very likely." Because both variables are skewed toward "very important" or "very likely," we dichotomize the variables to "very important" or "very likely" versus the other responses. Our third variable, mismatch, indicates whether respondents expect not to be able to live up to their own aspirations. To this end, we constructed a dichotomous variable measuring whether respondents' aspirations were higher than their expectations (1) or not (0).

Academic performance was measured as students' math results from the Key Stage 4 test (age 15/16), which was administered in the same year as our attitudinal variables were measured. The results were obtained from the National Pupil Database. The measure ranges from 0 to 68.<sup>1</sup>

# Independent variables

Neighborhood resources are proxied by the government issued indices of multiple deprivation (IMD) for the neighborhoods in which youth lived when they were aged 13/14 (Khattab et al. 2012; Payne and Abel 2012; see also Sevinc 2020). Neighborhoods are defined as lower layer super output areas (LSOAs), the smallest available delineation, which contains between 400 and 1200 households (Office for National Statistics 2020). We use LSOAs because small delineations best capture the neighborhood's social network, which people are part of and most affected by (Nieuwenhuis, Hooimeijer, and Meeus 2015; Oberwittler and Wikström 2009). Moreover, the smallest scale is most comparable with the scale of the experienced school environment. We use age 13/14 for comparability with our measure for school poverty because this age corresponds to the timing of Key Stage Test 3 and therefore with the timing of available measures for school poverty. We did not use contextual poverty at Key Stage 4 (age 15/16) because we wanted to lag the poverty variables with one period. The IMD consists of the following characteristics: income; employment; health and disability; education, skills and training; barriers to housing and services; living environment; and crime. The IMD comes in deciles, ranging from the first (least deprived) to the 10th (most deprived).

School poverty was measured as the proportion of children eligible for school meals, which is a commonly used proxy (Gorard 2012). This measure was available from the Annual School Census at the time individuals were taking Key Stage Test 3, corresponding to age 13/14.

Parental education was measured as the highest achieved education of one of the parents as assessed at 32 weeks into gestation. Education was measured in five ordinal categories: (1) lowest: Certificate of Secondary Education (CSE) or GCSE levels D, E, F, or G; (2) low: vocational education; (3) middle: ordinary level (O level) or GCSE levels A, B, or C; (4) high: advanced level (A Level); and (5) highest: university degree.

<sup>&</sup>lt;sup>1</sup> As a robustness check, we ran additional models substituting student's math test scores for Key Stage 4 test scores on English and science. Doing so, for both alternative measures, we obtain results that replicate those presented in this article. These sensitivity analyses bolster our confidence that mathematics test scores are a good measurement of academic performance. Full results are available upon request.

Variable	N	Mean/Prop.	SD	Min.	Max.
Academic performance	4968	36.88	13.00	0	68
Aspirations	3208	0.83	0.37	0	1
Expectations	3038	0.56	0.50	0	1
Mismatched expectations	3030	0.37	0.48	0	1
Neighborhood deprivation	4968	4.72	2.90	1	10
School poverty	4968	10.33	8.40	0	64.71
Parental education					
–Lowest (CSE)	4968	0.16			
–Low (Vocational)	4968	0.08			
–Middle (O Level)	4968	0.30			
–High (A Level)	4968	0.32			
–Highest (Degree)	4968	0.14			
Academic ability	4968	9.33	3.65	0	15

#### TABLE 2 Sample descriptives

Abbreviation: CSE, Certificate of Secondary Education.

Source: Avon Longitudinal Study of Parents and Children (ALSPAC).

# Control variable

A major concern in identifying the family and contextual effects of SES on children's academic performance, aspirations, and expectations is the confounding of treatment and selection processes: Particularly bright children may sort into better schools or cluster in wealthier neighborhoods with better schools. To take this into account, we included academic ability measured at an early age before the measurement period of our contextual and outcome variables. Academic ability was measured as the score on the Key Stage 1 test, taken at age 7. The test result is a comprehensive summary score, comprising English, math, and science.

Table 2 gives sample descriptives.

## Analytical approach

Our analyses are designed to estimate the association between adolescents' multidimensional neighborhood, school, and family contexts and a set of dependent variables. First, we constructed eight categories corresponding to the possible combinations of family background, neighborhood deprivation, and school poverty, to directly address our hypotheses following the cultural resource perspective and reference group theory. In our analyses, we look only at individuals who were exposed to either high or low SES in the three contexts, measured at age 13/14 (i.e., one period before our dependent variables were measured at age 15/16). For each of the three contexts, we created high and low SES groups as close as possible in size and meaning, while taking into account the specific nature and distribution of the three different contexts. Within the constraints given by our data, we used those measurements that were most comparable. "High" and "low" SES were defined, respectively, as (1) parents have A-level or higher education versus vocational education or lower (20 percent vs. 21 percent of the sample, respectively); (2) neighborhood is the four least deprived deciles versus the four most deprived (52 percent vs. 23 percent of the sample, respectively); and (3) the bottom third versus the top third of respondents ranked by the school-based percentage of students eligible for free meals (ranging from 0 percent to 5.2 percent and from 10.5 percent to 100 percent, respectively). All these high and low SES classifications leave out the middle category by

design: Our theoretical interest is in the contrast between high and low SES contexts. Making all possible combinations between these three dimensions yields the eight scenarios described in Table 1.

We estimate effects and calculate predicted probabilities based on logistic regression models for aspirations (N = 1764), expectations (N = 1679), and mismatch (N = 1674), with dummies for the eight categories as our independent variables, first without and then including a control for academic ability. For academic performance, we repeat this exercise based on an ordinary least squares (OLS) regression (N = 2102).

In a final step, we estimate models in which we keep the original variables for family, neighborhood, and school deprivation intact, instead of combining them into the eight categories. We use these models as an additional test to determine the relative importance of the three different contexts for our four outcome variables, testing whether the effect of one might not hold up when controlling for another or for selection. Additionally, these models include the middle categories omitted by the abovementioned models, thus extending our scope to a wider sample.

The regression models take the form of

$$Y_{ii} = \beta_1 \text{Family}_i + \beta_2 \text{Neighborhood}_{ii-1} + \beta_3 \text{School}_{ii-1} + \beta_4 \text{Ability}_i + \alpha_i + \varepsilon_i, \tag{1}$$

where  $Y_{it}$  is the dependent variable (aspirations, expectations, or academic performance) for person *i* at time *t* (= age 15/16);  $\beta_1$  is a coefficient for the time-invariant independent variable Family;  $\beta_2$  is a coefficient for the independent variable Neighborhood; and  $\beta_3$  is a coefficient for the independent variable School. Both  $\beta_2$  and  $\beta_3$  were lagged by one period (= age 13/14). In the models where we measure adolescents' multidimensional family, school, and neighborhood context into eight categories,  $\beta_1$ ,  $\beta_2$ , and  $\beta_3$  are combined into one variable.  $\beta_4$  is a coefficient for the time-constant control variable indicating a person's academic ability (measured at age 7);  $\alpha_i$  is the person-specific intercept; and  $\varepsilon_{ii}$  is the error term.

A challenge to estimate the effect of social context on aspirations, expectations, and academic performance is the fact that adolescents are not randomly distributed across neighborhoods and schools. Part of the association between our context variables and our dependent variables likely reflects a treatment effect of the former, whereas another part of the association is indicative rather of a selection effect whereby some children are more likely than others to find themselves in affluent schools and neighborhoods (Plotnick and Hoffman 1999; Zangger 2018).

To empirically describe this selection effect, we include a control variable for students' academic test scores at age 7 (see the Control Variable section) to account for the process through which past school performance may steer students to more affluent schools in more affluent neighborhoods. We estimate, for each dependent variable, a regression model with and one without this control variable. If the association between school and neighborhood contexts and our focal outcome measures (academic performance, aspirations, and expectations) is the same in each model, we can interpret it to reflect a treatment effect. If the two models yield different results, the difference is indicative of a selection effect. The former scenario gives us a "clean" estimate of the impact of social context. The latter allows us to estimate the selection effect as that part of the estimated association between context and outcomes that is reduced by including a control variable for academic ability. Substantively, this selection effect describes how past school performance may steer students to more affluent schools in more affluent neighborhoods.

# FINDINGS

#### Social context and academic performance

Looking at the multidimensional configuration of the socioeconomic contexts of adolescence (Table 3), we find a clear descending pattern in the magnitude of coefficients, indicating that the fewer contexts of poverty the adolescents were exposed to, the better their academic performance. Taking into account

	Model 1		Model 2	Model 2		
	Coef. (s.e.)	Р	Coef. (s.e.)	Р		
Low all	-19.46 (0.71)***	25.09	-9.29 (0.64)***	31.29		
Low, high S	-14.78 (2.08)***	29.77	-7.87 (1.67)***	32.72		
Low, high Nh	-14.57 (1.43)***	29.97	-7.00 (1.16)***	33.59		
Low, high S/Nh	-9.98 (1.05)***	34.56	-4.60 (0.85)***	35.99		
High, low S/Nh	-9.10 (0.85)****	35.45	-4.00 (0.69)***	36.59		
High, low Nh	-3.97 (1.47)**	40.57	-1.49 (1.18)	39.10		
High, low S	-4.52 (0.96)***	40.03	-1.05 (0.78)	39.54		
High all	Ref.	44.55	Ref.	40.59		
Academic ability (age 7)			2.13 (.06)***			
Intercept	44.55 (0.41)***		20.76 (0.76)***			
$R^2$	0.28		0.54			

TABLE 3 Linear regression results and predicted probabilities for adolescents' academic performance at age 16

*Note:* P gives predicted probabilities. "Low" indicates lower and "high" indicates higher socio-economic background. "S" = school; "Nh" = neighborhood. "Low/high all" means lower/higher on all three socio-economic background (i.e., family, neighborhood, and school). Both school and neighborhood measures were lagged by one time period. N = 2102.

 $*p < 0.05; \, **p < 0.01; \, ***p < 0.001.$ 

Source: ALSPAC.

students' academic ability cuts the magnitude of the coefficients for poverty contexts more or less in half and doubles the explanatory power of the model. This indicates that the effect of contextual deprivation on academic performance is partly driven by selection, but an important effect remains. These findings are in line with the cultural resource perspective and suggest that an accumulation of contextual deprivation is detrimental to adolescents' academic performance.

In the next section, we evaluate whether these patterns hold with regard to adolescents' aspirations and expectations.

# Social context and adolescents' views of their future

# Adolescents' aspirations

In Table 4 (Models 1 and 2), we describe adolescents' aspirations as the proportion of respondents who think it is "very important" to qualify for higher education for each combination of family, school, and neighborhood affluence (low or high), based on the regression results reported in the table and discussed in more detail in the next section. Overall, we find that the empirical pattern in adolescents' aspirations follows the cultural resource perspective: higher family, school, and neighborhood SES generally go together with higher aspirations. Over 90 percent of children who grew up in universally affluent settings aspire to go to university as compared to an estimated 69 percent of children growing up in universally poor settings; a difference of 21 percent.

Looking at the childhood neighborhood and school contexts of adolescents in affluent families, we find a similar pattern, where those who grew up in poor neighborhoods and schools come to hold lower aspirations by about 9 percentage points. There is a 5-percentage point difference, comparing adolescents who spent their childhood in poor neighborhoods with those in affluent neighborhood, holding constant their school and family contexts. Interestingly, there is no difference between adolescents who attended an affluent or poor school for students in otherwise affluent settings.

TABLE 4 Logistic regression results and predicted probabilities for adolescents' aspirations, expectations, and mismatched expectations to attend university at age 16	regression results an	id predict	ed probabilities for a	dolescen	ts' aspirations, expec	stations, a	ind mismatched expe	ectations	to attend university a	it age 16		
	Aspirations				Expectations				Mismatch			
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Coef. (s.e.)	Ρ	Coef. (s.e.)	Р	Coef. (s.e.)	Ρ	Coef. (s.e.)	Ρ	Coef. (s.e.)	Р	Coef. (s.e.)	Ρ
Low all	-1.40 (0.21)***	0.69	$-0.64 (0.23)^{**}$	0.82	-2.07 (0.22)***	0.23	-1.38 (0.24) <sup>***</sup>	0.36	1.57 (.20)***	0.62	0.90 (0.22)***	0.47
Low, high S	-1.87 (0.60)**	0.58	-1.40 (0.62)*	0.69	-1.29 (0.65)*	0.40	-0.82 (0.69)	0.49	0.67 (0.65)	0.40	0.24 (0.67)	0.31
Low, high Nh	$-1.41 (0.34)^{***}$	0.69	$-0.82(0.36)^{*}$	0.80	-1.73 (0.35)***	0.30	$-1.06(0.38)^{**}$	0.44	$1.18 (0.33)^{***}$	0.53	0.55(0.35)	0.38
Low, high S/Nh	$-0.82 (0.31)^{**}$	0.80	-0.46 (0.32)	0.85	-1.55 (0.27)***	0.34	-1.25 (0.29)***	0.39	$1.38 (0.26)^{***}$	0.57	$1.08 (0.27)^{***}$	0.51
High, low S/Nh	-0.78 (0.21)***	0.81	-0.48 (0.22)*	0.85	$-0.64(0.16)^{***}$	0.56	-0.33 (0.18)	0.62	0.58 (0.17)**	0.37	$0.30\ (0.18)$	0.33
High, low Nh	-0.48(0.40)	0.85	-0.47 (0.41)	0.85	-0.06 (0.32)	0.69	0.00 (0.34)	0.69	0.06(0.33)	0.27	$0.01 \ (0.35)$	0.27
High, low S	-0.06(0.20)	0.90	-0.05 (0.20)	0.89	0.28 (0.14)*	0.76	$0.33 (0.15)^{*}$	0.76	-0.37 (0.15) <sup>*</sup>	0.19	$-0.41 (0.16)^{*}$	0.19
High all	Ref.	0.90	Ref.	0.90	Ref.	0.71	Ref.	0.69	Ref.	0.25	Ref.	0.26
Academic ability (age 7)			0.19 (0.02)***				0.27 (0.02)***				-0.22 (0.02)***	
Intercept	2.21 (0.12)***		0.11 (0.25)		$0.88(0.08)^{***}$		-2.16 (0.23)***		$-1.08$ $(0.08)^{***}$		$1.36 (0.22)^{***}$	
Pseudo $R^2$	0.05		0.10		0.09		0.18		0.06		0.13	
N	1764		1764		1679		1679		1674		1674	
Note P gives predicted probabilities. "Low" indicates lower and "high" indicates higher socio-economic background. "S" = school; "Nh" = neighborhood. "Low/high all" means lower/higher on all three socio-economic background (i.e., family, neighborhood, and school). Both school and neighborhood measures were lagged with one period. *p < 0.01; ***p < 0.001. Sumre ALSPAC.	babilities. "Low" indic ighborhood, and schoo < 0.001.	ates lower l). Both sch	and "high" indicates hi tool and neighborhood	gher socic measures	-economic background were lagged with one p	d. "S" = s eriod.	chool; "Nh" = neighb.	rhood. 'T	.ow/high all" means lo	wer/highe	r on all three socio-ec	onomic

542

MIJS AND NIEUWENHUIS

For adolescents from low-educated families, we find confirmation that context matters in the fact that those adolescents who grew up in affluent neighborhoods and attended affluent schools come to hold aspirations about as high as their peers from affluent backgrounds. Eighty percent and 85 percent aspire to go to university. The gap, in aspirational terms, opens up however for adolescents from poor families who grew up in poor school or neighborhood context, only 69 percent and 58 percent of whom aspire to go to university. The level of aspirations of the latter group of adolescents from low-SES backgrounds who attended affluent schools is markedly lower than that of young people in universally poor settings—by 11 percentage points. It is a full 32 points lower than adolescents in universally affluent contexts. Whereas the overall pattern follows the expectations of the cultural resource perspective, this last finding suggests that reference group processes may depress the aspirations of particular groups of youth within these contexts.

Statistically controlling for academic ability reaffirms the close link between family background and educational aspirations, but the differences decrease in size. Taking into account adolescents' academic ability, the large aspirational gap between students in universally affluent context and those who attended affluent schools but came from poor families and neighborhoods closes by more than 10 points—or a third. The gap between students from rich and poor families who spent their childhood in comparable school and neighborhood contexts similarly decreases by 11 and 13 percentage points, respectively. Net of academic ability, adolescents from low-SES families who grew up in affluent neighborhoods and attended affluent schools hold aspirations as high as those of their peers from high-SES backgrounds who lived in poor neighborhoods or attended poor schools.

# Adolescents' expectations

We now turn to consider the role of context in shaping adolescents' expectations of their educational future, measured as the proportion who expects they are "very likely" to go to university (Table 4, Models 3 and 4). If aspirations are statements of hope, expectations reflect adolescents' realistic assessments of what they think they will achieve. In what follows, we explore whether the latter is similarly or differently impacted by the social context of childhood.

Like with adolescents' aspirations, looking at their expectations, we find a pattern that is broadly in line with the cultural resource perspective but more pronouncedly so: Those in universally affluent environments have greater expectations than those who grew up in poor environments, by as much as 49 percent. Whereas 71 percent of the former expects to go to university, only 23 percent of the latter does. Importantly, the largest part of this difference holds when we control for academic ability (33 of 49 point), meaning that only about a third of the association we observe is indicative of a selection effect. In short, we find that equally talented students growing up in different social settings hold dramatically different expectations for their educational future.

A large part of these differences in expectations can be attributed to family background; the difference between adolescents from affluent and poor families in otherwise similarly affluent environments is 37 percentage points (0.71 - 0.34); the corresponding difference between students from high and low family backgrounds in otherwise poor environments is 33 percentage points (0.56 - 0.23). In fact, whereas we found only a small difference in aspirations when comparing adolescents from lower backgrounds to those from more privileged backgrounds when both attended affluent schools and lived in affluent neighborhoods, the corresponding gap in expectations is twice that size—22 percentage points. Evidently, expectations are more strongly conditioned by family context than are aspirations.

For young people in highly educated families, the joint impact of low SES school and neighborhood context is about 15 percentage points (0.71 - 0.56). However, adolescents who either attended a poor school or lived in a poor neighborhood, but were otherwise surrounded by affluent peers, do not seem to suffer: The latter's expectations are virtually identical to their peers in universally affluent environments (0.69 as compared to 0.71), whereas students who attended poor schools actually hold higher expectations than their peers in affluent schools (0.76 as compared to 0.71). In other words, students from affluent backgrounds who attended high poverty schools hold slightly higher expectations than their peers at more

affluent schools, who grew up in similarly affluent neighborhoods, and markedly higher expectations than their peers at more affluent schools who lived in poor neighborhoods.

For adolescents from low-educated parents, we find that those in universally poor environments have the lowest expectations for their future education. Adolescents from low-SES backgrounds who grew up in affluent neighborhoods and/or attended affluent schools hold higher expectations. Note that the combination of affluent school and neighborhood makes for lower expectations than is true for students who attended an affluent school (but lived in a poor neighborhood): About 34 percent of the former expects to go to university as compared to 40 percent of the latter. This finding mirrors what we observed for the aspirations of adolescents from low-SES backgrounds: Mixed social contexts may give rise to comparison processes. Here, the comparison with their neighborhood friends attending high poverty schools may be what bolsters these young people's educational expectations.

When we hold up adolescents' aspirations against their realistic expectations (Table 4, Models 5 and 6), we find that those from affluent backgrounds set higher aims and are more confident of attaining their goals than students from low-education backgrounds: whereas three-quarters of adolescents in universally affluent settings hold aspirations matching their expectations, only 38 percent of young people in fully low-SES settings do (1 - 0.62). As discussed in the preceding, a large part of these differences can be attributed to family background, but the gap shrinks when comparing adolescents from affluent backgrounds in poor schools and neighborhoods to those from poor backgrounds in affluent school and neighborhood settings, 0.38 of whom have mismatched expectations as compared to 0.57.

Two exceptions stand out, both indicative of comparison processes in line with reference group theory. First, students in affluent families who attended high poverty schools are more confident of attaining their aspirations (81 percent) than their neighborhood friends at more affluent schools (75 percent). These results are unaffected by academic ability. Second, students from low-educated families who attended affluent schools, but lived in poor neighborhoods, are more likely to have matching expectations (60 percent) than their classmates from similar backgrounds who lived in affluent neighborhoods (43 percent) as well as their neighborhood friends who attended poor schools (38 percent). Controlling for academic ability increases the expectation gap between students from low-SES backgrounds who came from affluent schools or neighborhoods, on one side, and those who were a minority in both their school and neighborhoods, on the other: Some 62 percent and 69 percent of the former have matched expectations, compared to only 49 percent of the latter.

# Combined importance of contexts for adolescents' aspirations, expectations, and performance

In the preceding analysis, we examined how the multidimensional socioeconomic childhood context of family, school, and neighborhood affected adolescents' aspirations, expectations, and performance. To get a more precise view of the relative importance of these different contexts, we here report results from logistic regression models predicting adolescents' aspirations, expectations, and mismatched expectations (Table 5) and OLS regression models for academic performance (Table 6). We find that neighborhood poverty has a moderate-size negative effect on aspirations, expectations, and performance, and a positive effect on mismatched expectations, net of other contextual variables. However, after controlling for academic ability, only the effects on expectations and performance remain statistically significant. School poverty has a small and negative effect on aspirations and performance, which is rendered non-significant by controlling for academic ability for aspirations. The school effect for performance remains but is negligible in magnitude. Family background has a very large and significant effect on all four outcomes, net of the other contextual variables. These effects hold when controlling for academic ability, but the estimated effect size is reduced by about 50 percent, for aspirations and performance, and about 25 percent for expectations. This reflects a selection process whereby adolescents with high academic ability are more likely to attend affluent schools and live in affluent neighborhoods than their peers with lower academic ability.

	Aspirations		Expectations		Mismatch	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Coef (s.e.)	Coef (s.e.)	Coef (s.e.)	Coef (s.e.)	Coef (s.e.)	Coef (s.e.)
Intercept	2.42 (0.11)***	0.05 (0.20)	1.24 (0.08)***	-1.97 (0.18)***	-1.36 (0.08)***	1.10 (.17)***
Neighborhood deprivation (lagged)	-0.06 (0.02)**	-0.04 (0.02)	-0.06 (0.02)***	-0.05 (0.02)*	0.04 (0.02)*	0.03 (0.02)
School poverty (lagged)	$-0.01 (0.01)^{*}$	-0.01 (0.01)	-0.01 (0.01)	0.00 (0.01)	0.01 (0.01)	-0.00 (0.01)
Low parental education	-0.26 (0.04)***	-0.13 (0.04)***	-0.47 (0.04)***	-0.36 (0.04)***	0.41 (0.04)***	0.30 (0.04)***
Academic ability (age 7)		0.21 (0.02)***		0.28 (0.01)***		-0.21 (0.01)***
Pseudo R <sup>2</sup>	0.03	0.10	0.06	0.17	0.05	0.11
Ν	3208	3208	3038	3038	3030	3030

	Y 1.1	110			1	
TABLE 5	Logistic regression	models for a	spirations ex	mectations and	i mismatched e	xpectations at age 16

\*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001.

Source: ALSPAC.

**TABLE 6** Linear regression results for adolescents' academic performance at age 16

	Model 1	Model 2
	Coef (s.e.)	Coef (s.e.)
Intercept	47.95 (0.36)****	24.51 (0.56)***
Neighborhood deprivation (lagged)	-0.65 (0.07)***	-0.39 (0.06)***
School poverty (lagged)	-0.20 (0.02)***	-0.11 (0.02)***
Low parental education	-3.32 (0.14)****	-1.72 (0.04)***
Academic ability (age 7)		1.97 (0.56)***
$R^2$	0.21	0.47

*Note: N* = 4968. \**p* < 0.05; \*\**p* < 0.01; \*\*\**p* < 0.001. *Source:* ALSPAC.

# CONCLUSION

In summary, we find a strong pattern of association between the social context of childhood and adolescents' educational hopes and realistic expectations. Ninety percent of young people from privileged socioeconomic backgrounds who grew up in affluent neighborhoods and attended affluent school aspire to go to university as compared to 58 percent of adolescents from lower socioeconomic backgrounds who grew up in poverty. The gap in realistic expectations for their educational future is larger even: whereas 76 percent of the former expects to go to university, only 23 percent of the latter thinks they will make it there. Comparing aspirations and expectations confirms this pattern: A full 81 percent of the former thinks they can accomplish what they set their mind to, as compared to 38 percent of the latter.

In comparison to the strong association between school and neighborhood contexts and aspirations and expectations, we find more modest associations with students' academic performance. We find a negative association with childhood neighborhood poverty, which is strongest for adolescents from low-SES backgrounds. For these adolescents, a 10 percentage-point improvement in neighborhood context is positively related to their school performance by about 0.14 standard deviations. Children from high-SES families are much less affected by neighborhood poverty. In contrast, school poverty is strongest associated for adolescents from high-SES backgrounds, whose academic performance would be 0.20 standard deviations higher, were they to have attended a 10 percentage-point more affluent school. In other words, whereas affluent families manage to insulate their children from the negative impact of neighborhood poverty, they are unable to do the same with regard to school poverty. In sum, school context matters most for the children of high-SES families, whereas neighborhood context matters most for children of low-SES families.

With regard to the two theoretical perspectives that informed our study, the overall empirical pattern supports the expectations of the cultural resource perspective (cf. Jæger and Breen 2016; Lareau 2011; Lareau and Goyette 2014; Owens 2016). Adolescents who, by virtue of their family, school and neighborhood settings, had access to more socioeconomic resources tend to (1) do better in school, (2) hold higher educational aspirations, (3) and expect more from their future. These patterns decrease in size but hold when we control for students' academic ability, indicating that adolescents' school performance, aspirations, and expectations are driven both by a selection and treatment effect of family, school, and neighborhood contexts.

However, looking more closely at the various configurations of neighborhood, school, and family contexts, we also find evidence of reference group processes (cf. Destin et al. 2012; Merolla 2017; Nieuwenhuis et al. 2017; Thijs, Verkuyten, and Helmond 2010). Adolescents hold the lowest aspirations not when they are in universally poor environments but when they come from a low-SES background, grew up in a poor neighborhood but attended an affluent school. These reference group processes are more pronounced when we consider students' realistic expectations to go to university. We find that expectations are highest for adolescents from high-SES families when they attended low-SES schools, and for students from low-SES backgrounds when they enrolled in affluent schools but lived in poor neighborhoods.

These statistical patterns hold after controlling for academic ability. In fact, we find the strongest mismatch between students' expectations and their aspirations, net of academic ability, among adolescents from low-SES backgrounds who attended affluent schools and lived in affluent neighborhoods: More than half of these students have educational aspirations that exceed their realistic expectations. In sum, based on our longitudinal sample of British adolescents, we conclude that cultural resources trump reference group processes, but the latter have a meaningful negative impact on adolescents from low-SES backgrounds while bolstering the educational expectations and aspirations of their peers from high-SES backgrounds.

These theoretical discussions have high stakes; while social scientists debate the issue, governments on both sides of the Atlantic are designing policy interventions. Government initiatives like Moving to Opportunity in the United States and a variety of similarly motivated policies and practices in European countries, such as the Netherlands, Germany, Sweden, and Denmark set out from the premise that providing equality of opportunity requires intervening in children's neighborhood context and providing pathways to nonneighborhood schools (Andersson and Musterd 2005; Friedrichs, Galster, and Musterd 2003).

Our findings give reason to temper expectations for such policy interventions, on two grounds. First, similar to earlier studies (e.g., Duncan, Boisjoly, and Harris 2001), our study of British adolescents suggests that family is the driving force behind much of their educational performance, aspirations, and expectations. Giving access to resources families cannot currently provide, for example, through subsidized preschool and early education, may have a greater impact than interventions in neighborhood context. Second, helping children from poor backgrounds move to affluent neighborhoods and schools may also depress their educational aspirations and expectations through negative reference group processes. Some scholars have taken these patterns to mean that school differentiation practices like ability-group tracking could be beneficial for children from low-SES backgrounds (for a review, see Van de Werfhorst and Mijs 2010). That conclusion is based on the assumption that in the school context, low SES equates to low ability. We do not support that assumption. If anything, our study has painted a much more nuanced picture of the link between academic performance and students' multidimensional social context. As such, we have no reason to believe that ability-group tracking would counteract negative reference group processes.

By describing the impact of different contexts of poverty on adolescents' future trajectories, we hope our research may contribute to better-informed policy making and help identify how best to design interventions. Open questions for future research include: At what developmental stage are children most affected by the availability or absence of cultural resources in their family, neighborhood, and schools (cf. Hicks et al. 2018), and how are they best insulated from (negative) reference group processes?

In conclusion, it bears emphasis that context impacts adolescents' futures by shaping their dreams and realistic expectations for the future, over and beyond their academic performance. Based on their different outlook, similarly performing students may take dramatically different decisions about their future education and employment. Half of the story is lost when we exclusively focus on academic performance.

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### ETHICS STATEMENT

Ethical approval for the study was obtained from the ALSPAC Ethics and Law Committee and the Local Research Ethics Committees.

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