

# SciencesPo

LABORATOIRE INTERDISCIPLINAIRE  
D'ÉVALUATION DES POLITIQUES PUBLIQUES

LIEPP Working Paper

January 2016, n°44

Research group "Educational policies"

## Aspirations and the Perpetuation of Social Inequalities

*Evidence from Academic Paths in France*

**Nina Guyon**

National University of Singapore, Department of Economics / Sciences Po, LIEPP

[nina.guyon@nus.edu.sg](mailto:nina.guyon@nus.edu.sg)

**Elise Huillery**

Sciences Po, Department of Economics/ LIEPP

[elise.huillery@sciencespo.fr](mailto:elise.huillery@sciencespo.fr)

[www.sciencespo.fr/liepp](http://www.sciencespo.fr/liepp)

© 2016 by the authors. All rights reserved.

# Aspirations and the Perpetuation of Social Inequalities: Evidence from Academic Paths in France \*

Nina Guyon<sup>†</sup> and Elise Huillery<sup>‡</sup>

January 27, 2016

## Abstract

This paper provides empirical evidence on how aspirations are formed and affect individual behavior, decisions, and paths in the context of education. Using unique data on aspirations, academic performance and actual track assignment to high school of French ninth graders, we show that low-SES students have lower aspirations than their equally-achieving high-SES classmates, and that track assignments to high school the next year are even more unequal due to dysfunctional dynamics: first, both low aspirations and low SES are associated with slower academic progress over the year. Second, aspirations and parental SES play a role in track assignment independent of one's academic performance. Our results suggest that, in France, an aspirational trap at school contributes to the poverty trap, leading to the perpetuation of social inequalities.

*JEL Codes:* I24, I21, J15, O15

*Keywords:* School Aspirations, Aspiration windows, Track choices, Inequality, Poverty Trap

## 1 Introduction

The degree to which socio-economic background determines human capital formation is a key policy question: how much of school achievement is determined by students' parents' backgrounds? Intergenerational correlation in years of schooling between parents and children is between 0.30 and 0.50 in seven OECD countries including the United States (Hertz et al. 2007). Björklund and Salvanes (2010) review the literature on sibling correlations in years of schooling and find that, in all countries for which they had data, more than 50% of the variation in years of schooling can be attributed to factors shared by siblings. In France, the link between social background and school achievement is particularly strong: the social gap in math score

---

\*We wish to acknowledge the support of the LIEPP (Interdisciplinary Research Center for the Evaluation of Public Policies), the Sciences Po Scientific Advisory Board, the Direction de l'évaluation, de la prospective et de la performance in the French Ministry of Education and the French National Research Agency (ANR-11-LABX-0091, ANR-11-IDEX-0005-02, et ANR-10-BLANC-1819-01-EVALPOLPUB). We are grateful to Séverine Chauvel, Denis Cogneau, Marie Duru-Bellat, Marc Gurgand, John Ham, Julien Labonne, Eric Maurin, and Jessica Pan for helpful comments. We are deeply indebted to Sébastien Bauvet for excellent project management, as well as Cécile Ballini, Mbayi Mukendi, Rokhya Konate, Nicolas Hovart, and Rabeh Mbaigoto for excellent data collection. We also thank Alexandre Naud for his assistance with data entry and Cécile Ballini for her help with data management. Finally, we gratefully acknowledge the school staff and students for the time and information they gave. All errors remain our own.

<sup>†</sup>National University of Singapore, Department of Economics (nina.guyon@nus.edu.sg) and Sciences Po, LIEPP

<sup>‡</sup>Sciences Po, Department of Economics (elise.huillery@sciencespo.fr) and LIEPP

in 2012 is the most extreme of all OECD countries, and it has increased by 33% since 2003 (PISA, 2012)<sup>1</sup>. Such a dynamic locks generations and social groups into a cycle of low achievement. In order to break this dynamic, it is crucial to understand the mechanisms by which the socio-economic status (henceforth SES) of the students influences their academic achievement. This paper focuses on academic aspirations as a potential mechanism behind the self-perpetuation of social inequalities in school achievement.

Aspirations are the set of goals that individuals form about themselves for the future. As Appadurai (2004) stresses, aspirations should be considered a *capacity* in which people may differ: some people are more “capable” than others in terms of setting appropriate goals for their futures, meaning goals that are in line with their potential and lead to the best outcomes possible. The theoretical literature on aspirations emerged a decade ago at the intersection of anthropology and economics (Appadurai, 2004; Ray, 2006). According to Appadurai and Ray, the individuals who populate poor people’s possible selves are different from those who populate rich people’s possible selves because people use comparisons and similarities with their peers when they form their zone of attainable individuals. The capacity to aspire is thus inherently unequal between rich and poor. An aspirational trap then occurs when low aspirations induce low investment and effort to better one’s life, resulting in poor outcomes. Embedding this theory in a macroeconomic growth model, Genicot and Ray (2015) show that the social determination of aspirations can be the source of divergent income inequalities: in relatively equal societies, aspirations of the relatively poor are easier to satisfy, so growth is more equally distributed and creates convergence, while in unequal societies the aspirations of the poor are more often frustrated, inducing lower investment and lower growth for the poor. Dalton et al. (2015) develop a different model in which aspirations are not inherently socially determined but still contribute to a poverty trap: at a given initial aspiration level, a poor person chooses a lower level of effort than a rich person because poverty imposes external constraints that make effort less fruitful. This lower effort induces lower realized outcomes, which result in lower aspirations in the next period. These theories of aspiration-based poverty traps thus draw on a common dynamic that progresses from aspirations to effort, to realized outcomes, and back to aspirations. This paper contributes to this literature by providing empirical evidence of these dynamics in the context of education in France. Comparing students who are in the same class and have the same academic performance, we show that aspirations are directly influenced by parental SES, and that later outcomes are influenced by parental SES and by aspirations, resulting in a rapid divergence of school outcomes between high- and low-SES students.

We use both administrative and unique survey data from ninth graders at 59 junior high schools in the

---

<sup>1</sup>Precisely, in 2012, being from a more advantaged background in France induces a 57-point increase in themath score. The average for OECD countries is 39 points, and it was 43 points in 2003 in France. In 2010-2012, 65% of individuals aged 25-29 from high- or medium-SES families completed some higher education, while only 30% from low socio-economic status families did so (Le Rhun, 2015)

Paris metropolitan area. The administrative data provides parental SES, average yearly grades in grade 9, test scores at the national exam taken at the end of grade 9, and actual track assignments in grade 10. We implemented a survey at the beginning of grade 9 to assess their academic performance at the beginning of the year, as well as their educational aspiration window (i.e., the set of tracks that they know and feel capable of pursuing, or a set of *attainable* options), their aspirations (i.e., their preferences within this window), and their occupational aspirations. In France, grade 9 is the last year in junior high school, where the curriculum is uniform for all students. At the end of the year, this uniform schooling system gives way to a stratified system of high schools, which involves academic and vocational tracks. For the first time in their lives, a choice is thus to be made between different educational options that will, due to irreversibility, determine their future academic and professional paths. The paper uses both externally graded test scores and teachers' grades to measure academic performance, and includes class fixed effects to isolate the effects of parental SES from neighborhood, teacher, and peer effects. The paper thus consistently compares low-SES students, defined as students whose both parents have intermediate or low-skilled occupations, with their high-SES - at least one parent has a high-skilled occupation - classmates with similar academic achievement. We propose a framework of educational aspirations as formed based on the knowledge of existing tracks, their *perceived* current academic achievement, *anticipated* future academic achievement, *anticipated* costs and benefits of education, and personal (possibly identity-based) taste regarding education and jobs. This framework clarifies the role of parental SES and helps understand our IV strategy to estimate the impact of aspirations on later academic outcomes.

We find clear evidence that aspirations are not just determined by the realized outcomes but also by social background, as hypothesized by Appadurai, Génicot, and Ray. Low-SES students have indeed different aspiration windows than their equally-achieving high-SES classmates: the former are 42% more likely to include vocational high school and 18% more likely to have no idea of any attainable option after high school, while they are 3% less likely to include academic high school and 27% less likely to include master degrees in their attainable options. These findings confirm that aspiration windows are socially determined, inducing an excess on the less selective margin and a deficit on the more selective margin among the disadvantaged relative to the equally-achieving advantaged. Moreover, the differences in sets of attainable options are amplified by different preferences: at equal aspiration windows, low-SES students are more likely to aspire to vocational high school and to a job right after high school, and less likely to aspire to academic high school. The combination of different aspiration windows and different preferences within a given aspiration window suggests that social inequalities in academic aspirations are partly a matter of taste, and partly a matter of what students know and feel capable of pursuing. Interestingly, the social inequalities in aspirations concern

both high, medium and low-achieving students. While low-achieving low-SES students seem more realistic than their high-SES counterparts, medium and high-achieving low-SES students seem to aspire below their academic potential.

In contrast, professional aspirations are not socially differential within classrooms: parental SES does not influence the number of years of education associated with the jobs students aspire to, meaning that students have the same ultimate goals on the job market but do not plan the same investment in education to reach these goals. This suggests that teenagers do not see education as an investment adjusted to future jobs, probably due to ignorance of educational pathways to jobs. If social origin eventually affects occupations it would be due to differential investment in education, not to differential early occupational preferences.

Importantly, we find that actual assignment in high school in grade 10 is even more unequal than academic aspirations at the beginning of grade 9. With similar test scores at the beginning of grade 9, low-SES students are three times more likely to enter a vocational high school in grade 10 than their high-SES classmates (19% versus 6%), and symmetrically less likely to enter an academic high school (78% versus 92%). This result shows that social inequalities in aspirations are not corrected over the year, for instance through parental or school staff action, but are actually amplified. We find two mechanisms for this amplification. First, low-SES students show slower academic progress over the year than their high-SES classmates who had similar academic performance and similar aspirations at the beginning of the year. These findings confirm that parental SES affects later outcomes independently from aspirations, suggesting a combination of lower effort and lower return to effort as hypothesized by Dalton and co-authors. Second, low aspirations are also associated with slower academic progress independent of social background, confirming that low aspirations have dynamic effects on later outcomes as supposed by Ray and Génicot, and Dalton and co-authors. Finally, aspirations and parental SES play a role in track assignment independent of students' academic achievement, suggesting that those who participate in the process, in particular parents and teachers, not only echo students' early preferences but also exacerbate the social inequalities. In the end, since low-SES students are more likely to have low aspirations relative to high-SES students, they are more likely to suffer from the negative consequences of low aspirations on top of the negative consequences of their social origin, which explains the dramatic divergence in academic paths between low and high SES.

This paper thus brings new evidence on the social determination of aspirations. To date, the empirical evidence of the social determination of aspirations remains thin. The main contributions were provided using data from the 1960s (Sewell et al. 1969, Sewell et al. 1970, Jencks et al. 1983). A recent contribution shows that, among the highest-achieving US students (top 4% of college assessment test scores), students from low-income families are less likely to apply to selective universities than students from high-income

families (Hoxby and Avery, 2013). Our paper adds to this literature by using a large sample of students in compulsory education of all school proficiency levels and by exploring detailed measures of aspirations in the short, medium, and long term. To our best knowledge, no other paper observes the aspiration window (i.e., the zone of attainable selves) in addition to aspirations (the preferred selves within the aspiration window). Papers usually focus on preferences, which are a mix of who one can be and who one would like to be. Being able to distinguish between the two concepts is important for policy interventions since aspiration windows are based on information and perceptions while preferences within the aspiration window are based on tastes.

Our paper then adds to the empirical literature on the consequences of aspirations on economic outcomes. This literature consists of a few field experiments in which the intervention proved to affect both aspirations and final educational or economic outcomes (Oyserman et al. 2006, Beaman et al. 2012, Bernard et al. 2013, and Goux et al. 2014), though one cannot always exclude the possibility that other effects of the interventions might have contributed to the improved outcomes in ways that may not be related to students' aspirations. We add to this literature by exploring the consequences of aspirations on short-term academic progress and track assignment. We provide robustness checks and an IV strategy to rule out a number of confounding factors and ensure that an important part of the relationship between students' aspirations and later school outcomes can reasonably be considered causal.

Our findings finally speak to the literature on the role of social identity in economic behavior. Following Akerlof and Kranton (2000, 2002), a number of models incorporate identity into a standard utility-maximizing problem to explain why individuals whose decisions seem sub-optimal may in fact act strategically given the presence of identity concerns, thus maximizing their welfare. In contrast, the stereotype threat literature highlights potential detrimental impacts of social identity on behaviors, suggesting that the resulting outcomes may not be individually efficient (Hoff and Pandey 2006, 2011; Hoff and Fehr 2011; Hoff and Stiglitz 2010). This literature offers explanations of why low-SES students have different aspirations than high-SES students. We also report in a separate paper new findings from empirical tests of these explanations (Guyon and Huillery 2015). This paper starts sorting these explanations by distinguishing between tracks students know and feel capable of pursuing, and tracks they prefer.

Is this evidence that low-SES students have suboptimal aspirations? In terms of educational outcomes, the answer is yes: given the relationship between socio-economic status and aspirations on the one hand, and between aspirations and later academic paths on the other hand, aspirations seem to be a cause of underperformance of the medium and high-achieving low-SES who aspire below their potential. This means that classic educational interventions aimed at reducing social inequalities in academic performances, like extra tutoring or reduced class size, would not be sufficient to close the gap. Instead, these interventions

must be combined with actions that strengthen the capacity to aspire; otherwise, aspiration failures will continue to dampen the academic outcomes of the disadvantaged. However, there are two precautions to keep in mind: first, strengthening the capacity to aspire is *not* equivalent to raising aspirations for all low-SES students, which may produce worse outcomes among low-achieving students (Goux et al. 2014). The reduction of social inequalities in education requires that aspirations be adjusted in ways that bring them in line with students’ real potential, independent of their social backgrounds, which means downward adjustments for low-achieving high-SES students, while upward adjustments for medium and high-achieving low-SES students. Second, the impact of such adjustments on job market outcomes and welfare remains an open question: whether adjusted aspirations and educational outcomes come with better jobs, higher income and welfare gains requires more investigation and research.

The remainder of the paper is organized as follows. Section 2 presents the conceptual framework of aspirations used in the rest of the paper. Section 3 presents the data we use, and section 4 presents our empirical strategy. Section 5 presents the results, section 6 provides some robustness checks, and section 7 concludes.

## 2 Conceptual Framework of Educational Aspirations

This section presents the conceptual framework for the determination of educational aspirations that motivates our empirical strategy. This framework is necessary for the understanding of how social background affects aspirations, as well as of our identification strategy for the impact of aspirations on later school outcomes.

Building on the models of aspirations (Appadurai 2004, Ray 2006, Ray and Génicot 2015, Dalton et al. 2015) and on the identity literature, we catalog six main factors that each play a role in determining educational aspirations. This list is useful to identify potential confounding factors when we estimate the impact of aspirations on later academic outcomes. In this perspective, we distinguish between factors that affect only aspirations without affecting directly final school outcomes (henceforth “instruments”) and factors that affect both aspirations and final school outcomes independent from students’ aspirations (henceforth “third factors”)<sup>2</sup>. The first four factors determine students’ aspiration windows, meaning the tracks that come to their mind and that they feel capable of pursuing. The last two factors determine the preferred options within the aspiration window.

1. *Knowledge of existing tracks*: information about existing tracks is a key factor as, by definition, aspirations are formed based on the set of options the student has in mind. Appadurai (2004) indeed

---

<sup>2</sup>Dalton calls these “external constraints”, but we prefer the term “third factors” as part of it can be internalized.

mentions the “stock of available experiences” that forms aspirations. Ray (2006) also identifies the flow of information and role models available in one’s network as factors that influence the aspiration window. These elements arguably may not influence the realized outcomes in the absence of variations in aspirations. Knowledge of existing tracks is thus an instrument.

2. *Current academic achievement*: the current academic achievement contributes to educational aspirations following the view of Dalton et al. (2015) that aspirations result from current realized outcomes. In the French education system, track assignment depends heavily on academic achievement: low-achieving students would generally not be accepted into the academic track. Also, as current academic achievement is a good predictor of future academic achievement, educational aspirations logically depend on current academic achievement even at the higher education level. It is not an instrument but a “third factor” since it would affect later school outcomes even in the absence of an effect on aspirations.
3. *Perception of current academic achievement*: Hoff and Stiglitz (2010) build a theoretical model of an identity-based poverty trap in which beliefs related to social inferiority bias the *perceived* probability of success. Even with the same academic achievement, two students may not perceive their achievement in the same way: this self-perception of academic ability is also called “academic self-esteem” and can be prone to stereotype susceptibility (Hoff and Pandey 2006, 2011; and Hoff and Fehr 2011). We see this factor as an instrument since it does not directly affect school outcomes except through its effect on students’ plans, confidence, and ambition, which are embedded in aspirations.
4. *Anticipation of future academic achievement*: anticipations can contribute to the formation of aspirations because aspirations are goals for the future, so they should be in line with one’s future performance. While current academic achievement should be strongly correlated with future performance, students may still have different expectations about the evolution of their performance over time, as proposed in Dalton et al. (2015).<sup>3</sup> Part of these anticipations may be rational, recognizing that parents provide technical inputs that influence academic progress over time (homework assistance, monitoring of homework schedule, management of sleeping time, etc.): this part is a “third factor” that would affect final outcomes independent of one’s aspirations. However, some anticipations can also be based on beliefs related to social inferiority, which can cause behavior adjustments that make them self-fulfilling, as modeled in Hoff and Stiglitz (2010): this part is thus an instrument.
5. *Anticipation of returns to education*: each student has her own beliefs about the returns to education,

---

<sup>3</sup>Since our analysis compares students who are in the same classrooms, differences in anticipations of future academic performance do not result from differences in current peers, teachers, or school. However, these anticipations can differ according to students’ family backgrounds.



at the interplay between the cost of education and its benefits in the labor market and in life in general. These beliefs would not affect aspiration windows since they are not related to the tracks students feel capable of pursuing, but they would affect aspirations (i.e., preferences within this window) to the extent that education is an investment. The cost of education may differ according to parental SES due to liquidity and credit constraints. Also, the benefits of education may differ according to parental SES due to complementarity between parental resources, like social network, and education, or due to social discrimination on the job market. These anticipations, whether rational or based on misperceptions, concern the cost and benefit of education but not the capacity to achieve at school. Therefore, they constitute an instrument as they do not affect school outcomes independent of one's aspirations.

6. *Personal taste*: personal taste should be a strong factor affecting aspirations within the aspiration window. The identity literature provides different explanations for why personal taste regarding education may vary with social background and be in line with a student's family's and peers' tastes. Individuals get utility from keeping close to their networks (Fryer 2007, Fang and Loury 2005) and from affirming their social identity: doing so limits disruption, maintains a sense of unity (Akerlof and Kranton 2000 and 2002), and signals values and beliefs to avoid cognitive dissonance (Benabou and Tirole 2011). Resisting education may also be a way to fight the threat of losing one's culture (Carvalho and Koyama 2014). We view personal taste as an instrument.

As such, aspirations are an output synthesizing a set of six main factors<sup>4</sup>. Any intervention aimed at decreasing social inequalities in aspirations would have to target one of these factors. Similarly, any causal effect of students' aspirations on their academic outcomes will be due to an effect of these factors, which are partly unobservable but are all synthesized in the aspirations.

We also highlight the fact that different factors lead to different welfare implications. On the one hand, current academic performance, personal tastes, and the *rational* anticipations of one's future academic achievement and returns to education reconcile low aspirations and maximized utility: information-based and taste-based behaviors may be detrimental in terms of school outcomes but still optimal for individuals. On the other hand, the other factors are all related to misperceptions and lack of information, which lead to sub-optimal behaviors, decisions, and outcomes. This second class of factors points to the risk that endogenous preferences perpetuate social inequalities.

---

<sup>4</sup>We intentionally do not list students' motivation as part of the determining factors of aspirations. This is because aspirations and motivation are simultaneously determined in our model. First, motivation is also determined by all factors that determine aspirations (in this case, the "personal taste" factor would then be more the taste for effort, studies, or reputation). Second, motivation can impact aspirations, but aspirations may also impact motivation; this is why we see them as simultaneously determined.

## 3 Context and Data

### 3.1 Background on French Education System

In France, the curriculum is the same across schools from kindergarten to the end of junior high school. Junior high school runs from grades 6 to 9. After finishing junior high school, 60% of pupils enroll in academic high school while 40% of pupils enroll in vocational high school (Afsa, 2009). Academic high schools are more selective than vocational high schools: the distributions of test scores at the end of grade 9 show that students who enroll in academic high schools have much better academic performances than students who enroll in vocational high schools (Figure 1). Academic and vocational high schools also differ in their link to higher education. Academic high schools do not provide a professional degree, so students are expected to get some higher education: in fact, 92% of students who graduate from academic high school enroll in higher education<sup>5</sup> (Afsa, 2009). In contrast, vocational high schools provide students with a professional degree allowing them to find a job with no further education: only 25% of students who graduate from the vocational 3-year track get some higher education, while no students in the vocational 2-year track enroll in higher education<sup>6</sup> (Afsa, 2009). The early specialization in vocational high school makes later track changes difficult, and many higher education pathways are not accessible to students in vocational high schools<sup>7</sup>.

Hence, the choice that ninth graders make between academic and vocational high schools is a crucial milestone with important consequences for final educational and occupational attainment. The procedure of track assignment starts in the middle of grade 9 and ends in June. At the end of the Winter term, in March, families indicate their preference to the teacher conference (academic track, 3-year vocational track, 2-year vocational track, or grade repetition), and the teacher conference expresses an opinion on this preference<sup>8</sup>. At the end of the school year, in June, families choose a track and the teacher conference validates or invalidates this choice based on students' performances. If teachers invalidate the choice of the family (which occurs in about one case out of four according to Caille 2005), the family meets with the provost. If disagreement

---

<sup>5</sup>Within academic high schools (*Lycée Général et Technologique*), 67% of students graduate from the *Général* track, of which almost 100% get some higher education, while 33% of students graduate from the *Technologique* track, of which 75% get some higher education (Afsa, 2009).

<sup>6</sup>Access to higher education requires the completion of a *Baccalauréat*; thus 2-year vocational-track (*Centre de Formation par l'Apprentissage*) students do not access higher education (their diploma is a *Certificat d'Aptitude Professionnelle*). 3-year vocational-track (*Lycée Professionnel*) students have formal access to universities with their professional *baccalauréat*, but they are not prepared for university, so in practice less than 5% do enroll in a university. The other 20% enroll in 2-year technical programs.

<sup>7</sup>The curriculum in academic high school is common across students in the first year (grade 10); then students choose among 10 different tracks in grades 11 and 12: literature, social sciences, and sciences constitute the *Général* track, while management, industrial technology, health, laboratory science, art, life sciences, and hospitality constitute the *Technologique* track. All academic tracks end with the graduation exam *Baccalauréat* and give access to any higher education pathways, although access to the more selective pathways is conditional on performance (teacher grades) and curriculum (for instance, engineering schools cannot be accessed by students who graduate in literature). In contrast, vocational high schools offer a large number of tracks as soon as grade 10, varying in terms of number of years of education (2-year or 3-year tracks), topics (construction, sanitation, mechanics, electrical technician, commerce, secretaries, agriculture, and other services), and pedagogy (with or without apprenticeship).

<sup>8</sup>The legal framework is available at <http://eduscol.education.fr/pid23597-cid53993/textes-referance.html>.

persists, the family can request an appeal committee whose decision is definitive. An important feature of this procedure is the leading role of families, who move first. The legal framework insists on the idea that teachers' role is corrective and must respect families' preferences and responsibility unless student performances are not compatible (Caille, 2005, p.78). Note also that the procedure of track assignment does not take into account students' performance on the national exam that is given at the end of June and anonymously graded in July. Students' performances are thus assessed on the basis of teachers' grades over the course of the academic year.

## 3.2 Data

### Junior High School Sampling Strategy

59 junior high schools from the three educational districts of the Paris metropolitan area participate in the study: 6 in the Paris district, 15 in the Créteil district (east of Paris), and 38 in the Versailles district (west of Paris). The sampling strategy was not random, so our sample is not representative of the French nor of the Parisian junior high schools. The main reason is that the school provosts had to agree to participate in the study, which means that the junior high schools in our sample are headed by provosts who may be more concerned by the topic of the study than the provost of the average junior high school. We also followed two research-based selection criteria independent of the purpose of this paper and linked to the "quality" of the school in terms of success on the national exam at the end of junior high school<sup>9</sup>. In the present paper, we focus on the effect of social background *within* classrooms, so these features of our sampling strategy are neutral for the analysis except that they affect the representativity of the sampled population. Our sample is indeed different from the national junior high school population in terms of school social composition: our sample over-represents junior high schools in which 40-60% of students are low-SES students, and those in which more than 90% are low-SES students, at the expense of the most advantaged (less than 40% low-SES) and intermediary (60-80% low-SES) junior high schools (Figure 2). This implies that our results may not generalize to all areas of France.

### Data Sources

Data come from two sources: (i) administrative data collected by the statistical unit of the Ministry of Education<sup>10</sup>, and (ii) a research survey administered to ninth graders in the sampled junior high schools. The

---

<sup>9</sup>First, we favored junior high schools with low and high success rates rather than those in between, while excluding outliers with extremely low and high rates. Second, we selected our sample so that the geographical location of the schools ensured that their students had equivalent access, on average, to any educational track, both at the high school and higher education levels, to rule out the effect of the supply of education as a determinant of aspirations. The point is to be able to study some specific "school context" effects in another paper.

<sup>10</sup>MEN-MESR, Direction de l'Evaluation, de la Prospective et de la Performance, "Bases Scolarité" 2012 and 2013, and "Base DNB" 2013.

administrative data contains information about parental SES, teachers' grades averaged over grade 9, score at a national standardized, anonymously graded test that students took in June 2013 at the end of grade 9, and track assignment in September 2013 at the beginning of grade 10. The research survey was administered in November 2012 in two parts. First, students took a math test consisting of seven exercises covering grade 8's math curriculum. The test was administered in class by one of their teachers. However, students were informed that the math test would be graded by independent researchers, and that their scores would be kept strictly confidential. Second, one week later, students completed a 50-minute questionnaire to assess their educational aspiration windows, their educational aspirations, and their occupational aspirations<sup>11</sup>. The questions were designed to be open-ended so as to capture as truly as possible students' attainable and preferred academic tracks and occupations: the measure of the aspiration window is not distorted by a provided set of existing options. For instance, the use of an MCQ format could have increased the salience of some options that low-SES students do not naturally consider.

### **Student Sample**

Of the 6,903 students registered in the 59 junior high schools of our sample, 5,672 completed both the math test and the questionnaire: the response rate was 87% in the first visit and 88% in the second visit, resulting in a combined response rate of 82%. Attrition is due to student absenteeism, which may result from sickness, voluntary class skipping, or, in very few cases, refusal to take the test and/or the questionnaire. We matched math tests and questionnaires in class after the completion of the questionnaire and then anonymized. We were not authorized to collect any students' identifiers in our independent test or survey<sup>12</sup>, so we matched the test and survey data with administrative data using school, class, year of birth, month of birth, and parents' socio-economic status<sup>13</sup>. Since this information does not constitute a unique identifier, duplicates were dropped, as well as observations with incomplete information for these characteristics. 67% were matched, resulting in a sample of 3,789 students. Finally, 10% of these students were missing values for their track assignment in September 2013. The reasons for this attrition are threefold: first, some students moved to an educational district outside of Paris, Créteil, and Versailles for which we have no data; second, some students dropped out of school and do not appear in any administrative dataset; third, some students enrolled in independent private schools, which do not report information to the Ministry of Education. These students were dropped from the study since we are interested in the full trajectory going from initial aspirations and

---

<sup>11</sup>The questionnaire was administered early in grade 9 in order to capture students' aspirations at a point of time when discussions about track assignment at school had not yet started. In particular, they might have discussed track assignment with their parents, but the family would not have made a formal choice yet. Moreover, no information about teachers' opinions is provided during the first term, so when students took the survey they were unlikely to know what teachers thought about their track assignment.

<sup>12</sup>To avoid a breach of confidentiality, we did not collect names, administrative identifiers, or complete dates of birth.

<sup>13</sup>Students were asked in the questionnaire to report their parents' occupations. We used the administrative classification of occupations to code parental SES in order to get the same variable as in the administrative data.

academic performance to later academic performance, grades, and track assignment.

Our final sample thus consists of 3,415 students, nearly half of the students registered in the sampled junior high schools in grade 9. Attriters are students who are more likely to be absent; who have, by chance, a classmate sharing the same month of birth, sex, and parental SES; and who are more likely to move outside the Paris region, stop education, or enroll in the private sector. We do not claim in any way that the resulting student sample is representative of the original junior high school population, and acknowledge that our findings on the role of aspirations may not apply to attriters. However, non-attriters look quite similar to the initial population in terms of family background (68% low-SES in both groups), test scores in June 2013 (144 versus 141 points), yearly grade average (85 versus 82 points), gender (52% versus 51% girls), probability of having repeated a grade (22% versus 23.5%), and probability of having skipped a grade (4% in both groups), none of these differences being important and significant.

### **Variables of Interest**

**Educational Aspiration Windows** Following Ray (2006), we define aspiration windows as the zone of attainable academic tracks. To construct this zone, students were asked first what tracks they know, and second, among the tracks they know, which ones they feel capable of pursuing. These questions were asked first about the high school level and next about the higher education level. We coded and aggregated students' answers to create dummies indicating levels of aspirations for the student. At the high school level, the dummies indicate whether the student is in the categories "No response", "Vocational high school is among attainable tracks", and "Academic high school is among attainable tracks". At the higher education level, the dummies indicate whether the student is in the categories "No response", "1-2 years college is among attainable paths", "3-4 years college is among attainable paths", and "5 years college or more is among attainable paths". We report in the Data Appendix detailed information on data construction.

**Educational Aspirations** Aspirations are defined as the preferred track within the aspiration window (Ray, 2006). Among tracks they feel capable of pursuing, students were asked which one they preferred. On average students reported 0.9 preferred tracks at the high school level and 0.8 preferred tracks at the higher education level. Outcomes are constructed following the same procedure as for aspiration windows, resulting in dummies indicating whether the student fell into the following categories: "No preference", "Vocational is preferred", and "Academic is preferred" at the high school level; "No preference", "1-2 years college is preferred", "3-4 years college is preferred", and "5 years or more college is preferred" at the higher education level. Students who provided several preferences (11% at the high school level and 16% at the higher education level) may occupy several categories. Finally, the questionnaire included a question on

whether the student preferred to find a job after high school or pursue higher education. We use a dummy indicating whether the student preferred to find a job after high school as an additional measure of educational aspirations.

**Professional Aspirations** Students were asked which job(s) they would like to have. On average, students provided 1.7 jobs (including 20% who provided no job). We coded jobs according to the number of years of education required to practice them and created dummies indicating whether the student entered the categories “No Response”, “No higher education”, “1-2 years college”, “3-4 years college”, or “5 years college or more” (see the Data Appendix for more information on these variables).

**Academic Performance** Measuring student academic performance is crucial in our analysis. The starting point of this paper is that aspiration is a capacity, namely the capacity to set goals for the future that are in line with one’s potential. A key variable is thus students’ academic potential or performance, i.e., how able students are in performing academic tasks. This paper uses primarily anonymously and externally graded test scores to measure academic performance, as these have the advantage of being unaffected by teachers’ beliefs and are thus less prone to stereotype threats and parental inputs than teachers’ grades. One concern is that performance on a test varies at the individual level due to random deviations around average ability. We measure academic performance at two points of time: a math test administered in November 2012 to measure performance at the beginning of the year, and a national exam administered in June 2013 that includes math, French, and history to measure performance at the end of the year. Using the relationship between the total score and the score in math on the national exam, we estimate the total score that a student would have had in November 2012 given her score in math and her invariant characteristics (see the Data Appendix for more information on this variable).

In addition to test scores, we also make use of teachers’ grades to propose an alternative measure of academic performance. Our measure of teachers’ grades is the average of the grades a student received from all teachers in grade 9 from September to June as reported in the administrative data. The advantage of this measure is that it smooths random variations at the individual level and, in this way, provides richer information about the student’s performance than a single test. However, the drawback of using teachers’ grades is that they may incorporate social factors unrelated to the student’s true academic performance: (i) parental SES may influence how a child’s academic ability materializes into grades: parents help their child with homework assignments, preparation for in-class tests<sup>14</sup>, appropriate behavior in class, etc.; (ii) teachers’

---

<sup>14</sup>The test administered in November 2012 was clearly disconnected from any academic stake, was not going to be graded by teachers, and was explicitly anonymously graded. Moreover, this test - which focuses on math - was often not administered during amath class. These precautions were thus very likely to reduce the stereotype threat and the loss in self-confidence that could be associated with it for low-SES students. These precautions also highly reduced the chance that students prepared

beliefs about students' ability according to their SES may bias their assessments (Hanna and Linden, 2012; Merle, 1998); (iii) stereotype susceptibility may affect student performances in class (Hoff and Pandey, 2004; Steele and Aronson, 1995, Croizet et al. 2001, 2004; Dee, 2009)<sup>15</sup>. In fact, Table A1 shows that teachers' grades are 0.28 standard deviations lower for low-SES students compared to high-SES students in the same class who had equivalent test scores in November (column 1), and 0.07 standard deviations lower for low-SES students compared to high-SES students who had equivalent test scores in June (which is consistent with our results on academic progress presented in the next section) (column 2). Overall, this is clear evidence that, for students with equal test scores and within classrooms, teachers' grades are lower for low-SES students relative to high-SES students, which can be for good or bad reasons as mentioned above. We remain agnostic about the costs and benefits of including teachers' grades in the measure of academic performance in addition to test scores. We will thus use both test scores only and tests scores plus teachers' grades in our empirical analysis.

Finally, while test scores reflect an impartial measure of academic performance, they are not observed by any agent. Therefore, teachers' grades add an interesting ingredient to the analysis since they reflect academic performance as observed by students, parents, and teachers themselves. As such, aspirations are likely to be formed on the basis of teachers' grades. Whether teachers' grades should be considered an additional tool to measure academic performance or a cause of the social inequalities in aspirations depends on the interpretation of the differences between test scores and teachers' grades.

**Track Assignment** Track assignment is observed in the administrative data. We use dummies indicating whether the student "Entered vocational high school", "Entered academic high school", or "Repeated grade 9".

**Family Socio-Economic Status** The administrative data contains socio-economic status of each guardian. The socio-economic status is coded on a 32-code scale, each code being a two-digit number. In this paper we construct two classifications of the family socio-economic status: a rough classification containing two categories, and a detailed classification containing six categories (see the Data Appendix for a description of these classifications). Overall, 31% of the families are in the high-SES category; the low-SES category contains the other 69% of families in which both parents have intermediate or low-skilled occupations. Our preferred specification uses the two-category classification, but we show in the Robustness Checks section

---

for this test, which is important as it is plausible that high-SES parents encourage and support more at-home preparation for usual tests set by teachers than do low-SES parents, or provide a better environment for studying. This would indeed result in differential performances as measured by grades despite equal performance on our externally set and graded test.

<sup>15</sup>As our empirical setting compares students in the same classroom, between-classroom and between-school variation in the grading system is not an issue in our analysis.

that the results are robust to the use of the six-category classification.

**Immigrant Family** Finally, we construct a dummy for immigrant families in which a family is classed as immigrant if *both* parents were born abroad, and use it as a control variable. Data on parents’ country of birth comes from our research survey. In our sample, 38% of families are immigrants, of which 60% come from Africa<sup>16</sup> 88% of immigrant families are low-SES families, so immigrant families are largely a sub-group of low-SES families. Following Caille (2007), who shows that immigrant families have higher aspirations for their children than non-immigrant families, our main specification uses the immigrant dummy as a control variable to capture the systematic difference between immigrant and non-immigrant families when it comes with academic and professional aspirations.

**Scholastic Self-Esteem** In the robustness checks, we use students’ self-perception of their scholastic competence, or “scholastic self-esteem”, as an instrument for educational aspirations. To measure this dimension, we use the “Self-perception profile for adolescents” (SPPA) conceived by the psychologist S. Harter in 1988 in its French version (translation done by the psychologist F. Bariaud in 2006). Our measure of scholastic self-esteem uses the average standardized score over five items. (See the Data Appendix for more information on this variable.)

## 4 Empirical Strategy

### 4.1 Specification used to study the consequences of social background on aspirations and track assignment

Our research design is based on a within-class identification. Our general equation of interest is as follows:

$$Y_{ij} = \alpha + \beta LowSES_i + \sum_{d=2}^{10} \gamma_d TestScore_{di} + \delta FE_j + \eta X_{ij} + \epsilon_{ij}$$

, where  $Y_{ij}$  is the outcome measure for individual  $i$  in class  $j$ ,  $LowSES_i$  is a dummy indicating whether the student is from a low-SES family,  $TestScore_{di}$  are dummies indicating whether the student is from the decile  $d$  of the test score distribution in November 2012,  $FE_j$  are class fixed-effects,  $X_{ij}$  are control variables including dummies for gender and for whether the parents are immigrants, and  $\epsilon_{ij}$  represents the error term. In this part of our analysis, the outcome measure  $Y_{ij}$  is either the student’s attainable tracks, preferred track, or track assignment just after junior high school.

<sup>16</sup>30% come from Northern Africa, 30% from Sub-Saharan Africa, 12% from Asia, 7% from the Middle East, 7% from the Caribbean, 5% from Portugal, 4% from Eastern Europe, 3% from Latin America, 2% from other European countries, and 0.5% from North America.



We also use an alternative measure of academic achievement that takes teachers’ grades into account. The equation is the same as the first one with additional dummies  $YearlyGrade_{d'i}$  for whether the student is in decile  $d'$  of the average yearly grade distribution:

$$Y_{ij} = \alpha + \beta LowSES_i + \sum_{d=2}^{10} \gamma_d TestScore_{di} + \sum_{d'=2}^{10} \gamma_{d'} YearlyGrade_{d'i} + \delta FE_j + \eta X_{ij} + \epsilon_{ij}$$

Since teachers’ grades are socially differential for reasons that may or may not be related to academic performance (see Section 3), we consider this alternative estimate of  $\beta$  as a lower bound of the effect of family background on aspirations.

Family background is determined by the accident of birth. The reasons why aspirations and track assignment are correlated with parental SES are all consequences of the family characteristics: parents’ level of education, parents’ involvement in their child’s school life, parents’ choices of educational setting for their child, the characteristics of parents’ friends and networks in general, genetics, etc. In that sense, any difference in aspirations between low-SES and high-SES students is the consequence of the family characteristics *via* the differences in academic achievement, in social networks, in school quality, etc. However, our parameter of interest is not the sum of all consequences of social background on aspirations: following the definition of aspirations as the capacity to “set goals for the future that are in line with one’s potential”, we don’t expect students of different potential to aspire equally. We thus want to exclude the channels by which family background affects one’s actual academic potential. This is why our analysis first compares students who have similar academic performance: we argue that students who have equal test scores (and equal teachers’ grades) in grade 9 have very similar academic potential. Second, our analysis includes class fixed effects to isolate the effects of parental SES from neighborhood, teacher, and peer effects, which are additional determinants of academic potential. In fact, parental choices result in differences in school quality and peer composition that have direct consequences on academic performance. We thus compare low-SES students with their high-SES *classmates* from the same decile of the test score distribution (and teachers grades). If social inequalities were entirely reflected in school and class selection, we would not see any differences left in this within-class framework. Our measure of social inequalities in aspirations thus excludes the part of family background expressed in school and class selection, which probably provides a lower bound of the effects of family background, but ensures that the observed effects are entirely due to family background of students with equal academic potential.

Conditional on the fact that students who are in the same class and have equal test scores (and teachers’ grades) have equivalent academic potential, we argue that  $\beta$  identifies the causal effect of being from a low-

SES family on aspirations. One caveat to interpreting  $\beta$  as the causal effect of being a low-SES student on aspirations is the fact that students' academic level may not be well measured by the test scores' and teachers grades' deciles. This measurement error would indeed bias the  $\gamma$  coefficients downward and thus bias  $\beta$  upward in absolute value as low-SES students have, on average, lower test scores and thus lower outcomes. Importantly, we have seen that the variation in students' math score explains 83% of the variation in students' total scores at the national exam in June 2013 (average over the math, French, and history scores), so the November 2012 math test is likely to be pretty efficient in measuring students' achievement in November. Moreover, the addition of teachers' grades significantly helps to reduce the noise and get a precise measure of academic performance (even if the use of this measure may lead to an underestimation of  $\beta$  as discussed in section 3). For these reasons, our measure of academic performance is arguably a very good measure compared to standards in this literature.

## 4.2 Specifications used to study the role of aspirations and external factors in the amplification of social inequalities

In the second part of our analysis, we investigate how aspirations for high school at the beginning of grade 9 and students' SES relate to academic progress over the year, and whether they play a role in track assignment at the end of the year independent of students' academic performance. To explore how family background and aspirations affect academic progress, we estimate the following equation:

$$Y_{ij} = \alpha + \beta LowSES_i + \theta Asp_i + \sum_{d=2}^{10} \gamma_d TestScore_{di} + \sum_{d'=2}^{10} \gamma_{d'} EarlyGrade_{d'i} + \delta FE_j + \eta X_{ij} + \epsilon_{ij}$$

, where  $Y$  is the test score at the national exam at the end of the year and  $Asp_i$  is a vector of two dummy variables indicating whether the student has "No preference" for any high school track and "Vocational High School", respectively, among his preferred options, the reference being students who prefer "Academic High School". For the same reasons as before, we interpret  $\beta$  as the causal impact of social background on academic progress given equivalent potential and aspirations at the beginning of the year. We also interpret  $\theta$  as the causal impact of aspirations on academic progress given equivalent potential and social background at the beginning of the year.

To explore how family background and early aspirations affect track assignment in June independent of academic performance, we estimate the following equation:

$$Y_{ij} = \alpha + \beta LowSES_i + \theta Asp_i + \sum_{d=2}^{10} \gamma_d TestScore\_Nov_{di} + \sum_{d=2}^{10} \gamma_d TestScore\_Jun_{di}$$

$$\left(+ \sum_{d'=2}^{10} \gamma_{d'} Y_{earlyGrade_{d'i}}\right) + \delta F E_j + \eta X_{ij} + \epsilon_{ij}$$

, where  $Y$  is a dummy indicating whether the student was assigned to vocational high school, assigned to academic high school, or repeated grade 9.  $Asp_i$  is the same vector as in the previous equation. In order to rule out the role of all academic factors, we control for the decile of test score in both November and June, as well as for teachers' grades. We thus interpret  $\beta$  (resp.  $\theta$ ) as the effect of social background (resp. students early aspirations) on track assignment independent of academic factors.

What caveats do we have to consider to interpret  $\beta$  and  $\theta$  as the causal effects of SES and aspirations on final test scores and the procedure of track assignment? First, these estimates can be biased due to measurement errors. For instance, a part of unmeasured aspirations could be correlated with students' SES and thus be included in  $\beta$ . The same is true conversely for  $\theta$ . In section 6, we provide evidence that this measurement error issue is unlikely to drive our results as both  $\beta$  and  $\theta$  are robust to the inclusion of more detailed measures of aspirations and SES.

Second, the correlation  $\theta$  measured between students' aspirations and outcomes may be due to a unobserved factor that impacts aspirations on the one hand and outcomes on the other hand but not through aspirations. Among the six determining factors of aspirations that we cataloged in Section 2, any potential confounding factor would be one that could also contribute to students' academic outcomes *independent* of aspirations, i.e., one of the third factors as described in Section 2. Given our econometric specifications, such a confounding factor must not be reflected in our measures of students' SES, test scores, and teachers' grades. Current academic achievement is captured by our measures of test scores and teachers' grades, so it does not bias  $\theta$ . The other determinant of aspirations that could bias  $\theta$  is students' rational anticipation of future academic achievement and returns to education. Given that we study students in the same classrooms and with the same current academic performance, the factors that can affect future academic performances and returns to education, and that can be anticipated today, are related to parents' technical inputs that influence academic and professional progress over time independent of aspirations (e.g., homework assistance, monitoring of homework schedule, management of sleep time, or professional connections). These parental inputs may not be captured by parental SES, and some portion of them may actually be orthogonal to SES. To test whether such rational anticipations drive the correlation between aspirations and later school outcomes, we instrument aspirations using students' current scholastic self-esteem in the Robustness Checks section (and discuss there the validity of this IV strategy).

## 5 Results

In this section, we present our main results on the social inequalities in aspirations and their dynamics with school outcomes. Our analysis focuses on low-SES versus high-SES students, although all tables include a dummy indicating whether students come from immigrant families to make sure that the effect of social background is not an immigration story, and to confirm the result of Caille (2007) that first-generation immigrants have higher aspirations than non-immigrants. We find similar results: students from immigrant families have higher aspirations than non-immigrants, especially in terms of jobs, which may reflect the fact that the decision to migrate comes with the desire to upgrade children’s opportunities and social status. Otherwise, we find no difference in teachers’ grades, academic progress, or procedure of track assignment between immigrants and non-immigrants. We do not further detail the effects of coming from an immigrant family in the rest of the paper, and the effect of the socio-economic status is considered independent of whether students are immigrants.

### 5.1 Social differences in aspirations

How much do students’ aspirations vary according to their parents’ SES? This section presents the differences in educational and professional aspirations for students in the same class who have the same academic performance.

#### **Educational Aspiration Windows**

Table 1 shows that aspiration windows at the beginning of grade 9 are socially different among students who are in the same classroom and have similar test scores in November (columns 1, 3, and 5). Low-SES students are 42% more likely to include vocational high school in their set of attainable tracks (+6pp, significant at the 1% level), while they are less likely to include academic high school (-3pp, significant at the 10% level) or not to answer the question (-3pp, significant at the 5% level). This result indicates that low-SES students are more likely to have ideas about their near-future academic options, and that the options that populate their zone of attainable selves are less selective than those of high-SES students. If we compare students with equal teachers’ grades in addition to equal test scores (columns 2, 4, and 6), we find that low-SES students are still more likely to include vocational high school and less likely to have an empty window, but we do not see differences between low-SES and high-SES students in the inclusion of academic high school in the window. This finding suggests that the fact that low-SES students feel less capable of entering an academic high school is primarily driven by the fact that they get lower teachers’ grades despite equal performances on the externally graded test. However, teachers’ grades do not close the gap in the two other categories. Some

high-SES students probably don't even think of vocational high school when they are asked about the tracks they know and feel capable of pursuing. As a consequence, the zone of attainable selves is less populated by vocational high schools among the high-SES than the low-SES students.

Aspiration windows are also socially different at the higher education level (Table 2). First, low-SES students are 18% more likely to have no idea of what they would be capable of pursuing after high school (40% versus 34% among the high-SES students, significant at the 5% level). Second, they are 27% less likely to include highest education attainments (5 years college or more) in their set of attainable paths (19% versus 26% among high-SES, significant at the 1% level). We do not find differences in the presence of intermediate education levels (1-2 years college and 3-4 years college) in the aspiration windows. These findings indicate that low-SES students have fewer ideas about their far-future academic options, which seems to be related to the fact that they have lower teachers' grades (column 2). Moreover, their zone of attainable selves proves again more modest than those of high-SES students, and this result remains true when both teacher-assigned grades and external test scores are equal (column 10).

Decomposing the analysis by academic performance levels reveals interesting patterns. Low-achieving low-SES students' aspiration windows seem more adjusted to their academic performance than their high-SES counterparts: they are less often empty and more often include vocational high school (Appendix Table A2). In contrast, medium- and high-achieving low-SES students' aspiration windows seem less adjusted to their academic performance than their high-SES counterparts: medium-achieving students feel less capable of academic high school (Appendix Table A2), and high-achieving students feel less capable of 5 years or more of higher education (Appendix Table A3), although their current academic performance does not contraindicate such aspirations.

### **Educational Aspirations**

Education aspirations follow similar patterns as aspiration windows (Table 3, Panel 1). While the proportion of students who have no preference is not socially differential, academic preferences are clearly more modest among low-SES students. When considering preferences for high school track, low-SES students are 120% more likely to prefer vocational high school than their high-SES counterparts (10% versus 5%), a difference that is driven by low- and medium-achieving students (Appendix Tables A4, A5 and A6). They are also less likely to prefer academic high school, which this time is driven by medium- and high-achieving students - although point estimates are less precise. Again, teachers' grades explain the difference in the proportion of students who prefer academic high school (column 6), but only part of the difference in the preference for vocational high school (column 4).

When considering preferences after high school, low-SES students are 78% more likely to prefer finding

a job after high school without going to college (14% versus 8% among high-SES), and symmetrically less likely to prefer doing 5 years or more of higher education (18% versus 24% among high-SES students, both differences being significant at the 1% level) (Table 4, Panel 1, columns 5 and 11). These differences are reduced but still significant when we compare students with equal test scores and teachers grades (Table 4, Panel 1, columns 6 and 12). The higher proportion of students who prefer finding a job after high school comes from low-achieving low-SES students (Appendix Table A7, A8 and A9), which is consistent with their higher preference for vocational high school, and may be more appropriate given their low academic performances. In contrast, high-achieving low-SES students exhibit aspirations that do not seem appropriate given their academic performances: they are 32% less likely to prefer postgraduate studies, and twice as likely to prefer finding a job after high school than their high-SES counterparts.

Controlling for their aspiration windows shows that a substantial part of the difference in academic preferences comes from the difference in what students can envision and feel capable of pursuing (Tables 3 and 4, Panel 2): differences between high- and low-SES students who have identical aspiration windows are smaller. In particular, the preference for postgraduate studies is no longer socially differential among students with equal aspiration windows. However, the other differences in preferences are still significant, which suggests that, overall, the source of differential aspirations is two-fold: the *zone* of attainable selves on the one hand, and *taste* for these attainable selves on the other hand.

The empirical literature showing that aspirations are impacted by individuals' social background is quite limited. The first evidence was provided in the 1960s using US data in what is known as the "Wisconsin Model": an 11th grade student whose father has a low education level is less likely to aspire to and reach college than an 11th grade student with the same IQ score and class rank whose father has a higher education level (Sewell and al. 1969).<sup>17</sup> More recently, Hoxby and Avery (2013) show that, among the highest-achieving US students (top 4% of college assessment test scores), low-income students are less likely to apply to selective universities than high-income students, although the cost of attending a highly selective university would not have been higher. Our findings add to this literature by showing that the social inequalities in aspirations exist in France and are not limited to top students.

## Professional Aspirations

Table 5 shows that parental SES does not cause any gap in professional aspirations. At this age, the most popular occupations are ones that either require postgraduate studies (doctor was a very popular response,

<sup>17</sup>In this first paper, the external validity was very limited since the study uses a sample of Wisconsin farmers' sons. Variations in social origins were tiny, and the results may have been too specific to this particular rural and under-educated population. Also, the measurement of academic achievement raised concerns because rank in the class depends heavily on the composition of the class: the best student in a low-achieving class is not comparable to the best student in a high-achieving class. Additional papers therefore extended this first result using broader populations and better measurements of academic achievement - both a test score and teachers' grades (Sewell et al. 1970, Jencks et al. 1983).

as well as journalist and lawyer), or do not require higher education at all (for instance, musician and artist were also quite popular answers). Note also that 22% of students do not have any idea of a job they would like to have. At equal academic performance (whether or not teachers' grades are included), low- and high-SES students have professional aspirations that require the same level of education. This finding sheds new light on social inequalities in France: social groups differ in the way they think about their educations, but they do not differ in the way they think about their jobs. Different tastes regarding occupations do not seem to drive the different educational aspirations. Students thus have the same ultimate goals but do not invest similarly to reach these goals. The lack of consistency between educational aspirations and occupational aspirations may well reflect the fact that students are largely ignorant of what educational path is required to have this or that job. This means that preferences for education are not, at this age, pure investments adjusted to future jobs. Among the determinants of educational aspirations, anticipations of lower returns to education are thus unlikely to explain the lower educational aspirations of the low-SES students: anticipating lower returns to education would mean that, at equal academic performance today, low-SES students would not invest as much as high-SES students in education since they would anticipate not being able to get the same job in the future due to factors like discrimination on the job market or lack of appropriate social network. Such an anticipation would thus reflect in lower occupational aspirations, which is not supported by the data. However, professional aspirations may adjust to realized investments in education *ex post*, which would create higher professional aspirations for the high-SES students compared to the low-SES students in the future. In this case, professional aspirations may appear adjusted to investments in education *ex post* while they were not adjusted *ex ante*.

## 5.2 Social differences in track assignment

Academic assignment in grade 10 is highly socially differential (Table 6). Consider two students in the same classroom: they are of the same sex, come from families with the same immigrant or non-immigrant background, and have equal test scores at the beginning of grade 9; however, one is a low-SES student and the other is a high-SES student. The next year, the low-SES student is 13pp more likely to attend a vocational high school and 14pp less likely to attend an academic high school (significant at the 1% level)<sup>18</sup> (columns 1, 3, 5). This means that low-SES students are three times more likely to enter a vocational high school in grade 10 than their equally able high-SES classmates (19% versus 6%), and symmetrically 15% less likely to

<sup>18</sup>There is a French literature on the social inequalities in track assignment: Girard and Bastide (1963), Duru-Bellat (1988), and Davaillon et Nauze-Fichet (2004) show that low-SES French students are less likely to enter selective tracks than high-SES students with the same teachers' grades. Felouzis (2003) and Broccolichi et Sinthon (2011) extend these results using independently graded test scores instead of teachers' grades, much like what we do in this paper. Yet there is little empirical evidence so far that can shed light on the mechanisms behind this phenomenon, in particular the extent to which social inequalities in track assignment are due to the pupils themselves, or to their teachers and parents. Our paper adds to this literature by pointing to the role of students' preferences in the production of social inequalities.

enter an academic high school (78% versus 92%). Academic assignments to high school are thus even more unequal than initial academic aspirations: low-SES students are *two* times more likely to prefer vocational high school at the beginning of the year, but *three* times more likely to enter a vocational high school the next year, than their equally able high-SES classmates.

Comparing students whose teachers' grades, in addition to test scores, are equal does not change the view: low-SES students are still twice as likely to enter a vocational high school as their equally achieving high-SES classmates (Table 6, column 1), a difference that is bigger than the 77% gap in the proportion of students whose initial aspiration was vocational high school (Table 3, Panel 1, column 4). Moreover, while initial aspirations for the academic high school track were not differential (Table 3, Panel 1, column 6), low-SES students are now 6 percentage points less likely to enter an academic high school than their equally achieving high-SES classmates (Table 6, column 2). Whatever the measure of academic performance, the initial social inequalities in aspirations are thus not corrected over the year, but are actually amplified.

What elements fuel the initial differences in aspirations and amplify initial social inequalities? One hypothesis is that students' preferences and/or academic performance may change over the year in ways that make social inequalities larger at the end of the year. This would be the case if low-SES students' academic performances decrease relative to their *initially* equally able high-SES classmates, or if low-SES students' preferences tend to change more often in favor of vocational high school over the year due to the influence of their networks (friends, relatives) or the information they receive from their teachers. A second hypothesis is that students' preferences and academic performance may remain stable over the year but other actors add to initial social inequalities in aspirations, such as teachers and/or parents who play a key role in the track assignment process, as described in section 3.1. If parents have a strong preference for vocational high school, or if teachers disagree with family's preference for academic high school, students may be sent to vocational high schools against their own wishes and despite reasonable performance. In the next section, we explore some of these mechanisms that may explain the amplification of the initial social inequalities.

### **5.3 The role of aspirations and external factors in the amplification of social inequalities**

The previous results show that equally-achieving students have unequal aspirations at the beginning of grade 9 according to their SES, and that they are even more unequally assigned to high school tracks. This section examines factors that contribute to this amplification of social inequalities.



## Academic Progression

One reason why social inequalities widen over the year is that low-SES students may progress more slowly than high-SES students as a consequence of their social background and/or their lower aspirations. Table 7 presents how test scores at the end of 9th grade are associated with SES and aspirations, conditional on test scores at the beginning of the school year (columns 1 and 2). We find that test scores in June are 0.27 standard deviations lower for low-SES than for high-SES students, 0.36 standard deviations lower for students who aspire to vocational high school than for students who aspire to academic high school, and 0.25 standard deviations lower for students who do not state a particular aspiration for high school than for students who aspire to academic high school. Both students' social background<sup>19</sup> and students' aspirations are thus strong determinants of their academic progress from the beginning to the end of 9th grade. The relationship between parental SES and academic progress reflects the fact that, depending on their SES, parents provide more or less inputs to their child's performance such as help with homework, extra tutoring, or other supervision or management that improves academic performance (e.g., encouraging students to go to bed early). We interpret the relationship between students' aspirations and academic progress as evidence that aspirations determine effort and investment: students who have lower aspirations invest less effort in class and at home, and thus achieve less and less compared to initially equally able classmates who have higher aspirations.

In case the inclusion of teachers' grades would improve our measure of academic performance, we also compare test scores in June among students with equal test scores in November *and* equal average yearly grades (columns 3 and 4). Since the average yearly grade reflects the perceived average academic level over the whole year<sup>20</sup>, and under the reasonable hypothesis that academic progress is on average linear, the average yearly grade should reflect academic performance in the middle of the year, i.e., in February. Hence, the time over which we estimate academic progress when we control for teachers' grades is reduced from 8 months (November-June) to 5 months (February-June). Also, as discussed earlier, if teachers' grades are biased towards high-SES students, controlling for teachers' grades would bias our estimation downward. Still, we find that low-SES students end up with 0.12 standard deviations lower test scores in June than their high-SES classmates who had equal test scores in November *and* equal average yearly grades; we also find a significant decline in academic performance for students who aspire to vocational high school or have no stated high school aspirations compared to those who aspire to academic high school (respectively -0.08 and -0.09 standard deviations in June test scores).

<sup>19</sup>Caille and Rosenswald (2006), Broccolichi and Sinthon (2011), and Cayouette-Rembliere (2013) also give evidence of the fact that low-SES students demonstrate less progress than high-SES students at equivalent initial academic achievement.

<sup>20</sup>In France, the average yearly grade reflects students' level across the whole year rather than where they finish.

These findings suggest that aspirations play an important role in academic progress, even in the short run. Empirically, few studies provide evidence on the consequences of aspirations for subsequent behavior and outcomes. Bernard et al. (2011) show that Ethiopian farmers who express fatalistic views also demand fewer long-term loans and loans for productive purposes, although this correlation is not interpreted as causal since third factors that are not included in the model could drive both fatalistic views and investment behavior. The literature also contains experiments providing exogenous sources of variations of aspirations (Oyserman et al. 2006, Beaman et al. 2012, Bernard et al. 2013, and Goux et al. 2014). In these experiments, a randomly assigned intervention changes both aspirations and realized outcomes. To draw a causal link between the change in aspirations and the change in outcomes, the effect of the intervention on realized outcomes must be channeled entirely through its effect on aspirations. Although aspirations do credibly play a central role in changing behaviors and outcomes in these experiments, one cannot exclude that other effects of the interventions might contribute to the improved outcomes in ways that may not be related to aspirations<sup>21</sup>.

The impact of aspirations and of social background on academic progress may explain why track assignment in grade 10 is more socially unequal than educational aspirations at the beginning of grade 9. In fact, track assignment takes place at the end of the year, so it is likely to be based on academic performance at the end of the year. In Appendix Table A10, we compare track assignment of classmates who have equivalent test scores in November *and* in June (columns 1, 3, and 5), as well as students who also have the same average yearly grade (columns 2, 4, and 6). The results show that social inequalities are reduced by about 45% (from about 13.5pp to about 7.5pp) compared to the previous specification that did not include test scores in June. This result suggests that the slower academic progress of the low-SES students relative to the high-SES students explains nearly half of the social inequalities in track assignment based on their academic level at the beginning of the school year. (The reduction is small when teachers' grades are taken into account since the average yearly grade already includes the academic progress over the year.) However, low-SES students

---

<sup>21</sup>In Oyserman et al. (2006), the intervention consists of 12 sessions in which instructors provided low-SES students with new "Academic Possible Selves", as well as with strategies to attain these selves, i.e., strategies to perform at school. In Bernard et al. (2013), Ethiopian farmers were invited to watch video documentaries about people who had succeeded in agriculture or small businesses, which included both a role model effect and an informational effect on how to succeed. In Goux et al. (2014), parents of low-achieving grade 9 students were invited to a meeting at which the school provost informed them about existing tracks after middle school, while pointing out the importance of adjusting expectations to students' performance and showing videos of students explaining how they performed well in vocational education, although they struggled in middle school. The intervention was able to adjust parents' track choice for their children, which importantly led to a reduction in drop-outs as students shifted to entering a vocational track of apprenticeship rather than repeating a grade or dropping-out. However, the findings show no change in students' behavior and performances in grade 9, and there is no data on students' aspirations (only applications are available, which are decided on by both parents and students after receiving teachers' opinions). The impact of this intervention may thus go entirely through parents' decisions with no lesson on the relationship between students' aspirations and effort at school. Finally, Beaman et al. (2012) show that reserving leadership positions for women in Indian village councils increased both girls' aspirations and educational attainment. However, Chattopadhyay and Duflo (2004) show that this policy also affected public good provision - increasing, for instance, the number of drinking water facilities - which could explain the increase in school participation of girls (as girls are usually in charge of water duties). Overall, it seems difficult to create an intervention that would affect only aspirations with no effect on other elements that independently contribute to the outcomes.

are still more than twice as likely than their high-SES counterparts to enroll in vocational high school (14.1% instead of 6.4%), and symmetrically less likely to enroll in academic high school, which suggests that the differential academic progress does not explain all the social inequalities in track assignment. Overall, even using the most complete set of information on students' academic performance that an econometrician can use - which is already more than what the education system itself can use - track assignment is still socially differential. We thus argue that these remaining differences in track assignment are due to non-academic factors.

### **Non-Academic Factors: Preferences and External Actors**

In Table 8, we add students' aspirations at the beginning of the year as an additional explanatory variable of track assignment to test the importance of students' early aspirations in track assignment. The results show that early aspirations have a large effect on track assignment at the end of the year, independent of family background and all measures of academic performance: students who prefer vocational high school in November are 24 percentage points (200%) more likely to enter a vocational high school than their same-background, equally achieving classmates who prefer academic high school (Table 8, column 2). Students' early aspirations are thus a strong predictor of final track assignment, suggesting that academic performance is not the only parameter that plays a role in track assignment and that the main actors in the procedure of track assignment, i.e., parents and teachers, largely echo students' early preferences.

However, low- and high-SES students still do not have the same probability of entering an academic or a vocational high-school at equal academic achievement and equal early preferences. Low-SES students are still 86% more likely to enroll in vocational high school (11.9% versus 6.4% among the high-SES, significant at the 1% level), and symmetrically less likely to enroll in an academic high school (86.7% versus 91.8%, significant at the 1% level), despite equal early academic performance, teachers' grades, final academic performance, and initial aspirations (Table 8, columns 2, 4, and 6). We see two explanations for this result. Either 1) low- and high-SES students' preferences have evolved over the year in ways that emphasize the initial social inequalities in aspirations and are independent of their academic performances, *a priori* through interactions with friends, parents, and teachers, or 2) parents and teachers who take an active part in the procedure of track assignment act in ways that accentuate the tendency of low-SES students' to aspire lower than high-SES students: teachers may deny them access to academic high school more often, or parents may put less pressure on their children to attend academic high school whatever their grades<sup>22</sup>. In both cases, track

---

<sup>22</sup>Pirus (2013) finds that family wishes at the end of grade 9 are socially differential at equal teachers' grades: among students with grades ranging between 10 and 12 out of 20 (middle-low achieving students), 9 out of 10 high-SES parents ask for academic track while only 6 out of 10 low-SES parents do so. However, this study does not disentangle students' aspirations and parents' action. It also uses teachers' grades as a measure of students' performance, which is problematic since teachers' grades are not comparable across schools and classes.

choices are socially differential at the end of the year despite equal initial preferences and equal academic performance, suggesting that the actions of external actors amplify the initial social inequalities in students' aspirations.

To conclude, the very large social inequalities in track assignment are the consequence of three congruent factors: (i) students' early aspirations are socially different and play a role in track assignment at the end of the year, (ii) low-SES students make less progress relative to high-SES students as a consequence of both their social background and their lower aspirations; and (iii) other actors who take part in the track assignment procedure, namely parents and teachers, accentuate the initial social inequalities in aspirations.

## 6 Robustness checks

We test here several alternative specifications to strengthen the interpretation of our results. The first two tests investigate measurement error issues and show that more detailed definitions of our main explanatory variables do not affect the results. The last test provides evidence that allows for excluding potential confounding factors.

### 6.1 Using a more precise definition of parents' SES

As discussed in section 4.2, it may be that the correlations between aspirations and outcomes do not reflect a causal impact of aspirations if parents' SES is not measured precisely enough. To show that this measurement error issue is not driving our results, we use a much more detailed definition of parents' SES that divides the low-SES families into five groups to get more homogenous social groups: "No parent has ever worked", "Maximum family SES is manual laborer", "Maximum family SES is low-skilled white-collar", "Maximum family SES is craftsman or storekeeper", and "Maximum family SES is intermediate occupation" (see Data Appendix). Appendix Tables A11 and A12 show that the coefficients on the aspirations variables are only very marginally modified (and in a non-significant way) compared to those obtained with the two-category classification<sup>23</sup>. This result means that aspiration coefficients do not seem to be affected by how the parents' SES is defined, suggesting that measurement error in parents' SES is not driving our results on aspirations given parents' SES.

### 6.2 Using a more exhaustive definition of students' aspirations

Similarly, as discussed in section 4.2, when we intend to separate the effects of parents' SES and students' aspirations on students' academic outcomes, it may be that the correlation between students' SES and their

---

<sup>23</sup>Note that, comfortably, in each table the effect of parents' SES varies in a very smooth way between the five new categories from the lowest category to the highest one.

outcomes does not reflect a causal impact if aspirations are not measured precisely enough. To show that this measurement error issue is not driving our results, we include a more exhaustive list of students' aspirations by including aspirations for higher education. Appendix tables A13 and A14 show that the coefficient on the parents' SES dummy is only very marginally modified (and in a non-significant way) compared to those obtained using only aspirations for high school as a control<sup>24</sup>. This result confirms that the effect of parents' SES is not affected at all by how students' aspirations are defined, suggesting that measurement error in students' aspirations is not driving our results on the effect of parents' SES given students' aspirations.

### 6.3 Using academic self-esteem as an instrument for their aspirations

Our last check aims at ruling out a potential confounding mechanism that could explain the correlation we find between aspirations and educational outcomes, namely students' rational anticipation of future academic achievement. Given that we study students in the same classroom, differences in anticipations of future academic performance do not result from differences in current peers, teachers, or school. Furthermore, students' current performance is likely to be strongly correlated with future performance, so we might expect students with the same current academic performance to have similar anticipations of future academic performance. However, students' rational anticipation of future performance, i.e., the evolution of their performance, could be impacted by their expectation or lack of expectation of parental technical inputs that can influence academic progress over time independent of aspirations, such as homework assistance, monitoring of homework schedule, management of sleeping time, etc. These inputs may not be entirely captured by parental SES.

To rule out this mechanism, we instrument aspirations using students' scholastic self-esteem. We argue that, within class and given current academic performance and SES, students' scholastic self-esteem can impact progress and track assignment only through its effect on aspirations. In particular, we argue that it is not related to students' anticipation of future academic achievement. This is because the five questions that we use to compute our scholastic self-esteem score concern the student's self-perception of her current scholastic ability (how quick and efficient they are, how well they respond in class) or of her general intellectual ability. By using this instrument, we thus capture the part of students' aspirations that is explained by their present-looking self-esteem and eliminate the potential forward-looking components of aspirations that could bias our estimate of the impact of aspirations on academic progression.

Columns 1 and 2 of Table 9 first show the first-stage results using a synthetic dummy for aspirations indicating whether the student has "No preference for high school" or mentioned "Vocational high school" among her preferred options, as opposed to listing "Academic high school" among her preferred options. It

---

<sup>24</sup>Note that, in all tables, the coefficients on the aspirations for high school are smaller in magnitude as the dummy indicating whether the student mentioned "Finding a job" among her preferred options after high school captures part of what these dummies used to capture.

shows that a one-standard-deviation increase in scholastic self-esteem leads to a 10pp increase (significant at the 1% level) in the probability of having no preference or preferring vocational high school, i.e., almost a 50% increase (a 49% increase for high-SES students and a 46% increase for low-SES students). The table then shows the results of the second-stage and of the OLS regressions with this simplified outcome. Controlling for teachers' grades, and consistent with Table 7, the OLS regression shows that test scores in June are 0.08 standard deviations lower for students who aspire to vocational high school or have no preference than for students who aspire to academic high school, while the IV regression measures a much stronger impact of 0.70 standard deviations. Similarly, regarding track assignment, the OLS regression shows, consistent with Table 8, that students who prefer vocational high school or have no preference for high school in November are 12 percentage points more likely to enter a vocational high school than their same-background equally achieving classmates who prefer academic high school, while the IV regression measures a much stronger impact of 31 percentage points. These results show that, for both academic progress and track assignment, the initial bias was actually downward, and not upward as one could have suspected; therefore, our aspiration variables are subject to an important measurement error that crushes the potential upward bias. Indeed, our measure of scholastic self-esteem is a continuous variable based on five questions to students whereas we measure aspirations using one or two dummies based on one question, leading to a lower measurement error. Overall, this robustness check confirms that our main estimates provide lower bounds for the impact of students' aspirations on their educational outcomes.

## 7 Conclusion

This paper provides evidence that students' educational aspirations are influenced by their family background on the one hand, and that these aspirations contribute to the short-term evolution of school outcomes on the other hand. As school outcomes are themselves a determinant of aspirations, these two results reveal the aspiration-based low-achieving trap engendered by social inequalities, especially for the medium and high-achieving low-SES students. Low-SES students start with clear factual disadvantages, but this aspiration trap drags them down even more than expected. A natural question is whether it reflects a market failure that would rationalize some form of policy intervention. Is there evidence that students have suboptimal aspirations and are making suboptimal decisions? In terms of income and occupation, the answer depends on how educational attainment impacts later job market outcomes for low-SES and high-SES students. If the returns to education are very low for low-SES students relative to high-SES students, reducing inequalities at school may not reduce inequalities in terms of income and occupation. But, as the vast literature on returns to education shows rather high returns to education without evidence that low-SES students benefit less, it

is likely that social inequalities in education contribute to social inequalities in income.

However, the question is more difficult when it comes to welfare. Whether adjusted aspirations and reduced social inequalities in education would make people happier remains an open question. We cannot take for granted that a low-SES person who invests more in education and gets a higher income will feel better as an adult than if she does not invest in education: she may feel socially isolated, or at odds with her cultural values, as suggested by the identity literature. However, our results show that low-SES students not only differ in their tastes but also in the tracks they know and feel capable of pursuing, which raises the issue of the level of information and the validity of their perception of their academic ability, casting doubts on the optimality of their final decision.

This paper thus questions whether preferences can be wrong, an issue that should be discussed. Most of the economic literature is based on the latin maxim that *de gustibus non est disputandum*<sup>25</sup>, so that everyone's personal preferences are merely subjective opinions that cannot be right or wrong. If preferences are formed on a clear-sighted and informed knowledge base, this should be true. But if preferences are formed on the ground of misperceptions and lack of information, for instance, lack of information about some academic options or misperceptions of one's probability of success, preferences may be the root of a market failure. This paper provides insights into this debate by distinguishing between aspiration windows and preferences, encouraging further empirical research on the reasons why low-SES students have lower aspirations than high-SES students.

---

<sup>25</sup>Meaning "In matters of taste, there can be no disputes".

## References

- [1]
- [2] Asfa, Cédric. 2009. “La moitié d’une génération accède à l’enseignement supérieur”, in *La France, portrait social* - édition 2009.
- [3] Akerlof, George and Rachel and Kranton. 2000. “Economics and Identity”, the Quarterly Journal of Economics, 65(3): 715-753.
- [4] Akerlof, George and Rachel Kranton. 2002. “Identity and Schooling: Some Lessons for the Economics of Education”, Journal of Economic Literature, 40(4): 1167-1201.
- [5] Austen-Smith and Roland Fryer. 2005. “An Economic Analysis of “Acting White””, the Quarterly Journal of Economics, 120(2): 551-583.
- [6] Bariaud, Françoise. 2006. “Le Self-perception profile for adolescents (SPPA) de S. Harter”, L’orientation scolaire et professionnelle, 35/2: 282-295.
- [7] Bénabou, Roland and Jean Tirole. 2011. “Identity, Morals and Taboos: Beliefs as Assets”, The Quarterly Journal of Economics, 126 (2): 805-855.
- [8] Bernard, Tanguy, Stefan Dercon, Alemayehu Seyoum Taffesse. 2011. “Beyond Fatalism: An Empirical Exploration of Self-Efficacy and Aspirations Failure in Ethiopia”, IFPRI Discussion Paper 01101, July 2011
- [9] Björklund, Anders; Salvanes, Kjell G. 2010. “Education and family background: Mechanisms and policies”, Discussion paper series // Forschungsinstitut zur Zukunft der Arbeit, No. 5002
- [10] Broccolichi Sylvain and Rémi Sinthon. 2011. “Comment s’articulent les inégalités d’acquisition scolaire et d’orientation ? Relations ignorées et rectifications tardives”, Revue française de pédagogie, 175: 15-38.
- [11] Caille, Jean-Paul. 2005. “Le vécu des phases d’orientation en fin de troisième et de seconde”, Éducation & formations, 72: 77-99.
- [12] Caille, Jean-Paul and Fabienne Rosenwald. 2006. “Les inégalités de réussite à l’école élémentaire : construction et évolution”, in “France : portrait social”, INSEE: 115-137.
- [13] Caille, Jean-Paul. 2007. “Perception du système éducatif et projets d’avenir des enfants d’immigrés”, Éducation & formations, 74,



- [14] Cayouette-Remblière, Joannie. “Les écarts se creusent-ils en cours de collège ? ”, *Éducation & formations* n° 84, Dec. (2013)
- [15] Croizet, Jean-Claude, Michel Désert, Marion Dutrévis and Jacques-Philippe Leyens. 2001. “Stereotype threat, social class, gender, and academic under-achievement: when our reputation catches up to us and takes over”, *Social Psychology of Education*, 4, 295-310
- [16] Croizet, Jean-Claude, Gérard Després, Marie-Eve Gauzins, Pascal Huguet, Jacques-Philippe Leyens, Alain Méot. 2004. “Stereotype Threat Undermines Intellectual Performance by Triggering a Disruptive Mental Load”, *Personality and Social Psychology Bulletin*, 30, 721-732.
- [17] Dee, Thomas S. 2009. “Stereotype threat and the student-athlete”, NBER Working Papers 14705, National Bureau of Economic Research.
- [18] Duru-Bellat, Marie. 1988. *Le fonctionnement de l’orientation. Genèse des inégalités sociales à l’école*. Lausanne, Editions Delachaux et Niestlé.
- [19] Jenck, Crouse and Mueser. 1983. "The Wisconsin Model of Status Attainment: A National Replication with Improved Measures of Ability and Aspirations," *Sociology of Education* (January 1983): pp. 3-19.
- [20] Guyon, Nina and Elise Huillery. 2015. “Explaining Aspiration Failures: Evidence from French Middle School Students”, mimeo, Sciences Po.
- [21] Hanna, Rema and Leigh Linden. 2012. “Discrimination in Grading”, *The American Economic Journal: Economic Policy*, 4(4): 146–168.
- [22] Harter, Susan. 1988. “The Self-Perception Profile for Adolescents”, Unpublished manual. University of Denver, Denver, CO.
- [23] Herpin Nicolas. 1996. “Les amis de classe : du collège au lycée”. *Economie et statistiques*, 293: 125-136.
- [24] Hertz Tom, Tamara Jayasundera, Patrizio Piraino, Sibel Selcuk, Nicole Smith and Alina Veraschagina. 2007. “The Inheritance of Educational Inequality: International Comparisons and Fifty-Year Trends”, *The B.E. Journal of Economic Analysis and Policy (Advances)*, 7(2), Article 10.

- [25] Hoff, Karla and Pandey, Priyanka, 2004. "Belief Systems and Durable Inequalities: an Experimental Investigation of Indian Caste", Policy Research Working Paper Series 3351, The World Bank.
- [26] Hoxby, Caroline and Christopher Avery. 2013. "The Missing "One-Offs": The Hidden Supply of High-Achieving, Low Income Students", Brookings Papers On Economic Activity, Spring 2013.
- [27] Le Rhun, Béatrice. "Le niveau d'études selon le milieu social", in : État de l'Enseignement supérieur et de la Recherche en France - 49 indicateurs, Kabla-Langlois Isabelle (dir.). Paris : Ministère de l'Éducation nationale, de l'Enseignement supérieur et de la Recherche, 2015 (8e éd.), fiche 20, p. 50-51.
- [28] Masson, Philippe. 1997. "Elèves, parents d'élèves et agents scolaires dans le processus d'orientation", *Revue française de sociologie*, 38(1): 119-142.
- [29] Merle, Pierre. 1998. "Les recherches sur la notation des élèves", *Education & Formations*, 53: 7-19.
- [30] Millet, Mathias and Daniel Thin. 2005. *Ruptures scolaires : l'école à l'épreuve de la question sociale*. Collection Le lien social, PUF, Paris.
- [31] Millet, Mathias and Daniel Thin. 2007. "Ecole, jeunes de milieux populaires et groupes de pairs", In : Marwan Mohammed et Laurent Mucchielli, *Les bandes de jeunes. Des « blousons noirs » à nos jours*, La découverte, Paris.
- [32] Oyserman, Bybee, Terry. 2006. "Possible Selves and Academic Outcomes: How and When Possible Selves Impel Action", *Journal of Personality and Social Psychology*, 91(1): 188-204
- [33] Périer, Pierre. 2004. "Adolescences populaires et socialisation scolaire. Les épreuves relationnelles et identitaires du rapport pédagogique". *L'orientation scolaire et professionnelle*, 33(2): 227-248.
- [34] Pirus, C. 2013. "Le déroulement de la procédure d'orientation en fin de troisième reste marqué par de fortes disparités scolaires et sociales ", Note d'information de la DEPP, 13.24
- [35] Program for International Student Assessment. 2012. "Results: Excellence through Equity: Giving Every Student the Chance to Succeed", Volume II, OECD.
- [36] Sewell, William., Archibald Haller and George Ohlendorf. 1970. "The educational and early occupational status attainment process: replication and revision", *American Sociological Review*, 35: 1014-1027.

- [37] Steele, Claude and Joshua Aronson. 1995. "Stereotype Threat and the Intellectual Test Performance of African Americans", *Journal of Personality and Social Psychology*, 69(5): 797-811.
- [38] Spencer, Steven, Claude Steele and Diane Quinn. 1999. "Stereotype threat and women's math performance", *Journal of Experimental Social Psychology*, 35: 4-28.
- [39] Van Zanten, Agnès. 2009. *Choisir son école : stratégies familiales et médiations locales*. Collection « Le lien social », PUF, Paris.

## Data Appendix

### Construction of the Educational Aspiration Windows

Students are asked first what tracks they know, and second, among the tracks they know, which ones they feel capable of pursuing. On average, students report 1.4 tracks they feel capable of at the high school level<sup>26</sup> (including 10% of students reporting 0 tracks) and 0.9 tracks they feel capable of at the higher education level<sup>27</sup> (including 44% of students reporting 0 tracks). 99% of students report between 0 and 5 attainable tracks at each level.

Given the open nature of these questions, the actual denomination of tracks varies a lot. At the high school level, a majority of answers are very precise (e.g., “scientific *baccalauréat*” or “2-year vocational track in hairstyling”) or quite precise (e.g., “academic high school”, “vocational *baccalauréat*”), while a minority (5%) of answers are vague (e.g., “high school”, “music”). We coded the answers in order to classify them into four categories: academic high school, vocational high school, no high school, and no response. When the answer is vague and there is uncertainty about the corresponding category, we consider two extreme scenarios: for instance, “music” may be associated with, at least, no high school education or, at most, academic high school (the literature track offers a music section). Since the vague responses represent only 5% of responses, there is a very high correlation (0.93) between the overall results when these 5% of responses are classified according to the “pessimistic” scenario (in which the inferred track is the less selective) and the overall results when the responses are classified according to the “optimistic” scenario (in which the inferred track is the most selective). We present the results using the pessimistic scenario, but they are identical in the optimistic one. Then, we aggregate answers at the student level to create dummies indicating whether the student’s response is among the following categories: “No response”, “Vocational high school is among attainable tracks”, and “Academic high school is among attainable tracks”. Students who reported several answers can be in both the academic and the vocational categories. Students who wrote “I don’t know”, “None”, *only* answers that are not relevant like “Traveling”, or who did not write anything, constitute the “No response” category. Finally, 20 students reported only one vague response that is associated with no high school education in the pessimistic scenario (e.g., students whose *unique* response is “music”). These few students were grouped with the “No response” category as we consider that their answer does not inform us about which track they feel capable of pursuing.

Data construction is similar at the higher education level. Students’ answers are coded according to the implied number of years of education: “school of architecture” is coded as 5 years, “I.U.T.” is coded as 2 years, etc. A handful of answers are vague and allow for different implied levels of education, like “university”. In that

---

<sup>26</sup>From an average of 3.9 tracks they know

<sup>27</sup>From an average of 1.9 tracks they know

case, as before, we use the lowest number of years of education compatible with the answer. In the example of “university”, the shortest degree requires 3 years, so the answer is coded as 3 years. We create dummies indicating whether the student falls into the following categories: “No response”, “No higher education is among attainable paths”, “1-2 years college is among attainable paths”, “3-4 years college is among attainable paths”, and “5 years college or more is among attainable paths”. We do not use the dummy indicating that “No higher education is among attainable paths” because the answers that fall into this category are often imprecise and make this category too heterogenous: a third of the answers in this category are vague like “artist”, “singer”, “pianist”, etc. These answers allow for different implied levels of education including “No higher education” but also quite high levels of education (e.g., conservatoire, “Ecole des Beaux-Arts”, etc.). For this reason, we think that this category is too heterogenous to draw clear conclusions.

### **Professional Aspirations**

We used the website of ONISEP, the principal French institute providing information on academic paths and jobs to associate the number of years of education required for each job. When jobs are not precise and can be associated with different levels of education (e.g., “IT engineer” which can be associated with at least a 2-year college education and at most a 5-year college education), as is the case with roughly 29% of answers, we build two extreme scenarios and use the lowest number of years of education compatible with the answer given. We check that our results are robust to the use of the optimistic scenario and indicate whenever a result is not robust.

### **Academic Ability**

The total test score in November is constructed using the November math test score on the one hand, and the relationship between the total score in June, the score in math in June, and invariant students’ characteristics (gender, SES, year of birth, and classroom fixed effect) on the other hand. 83% of the variation in students’ total scores on the national exam is explained by the variation in math scores. Adding gender, SES, year of birth, and classroom fixed effects raises explanatory power to 87%. We estimate the coefficients of a regression of the total score on the math score and students characteristics in June, and use these coefficients to estimate the total score that a student would have had in November given her score in math and her characteristics.

### **Family Socio-Economic Status**

The two-category classification separates “high-SES” from “low-SES” based on whether at least one guardian of the student (parent) has an occupation that corresponds to five years or more of education. The list of

these occupations is: legal, medical, teaching, and artistic freelance occupations; high-level civil servants; professors; researchers; journalists; artists; senior executives; engineers. They account for 25% of guardian 1 and 20% of guardian 2.

The six-category classification divides the low-SES families into 5 groups to get more homogenous social groups: “No parent has ever worked”, “Maximum family SES is manual laborer”, “Maximum family SES is low-skilled white-collar”, “Maximum family SES is craftsman or storekeeper”, and “Maximum family SES is intermediate occupation”. The social hierarchy used to define these categories relies on the increasing average level of education throughout the job categories “manual laborer”, “low-skilled white-collar”, “craftsman and storekeeper”, and “intermediate occupation”. The average level of education by job category is computed using our research survey, which contains information about both parent occupations and levels of education.

### **Scholastic Self-Esteem**

Scholastic self-esteem is measured using the “Self-perception profile for adolescents” (SPPA), which describes two adolescents with opposite characteristics on each item. The respondent first picks which adolescent she is more similar to, and then whether the characteristic is true or very true for themselves. The “Scholastic Competence” scale includes five items. The first one compares one adolescent who thinks she is just as smart as others to one who wonders if she is as smart as others; the second similarly refers to “Doing school work quickly”, the third to “Doing well at class work”, the fourth to “Feeling they are pretty intelligent”, and the last one to “Almost always figuring out the answers in class”. Precisely, the answer to each item is coded as an integer between 1 and 4, where 4 corresponds to the most positive answer in terms of self-competence assessment, and 1 to the lowest. Our measure of scholastic self-esteem uses the average standardized score over all five items.

Figure 1: Test scores in June 2013 by track assignment in September 2013

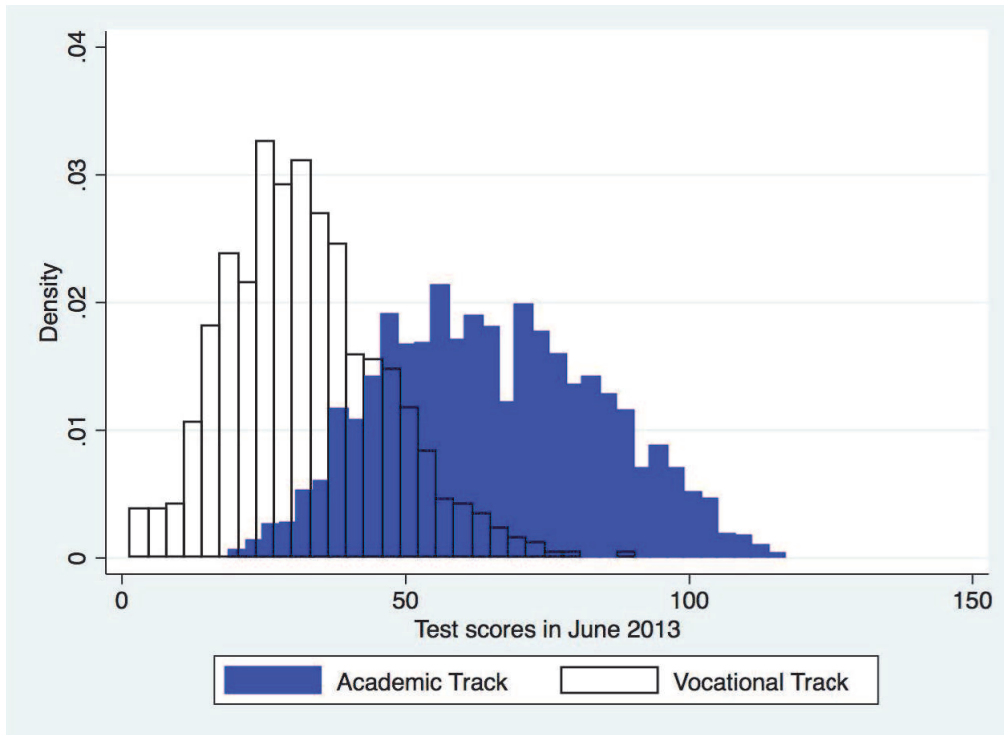


Figure 2: Proportion of low-SES families at the school level: our sample versus junior high school population

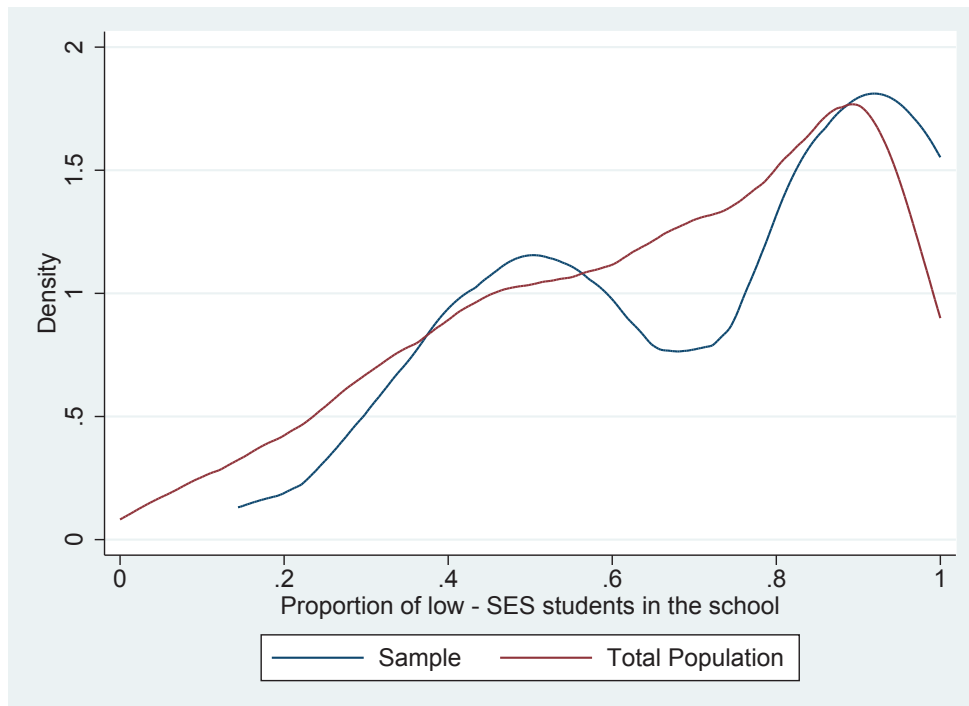


Table 1: Academic Aspiration Windows after Junior High School at Equal Test Score and Teachers' Grades

Variable	Attainable options after JHS					
	No response (1)	(2)	Vocational HS (3)	(4)	Academic HS (5)	(6)
Low-SES family	-0.028** (0.011)	-0.038*** (0.011)	0.064*** (0.021)	0.041** (0.021)	-0.031* (0.016)	0.001 (0.015)
Immigrant family	0.019 (0.016)	0.018 (0.016)	-0.067*** (0.022)	-0.070*** (0.021)	0.009 (0.022)	0.013 (0.020)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.073	0.073	0.152	0.152	0.889	0.889
Mean among non-immigrant families	0.081	0.081	0.236	0.236	0.803	0.803
Nb Obs	3113	3113	3113	3113	3113	3113
Adjusted R-squared	0.057	0.063	0.087	0.115	0.185	0.234

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' test scores in Nov. 2012 and average yearly grades are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.



Table 2: Academic Aspiration Windows after High School at Equal Test Score and Teachers' Grades

Variable	Attainable options after HS							
	No response (1)	(2)	1-2 yrs college (3)	(4)	3-4 yrs college (5)	(6)	5 or more yrs college (7)	(8)
Low-SES family	0.062** (0.029)	0.040 (0.028)	-0.009 (0.020)	-0.009 (0.020)	-0.016 (0.021)	0.005 (0.021)	-0.070*** (0.021)	-0.053** (0.021)
Immigrant family	0.007 (0.028)	0.006 (0.027)	-0.016 (0.017)	-0.016 (0.017)	0.013 (0.021)	0.015 (0.021)	0.035* (0.018)	0.035* (0.018)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.341	0.341	0.172	0.172	0.308	0.308	0.260	0.260
Mean among non-immigrant families	0.416	0.416	0.161	0.161	0.263	0.263	0.177	0.177
Nb Obs	3106	3106	3106	3106	3106	3106	3106	3106
Adjusted R-squared	0.067	0.078	0.007	0.008	0.043	0.059	0.087	0.108

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' test scores in Nov. 2012 and average yearly grades are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

Table 3: Academic Aspirations after Junior High School at Equal Test Score and Teachers' Grades

Variable	Preferred options after JHS					
	No response (1)	(2)	Vocational HS (3)	(4)	Academic HS (5)	(6)
<b>Panel 1: preferred options</b>						
Low-SES family	-0.003 (0.018)	-0.019 (0.018)	0.054*** (0.015)	0.035** (0.014)	-0.041** (0.019)	-0.008 (0.019)
Immigrant family	0.004 (0.020)	0.003 (0.020)	-0.033** (0.015)	-0.036** (0.015)	0.024 (0.023)	0.027 (0.021)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.163	0.163	0.045	0.045	0.795	0.795
Mean among non-immigrant families	0.195	0.195	0.113	0.113	0.702	0.702
Nb Obs	3113	3113	3113	3113	3113	3113
Adjusted R-squared	0.047	0.058	0.106	0.133	0.143	0.179
<b>Panel 2: preferred options given attainable options</b>						
Low-SES family	0.012 (0.017)	0.003 (0.017)	0.030*** (0.011)	0.020* (0.010)	-0.033* (0.018)	-0.015 (0.017)
Immigrant family	-0.005 (0.016)	-0.006 (0.016)	-0.008 (0.013)	-0.010 (0.013)	0.009 (0.019)	0.012 (0.019)
Poss. options includes Vocational HS	0.034* (0.020)	0.022 (0.021)	0.383*** (0.023)	0.368*** (0.023)	-0.395*** (0.029)	-0.370*** (0.029)
No response for poss. options after JHS	0.614*** (0.033)	0.602*** (0.033)	0.005 (0.018)	-0.008 (0.017)	-0.613*** (0.030)	-0.590*** (0.031)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.163	0.163	0.045	0.045	0.795	0.795
Mean among non-immigrant families	0.195	0.195	0.113	0.113	0.702	0.702
Nb Obs	3113	3113	3113	3113	3113	3113
Adjusted R-squared	0.222	0.226	0.336	0.342	0.338	0.348

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. The regressions in panel 1 show effect sizes for students' preferred academic aspirations without controlling for their attainable options. The regressions in panel 2 show effect sizes for students' preferred academic aspirations while controlling for their attainable options. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' test scores in Nov. 2012 and average yearly grades are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

Table 4: Academic Aspirations after High School at Equal Test Score and Teachers' Grades

Variable	Preferred options after HS									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>Panel 1: preferred options</b>										
Low-SES family	-0.008 (0.028)	-0.005 (0.027)	0.063*** (0.015)	0.036*** (0.014)	-0.008 (0.020)	-0.011 (0.020)	-0.015 (0.018)	0.001 (0.018)	-0.061*** (0.023)	-0.045** (0.022)
Immigrant family	0.043** (0.021)	0.043** (0.021)	-0.049*** (0.016)	-0.052*** (0.016)	-0.015 (0.015)	-0.015 (0.015)	-0.004 (0.019)	-0.002 (0.019)	0.032* (0.018)	0.033* (0.018)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.356	0.356	0.081	0.081	0.136	0.136	0.249	0.249	0.239	0.239
Mean among non-immigrant families	0.362	0.362	0.160	0.160	0.132	0.132	0.217	0.217	0.159	0.159
Nb Obs	3106	3106	3008	3008	2913	2913	2913	2913	2913	2913
Adjusted R-squared	0.019	0.019	0.121	0.158	0.024	0.024	0.021	0.030	0.092	0.104
<b>Panel 2: preferred options given attainable options</b>										
Low-SES family	-0.044** (0.020)	-0.030 (0.019)	0.051*** (0.014)	0.029** (0.013)	-0.001 (0.016)	-0.002 (0.015)	-0.010 (0.012)	-0.008 (0.013)	-0.011 (0.016)	-0.008 (0.016)
Immigrant family	0.041** (0.019)	0.042** (0.019)	-0.048*** (0.016)	-0.050*** (0.015)	-0.003 (0.011)	-0.003 (0.011)	-0.006 (0.013)	-0.006 (0.013)	0.009 (0.012)	0.010 (0.012)
No response for poss. options after HS	0.535*** (0.025)	0.539*** (0.024)	0.077*** (0.025)	0.072*** (0.025)	-0.125*** (0.021)	-0.126*** (0.020)	-0.189*** (0.021)	-0.189*** (0.021)	-0.112*** (0.021)	-0.113*** (0.021)
Poss. options includes 1-2 yrs college	0.009 (0.022)	0.008 (0.021)	-0.044** (0.018)	-0.042** (0.019)	0.511*** (0.030)	0.510*** (0.030)	-0.164*** (0.021)	-0.164*** (0.021)	-0.090*** (0.025)	-0.092*** (0.025)
Poss. options includes 3-4 yrs college	0.001 (0.022)	-0.010 (0.022)	-0.082*** (0.016)	-0.067*** (0.014)	-0.132*** (0.019)	-0.133*** (0.019)	0.529*** (0.025)	0.527*** (0.025)	-0.078*** (0.023)	-0.081*** (0.023)
Poss. options includes Masters	-0.045** (0.023)	-0.053** (0.023)	-0.059*** (0.018)	-0.046** (0.018)	-0.075*** (0.017)	-0.073*** (0.017)	-0.179*** (0.026)	-0.181*** (0.026)	0.571*** (0.028)	0.568*** (0.028)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.356	0.356	0.081	0.081	0.136	0.136	0.249	0.249	0.239	0.239
Mean among non-immigrant families	0.362	0.362	0.160	0.160	0.132	0.132	0.217	0.217	0.159	0.159
Nb Obs	3106	3106	3008	3008	2913	2913	2913	2913	2913	2913
Adjusted R-squared	0.307	0.315	0.159	0.187	0.459	0.459	0.507	0.507	0.504	0.505

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. The regressions in panel 1 show effect sizes for students' preferred academic aspirations without controlling for their attainable options. The regressions in panel 2 show effect sizes for students' preferred academic aspirations while controlling for their attainable options. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' test scores in Nov. 2012 and average yearly grades are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

Table 5: Professional Aspirations at Equal Test Score and Teachers' Grades

Variable	Level corresponding to job preference after HS									
	No response (1)	(2)	No higher ed. (3)	(4)	1-2 yrs college (5)	(6)	3-4 yrs college (7)	(8)	5 or more yrs college (9)	(10)
Low-SES family	-0.024 (0.021)	-0.025 (0.022)	0.034 (0.023)	0.013 (0.022)	-0.013 (0.020)	-0.010 (0.021)	0.023 (0.017)	0.023 (0.018)	-0.003 (0.024)	0.021 (0.024)
Immigrant family	-0.010 (0.019)	-0.010 (0.019)	-0.082*** (0.022)	-0.083*** (0.022)	0.009 (0.015)	0.010 (0.015)	0.023 (0.015)	0.024 (0.015)	0.074*** (0.023)	0.074*** (0.023)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.217	0.217	0.353	0.353	0.276	0.276	0.090	0.090	0.445	0.445
Mean among non-immigrant families	0.203	0.203	0.424	0.424	0.256	0.256	0.104	0.104	0.391	0.391
Nb Obs	3121	3121	3121	3121	3121	3121	3121	3121	3121	3121
Adjusted R-squared	0.034	0.035	0.063	0.073	0.016	0.017	0.044	0.046	0.094	0.110

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' test scores in Nov. 2012 and average yearly grades are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

Table 6: Track Assignment at Equal Initial Test Scores and Teachers' Grades

Variable	Stayed in Middle Sch.					
	Entered Voca. HS (1)	(2)	Entered Acad. HS (3)	(4)	Stayed in Middle Sch. (5)	(6)
Low-SES family	0.130*** (0.014)	0.066*** (0.012)	-0.137*** (0.015)	-0.062*** (0.012)	0.007 (0.009)	-0.004 (0.008)
Immigrant family	-0.031* (0.017)	-0.040*** (0.014)	0.023 (0.019)	0.034*** (0.012)	0.008 (0.009)	0.006 (0.008)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.064	0.064	0.918	0.918	0.018	0.018
Mean among non-immigrant families	0.197	0.197	0.775	0.775	0.027	0.027
Nb Obs	3121	3121	3121	3121	3121	3121
Adjusted R-squared	0.272	0.516	0.312	0.619	0.036	0.075

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' test scores in November 2012 are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

Table 7: Academic Progress over the Academic Year

Variable	Test scores in June 2013			
	(1)	(2)	(3)	(4)
Low-SES family	-0.291*** (0.028)	-0.272*** (0.027)	-0.122*** (0.021)	-0.120*** (0.021)
Immigrant family	0.003 (0.026)	-0.007 (0.025)	0.013 (0.022)	0.010 (0.022)
Pref. options includes Vocational HS		-0.356*** (0.041)		-0.079*** (0.029)
No response for pref. options after JHS		-0.250*** (0.032)		-0.088*** (0.025)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y
Deciles in average yearly grade			Y	Y
Class fixed effects and Controls	Y	Y	Y	Y
Mean among high-SES families	0.677	0.677	0.677	0.677
Mean among non-immigrant families	0.224	0.224	0.224	0.224
Mean among students with pref. for Acad. HS	0.268	0.268	0.268	0.268
Nb Obs	3121	3113	3121	3113
Adjusted R-squared	0.615	0.631	0.807	0.808

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. In this table, test scores in June 2013 are normalised test scores. Coefficients can be interpreted as standardized effect sizes. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' average yearly grade and test scores in Nov. 2012 are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

Table 8: Track Assignment at Equal Academic Performance All Over the Year and Equal Initial Aspirations

Variable	Entered Vocca. HS		Entered Acad. HS		Stayed in Middle Sch.	
	(1)	(2)	(3)	(4)	(5)	(6)
Low-SES family	0.068*** (0.013)	0.055*** (0.012)	-0.067*** (0.013)	-0.051*** (0.011)	-0.001 (0.008)	-0.004 (0.008)
Immigrant family	-0.020 (0.015)	-0.028** (0.013)	0.014 (0.015)	0.024** (0.011)	0.006 (0.009)	0.004 (0.008)
Pref. options includes Vocational HS	0.282*** (0.028)	0.239*** (0.024)	-0.250*** (0.026)	-0.196*** (0.022)	-0.032*** (0.011)	-0.043*** (0.012)
No response for pref. options after JHS	0.080*** (0.016)	0.063*** (0.015)	-0.089*** (0.016)	-0.069*** (0.013)	0.010 (0.010)	0.006 (0.010)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y
Deciles in test scores in June 2013	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade		Y		Y		Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.064	0.064	0.918	0.918	0.018	0.018
Mean among non-immigrant families	0.197	0.197	0.775	0.775	0.027	0.027
Mean among students with pref. for Acad. HS	0.120	0.120	0.854	0.854	0.026	0.026
Nb Obs	3113	3113	3113	3113	3113	3113
Adjusted R-squared	0.496	0.570	0.553	0.662	0.054	0.080

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' preferences after Junior High School, average yearly grades, and test scores in Nov. 2012 and June 2013 are controlled for in these regressions. Students' average yearly grade and test scores in Nov. 2012 and June 2013 are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

Table 9: Impact of Aspirations on Academic Progress and Track Assignment, IV Estimates

Variable	First Stage		IV		OLS			
	No pref. or Voca. HS preferred after JHS (1)	(2)	Test score in June 2013 (3)	Entered Voca. HS (4)	Entered Acad. HS (5)	Test score in June 2013 (6)	Entered Voca. HS (7)	Entered Acad. HS (8)
Scholastic Self-Esteem	-0.101*** (0.009)	-0.099*** (0.010)						
Low-SES family	0.011 (0.020)	0.015 (0.019)	-0.108*** (0.022)	0.057*** (0.013)	-0.053*** (0.011)	-0.117*** (0.020)	0.059*** (0.012)	-0.054*** (0.011)
Immigrant family	-0.040* (0.020)	-0.037* (0.020)	-0.013 (0.026)	-0.023* (0.013)	0.022* (0.011)	0.008 (0.022)	-0.028** (0.013)	0.026** (0.011)
No pref. or Voca. HS preferred after JHS			-0.696*** (0.131)	0.271*** (0.072)	-0.246*** (0.066)	-0.084*** (0.023)	0.115*** (0.015)	-0.107*** (0.012)
Deciles in test scores in Nov. 2012	Y		Y	Y	Y	Y	Y	Y
Deciles in test scores in June 2013		Y		Y	Y		Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.208	0.208	0.677	0.064	0.918	0.684	0.063	0.918
Mean among non-immigrant families	0.307	0.307	0.224	0.197	0.775	0.236	0.194	0.779
Mean among students with pref. for Acad. HS	-	-	0.268	0.120	0.854	0.278	0.118	0.857
Nb Obs	3059	3180	3059	3059	3059	3059	3059	3059
Adjusted R-squared	0.208	0.218	0.738	0.534	0.633	0.807	0.559	0.651
Kleibergen-Paap rk Wald F	-	-	117.506	102.684	102.684	-	-	-
Cragg-Donald Wald F	-	-	100.664	90.191	90.191	-	-	-

The table reports the coefficients of OLS and IV regressions including class fixed effects and a control for students' gender. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' preferences after Junior High School, average yearly grades, and test scores in June 2013 are controlled for in these regressions. Students' average yearly grade and test scores in Nov. 2012 and June 2013 are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

Table A1: Teachers' Grades at Equal Test Score

Variable	Average yearly grade (1)	Average yearly grade (2)
Low-SES family	-0.279*** (0.033)	-0.072*** (0.024)
Immigrant family	-0.008 (0.037)	-0.020 (0.031)
Deciles in test scores in Nov. 2012	Y	Y
Deciles in test scores in June 2013	Y	Y
Class fixed effects and Controls	Y	Y
Mean among high-SES families	0.501	0.501
Mean among non-immigrant families	0.146	0.146
Nb Obs	3121	3243
Adjusted R-squared	0.472	0.725

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. In this table, average yearly grades are normalised test scores. Coefficients can be interpreted as standardized effect sizes. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' test scores in Nov. 2012 and June 2013 are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.



Table A2: Academic Aspiration Windows after Junior High School at Equal Test Score and Teachers' Grades by Tertiles

Variable	Attainable options after JHS					
	No response (1)	(2)	Vocational HS (3)	(4)	Academic HS (5)	(6)
<b>Tercile 1: weakest test scores in Nov. 2012</b>						
Low-SES family	-0.098* (0.050)	-0.119** (0.051)	0.157*** (0.047)	0.116** (0.050)	-0.052 (0.063)	0.008 (0.061)
Immigrant family	-0.016 (0.041)	-0.013 (0.040)	-0.027 (0.044)	-0.021 (0.042)	0.040 (0.057)	0.034 (0.048)
Mean among high-SES families	0.179	0.179	0.200	0.200	0.707	0.707
Mean among non-immigrant families	0.154	0.154	0.353	0.353	0.583	0.583
Nb Obs	1012	1012	1012	1012	1012	1012
Adjusted R-squared	0.003	0.013	0.063	0.092	0.106	0.189
<b>Tercile 2: medium test scores in Nov. 2012</b>						
Low-SES family	-0.035* (0.021)	-0.042* (0.022)	0.073* (0.041)	0.054 (0.043)	-0.051 (0.036)	-0.024 (0.033)
Immigrant family	0.053* (0.031)	0.048 (0.030)	-0.083* (0.047)	-0.092** (0.047)	-0.031 (0.045)	-0.024 (0.045)
Mean among high-SES families	0.087	0.087	0.172	0.172	0.869	0.869
Mean among non-immigrant families	0.062	0.062	0.238	0.238	0.833	0.833
Nb Obs	1044	1044	1044	1044	1044	1044
Adjusted R-squared	0.060	0.059	0.100	0.133	0.083	0.126
<b>Tercile 3: strongest test scores in Nov. 2012</b>						
Low-SES family	0.005 (0.016)	-0.002 (0.016)	0.007 (0.034)	-0.007 (0.033)	-0.013 (0.018)	0.002 (0.018)
Immigrant family	-0.003 (0.020)	-0.007 (0.020)	-0.043 (0.037)	-0.055 (0.038)	0.006 (0.022)	0.012 (0.023)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.037	0.037	0.131	0.131	0.945	0.945
Mean among non-immigrant families	0.044	0.044	0.151	0.151	0.933	0.933
Nb Obs	1057	1057	1057	1057	1057	1057
Adjusted R-squared	0.099	0.099	0.038	0.050	0.091	0.110

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' test scores in Nov. 2012 and average yearly grades are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

Table A3: Academic Aspiration Windows after Junior High School at Equal Test Score and Teachers' Grades by Tertiles

Variable	Attainable options after HS							
	No response (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Tercile 1: weakest test scores in Nov. 2012</b>								
Low-SES family	0.075 (0.063)	0.042 (0.065)	-0.031 (0.056)	-0.025 (0.055)	-0.034 (0.053)	0.007 (0.052)	-0.025 (0.032)	-0.006 (0.031)
Immigrant family	-0.030 (0.041)	-0.025 (0.039)	0.014 (0.027)	0.013 (0.027)	0.044* (0.026)	0.041 (0.027)	-0.003 (0.022)	-0.007 (0.022)
Mean among high-SES families	0.435	0.435	0.167	0.167	0.225	0.225	0.145	0.145
Mean among non-immigrant families	0.549	0.549	0.139	0.139	0.154	0.154	0.077	0.077
Nb Obs	1006	1006	1006	1006	1006	1006	1006	1006
Adjusted R-squared	0.013	0.025	-0.011	-0.010	0.030	0.069	0.038	0.061
<b>Tercile 2: medium test scores in Nov. 2012</b>								
Low-SES family	0.056 (0.061)	0.031 (0.060)	0.004 (0.039)	0.009 (0.039)	-0.028 (0.050)	-0.006 (0.052)	-0.057* (0.034)	-0.044 (0.032)
Immigrant family	0.033 (0.056)	0.037 (0.058)	-0.022 (0.040)	-0.026 (0.041)	0.035 (0.046)	0.043 (0.047)	0.035 (0.037)	0.029 (0.037)
Mean among high-SES families	0.425	0.425	0.150	0.150	0.266	0.266	0.175	0.175
Mean among non-immigrant families	0.459	0.459	0.147	0.147	0.247	0.247	0.129	0.129
Nb Obs	1045	1045	1045	1045	1045	1045	1045	1045
Adjusted R-squared	0.033	0.046	0.052	0.047	0.024	0.054	0.044	0.062
<b>Tercile 3: strongest test scores in Nov. 2012</b>								
Low-SES family	0.057 (0.048)	0.046 (0.047)	0.005 (0.027)	0.002 (0.027)	0.002 (0.037)	0.010 (0.039)	-0.112*** (0.040)	-0.095** (0.040)
Immigrant family	0.078 (0.058)	0.076 (0.058)	-0.031 (0.039)	-0.029 (0.040)	-0.083 (0.053)	-0.086 (0.054)	0.058 (0.050)	0.064 (0.051)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.270	0.270	0.188	0.188	0.355	0.355	0.338	0.338
Mean among non-immigrant families	0.286	0.286	0.194	0.194	0.352	0.352	0.282	0.282
Nb Obs	1055	1055	1055	1055	1055	1055	1055	1055
Adjusted R-squared	0.047	0.058	0.014	0.016	0.026	0.031	0.067	0.087

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' test scores in Nov. 2012 and average yearly grades are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

Table A4: Academic Aspirations after Junior High School at Equal Test Score and Teachers' Grades by Tertiles

Variable	Preferred options after JHS					
	No response (1)	(2)	(3)	(4)	Academic HS (5) (6)	
<b>Tercile 1: weakest test scores in Nov. 2012</b>						
Low-SES family	-0.047 (0.056)	-0.071 (0.057)	0.137*** (0.037)	0.108*** (0.039)	-0.070 (0.061)	-0.019 (0.061)
Immigrant family	0.010 (0.046)	0.016 (0.047)	-0.075* (0.047)	-0.075* (0.044)	0.049 (0.052)	0.042 (0.045)
Mean among high-SES families	0.264	0.264	0.121	0.121	0.614	0.614
Mean among non-immigrant families	0.290	0.290	0.251	0.251	0.474	0.474
Nb Obs	1012	1012	1012	1012	1012	1012
Adjusted R-squared	0.044	0.057	0.047	0.070	0.074	0.124
<b>Tercile 2: medium test scores in Nov. 2012</b>						
Low-SES family	-0.011 (0.044)	-0.032 (0.044)	0.069* (0.037)	0.050 (0.033)	-0.062 (0.046)	-0.024 (0.046)
Immigrant family	0.013 (0.049)	0.009 (0.048)	-0.026 (0.034)	-0.035 (0.035)	-0.000 (0.051)	0.009 (0.050)
Mean among high-SES families	0.200	0.200	0.047	0.047	0.759	0.759
Mean among non-immigrant families	0.201	0.201	0.097	0.097	0.711	0.711
Nb Obs	1044	1044	1044	1044	1044	1044
Adjusted R-squared	0.007	0.018	0.036	0.071	0.054	0.100
<b>Tercile 3: strongest test scores in Nov. 2012</b>						
Low-SES family	0.000 (0.028)	-0.004 (0.027)	0.004 (0.016)	-0.010 (0.017)	0.005 (0.031)	0.023 (0.030)
Immigrant family	-0.011 (0.031)	-0.011 (0.031)	0.008 (0.014)	-0.004 (0.011)	0.008 (0.033)	0.017 (0.032)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.118	0.118	0.027	0.027	0.857	0.857
Mean among non-immigrant families	0.132	0.132	0.032	0.032	0.842	0.842
Nb Obs	1057	1057	1057	1057	1057	1057
Adjusted R-squared	0.051	0.052	0.131	0.192	0.053	0.065

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' test scores in Nov. 2012 and average yearly grades are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

Table A5: Academic Aspirations after High School at Equal Test Score and Teachers' Grades by Tertiles

Variable	Preferred options after HS									
	No response (1)	(2)	Finding a job (3)	(4)	1-2 yrs college (5)	(6)	3-4 yrs college (7)	(8)	Masters (9)	(10)
<b>Tercile 1: weakest test scores in Nov. 2012</b>										
Low-SES family	-0.078*	-0.059	0.137***	0.090*	-0.044	-0.046	0.044	0.076	-0.040	-0.028
	(0.046)	(0.048)	(0.051)	(0.051)	(0.051)	(0.051)	(0.051)	(0.054)	(0.034)	(0.034)
Immigrant family	0.044	0.043	-0.077*	-0.075*	0.015	0.015	0.024	0.025	-0.008	-0.010
	(0.040)	(0.040)	(0.044)	(0.042)	(0.023)	(0.024)	(0.029)	(0.031)	(0.025)	(0.024)
Mean among high-SES families	0.413	0.413	0.152	0.152	0.152	0.152	0.160	0.160	0.144	0.144
Mean among non-immigrant families	0.372	0.372	0.302	0.302	0.130	0.130	0.141	0.141	0.072	0.072
Nb Obs	1006	1006	975	975	946	946	946	946	946	946
Adjusted R-squared	0.049	0.050	0.090	0.151	-0.003	-0.006	0.011	0.045	0.064	0.080
<b>Tercile 2: medium test scores in Nov. 2012</b>										
Low-SES family	0.011	-0.001	0.039	0.020	0.021	0.020	-0.038	-0.019	-0.070*	-0.059
	(0.049)	(0.051)	(0.034)	(0.035)	(0.040)	(0.041)	(0.040)	(0.043)	(0.040)	(0.040)
Immigrant family	0.068	0.073	-0.055	-0.060	-0.031	-0.033	0.010	0.013	0.012	0.012
	(0.053)	(0.054)	(0.036)	(0.038)	(0.043)	(0.044)	(0.043)	(0.043)	(0.033)	(0.034)
Mean among high-SES families	0.384	0.384	0.111	0.111	0.131	0.131	0.241	0.241	0.165	0.165
Mean among non-immigrant families	0.388	0.388	0.152	0.152	0.136	0.136	0.216	0.216	0.115	0.115
Nb Obs	1045	1045	1007	1007	973	973	973	973	973	973
Adjusted R-squared	0.003	0.000	0.017	0.041	0.006	0.001	0.052	0.072	0.021	0.019
<b>Tercile 3: strongest test scores in Nov. 2012</b>										
Low-SES family	0.011	0.008	0.047*	0.037	-0.014	-0.017	0.001	0.005	-0.095**	-0.078*
	(0.057)	(0.056)	(0.026)	(0.026)	(0.024)	(0.024)	(0.046)	(0.047)	(0.043)	(0.042)
Immigrant family	0.001	0.001	0.001	-0.002	-0.010	-0.011	-0.115**	-0.114**	0.094**	0.098**
	(0.044)	(0.045)	(0.026)	(0.026)	(0.036)	(0.036)	(0.045)	(0.048)	(0.045)	(0.045)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.328	0.328	0.046	0.046	0.134	0.134	0.277	0.277	0.301	0.301
Mean among non-immigrant families	0.335	0.335	0.072	0.072	0.131	0.131	0.276	0.276	0.250	0.250
Nb Obs	1055	1055	1026	1026	994	994	994	994	994	994
Adjusted R-squared	0.009	0.007	0.109	0.123	0.047	0.053	0.030	0.026	0.040	0.059

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' test scores in Nov. 2012 and average yearly grades are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

Table A6: Track Assignment at Equal Academic Performance All Over the Year

Variable	Entered Voca. HS (1)	Entered Acad. HS (2)	Entered Acad. HS (3)	Stayed in Middle Sch. (4)	Stayed in Middle Sch. (5)	Stayed in Middle Sch. (6)
Low-SES family	0.077*** (0.013)	0.062*** (0.012)	-0.075*** (0.013)	-0.056*** (0.011)	-0.002 (0.008)	-0.006 (0.008)
Immigrant family	-0.029* (0.015)	-0.036*** (0.013)	0.022 (0.016)	0.030*** (0.012)	0.008 (0.008)	0.006 (0.008)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y
Deciles in test scores in June 2013	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.064	0.064	0.918	0.918	0.018	0.018
Mean among non-immigrant families	0.197	0.197	0.775	0.775	0.027	0.027
Nb Obs	3121	3121	3121	3121	3121	3121
Adjusted R-squared	0.458	0.544	0.527	0.646	0.051	0.074

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' average yearly grades, and test scores in Nov. 2012 and June 2013 are controlled for by deciles in these regressions. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

Table A7: Academic Progress over the Academic Year, Using Detailed SES Categories

Variable	Test scores in June 2013			
	(1)	(2)	(3)	(4)
No parent has ever worked	-0.478*** (0.054)	-0.449*** (0.052)	-0.234*** (0.049)	-0.234*** (0.049)
Max. family SES is manual laborer	-0.402*** (0.042)	-0.375*** (0.041)	-0.175*** (0.034)	-0.170*** (0.034)
Max. family SES is low-skilled white-collar	-0.312*** (0.033)	-0.289*** (0.031)	-0.109*** (0.025)	-0.107*** (0.025)
Max. family SES is craftsman or storekeeper	-0.290*** (0.060)	-0.276*** (0.057)	-0.128*** (0.038)	-0.127*** (0.038)
Max. family SES is intermediate occupation	-0.225*** (0.032)	-0.212*** (0.031)	-0.093*** (0.023)	-0.092*** (0.023)
Immigrant family	0.024 (0.025)	0.013 (0.023)	0.023 (0.021)	0.020 (0.022)
Pref. options after JHS includes Vocational HS		-0.352*** (0.041)		-0.080*** (0.028)
No response for pref. options after JHS		-0.246*** (0.031)		-0.087*** (0.025)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y
Deciles in average yearly grade			Y	Y
Class fixed effects and Controls	Y	Y	Y	Y
Mean for families with max. SES of high-skilled	0.693	0.693	0.693	0.693
Mean for non-immigrant families	0.224	0.224	0.224	0.224
Nb Obs	3121	3113	3121	3113
Adjusted R-squared	0.618	0.633	0.807	0.808

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. A family's socioeconomic status (SES) is stratified into six categories based on the parents' occupation. The first five variables in the table are dummy variables for the maximum family SES. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' average yearly grade and test scores in Nov. 2012 are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

Table A8: Track Assignment at Equal Academic Performance All Over the Year and Equal Initial Aspirations, Using Detailed SES Categories

Variable	Entered Voca. HS (1)	Entered Voca. HS (2)	Entered Acad. HS (3)	Entered Acad. HS (4)	Stayed in Middle Sch. (5)	Stayed in Middle Sch. (6)
No parent has ever worked	0.066 (0.045)	0.050 (0.039)	-0.077* (0.043)	-0.059* (0.034)	0.012 (0.026)	0.009 (0.026)
Max. family SES is manual laborer	0.066*** (0.022)	0.042** (0.019)	-0.079*** (0.021)	-0.049*** (0.017)	0.013 (0.014)	0.007 (0.014)
Max. family SES is low-skilled white-collar	0.082*** (0.018)	0.067*** (0.016)	-0.086*** (0.017)	-0.066*** (0.015)	0.003 (0.008)	-0.001 (0.008)
Max. family SES is craftsman or storekeeper	0.028 (0.028)	0.016 (0.026)	-0.046 (0.030)	-0.031 (0.025)	0.018 (0.023)	0.015 (0.022)
Max. family SES is intermediate occupation	0.058*** (0.017)	0.048*** (0.015)	-0.049*** (0.017)	-0.035** (0.015)	-0.010 (0.009)	-0.012 (0.009)
Immigrant family	-0.019 (0.015)	-0.026* (0.013)	0.016 (0.015)	0.024** (0.012)	0.003 (0.009)	0.001 (0.008)
Pref. options after JHS includes Vocational HS	0.281*** (0.028)	0.239*** (0.024)	-0.249*** (0.026)	-0.196*** (0.022)	-0.032*** (0.010)	-0.043*** (0.012)
No response for pref. options after JHS	0.079*** (0.017)	0.063*** (0.015)	-0.089*** (0.016)	-0.069*** (0.013)	0.010 (0.010)	0.006 (0.010)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y
Deciles in test scores in June 2013	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y
Mean for families with max. SES of high-skilled	0.060	0.060	0.922	0.922	0.017	0.017
Mean for non-immigrant families	0.197	0.197	0.775	0.775	0.027	0.027
Nb Obs	3113	3113	3113	3113	3113	3113
Adjusted R-squared	0.496	0.570	0.553	0.662	0.054	0.080

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. A family's socioeconomic status (SES) is stratified into six categories based on the parents' occupation. The first five variables in the table are dummy variables for the maximum family SES. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' preferences after Junior High School, average yearly grades, and test scores in June 2013 are controlled for in these regressions. Students' average yearly grade and test scores in June 2013 are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

Table A9: Academic Progress over the Academic Year, Using Detailed Aspirations

Variable	Test scores in June 2013			
	(1)	(2)	(3)	(4)
Low-SES family	-0.293*** (0.032)	-0.288*** (0.032)	-0.126*** (0.025)	-0.127*** (0.025)
Immigrant family	-0.015 (0.028)	-0.019 (0.027)	0.014 (0.023)	0.012 (0.023)
No response for pref. options after HS	-0.104** (0.045)	-0.063 (0.045)	-0.016 (0.032)	-0.001 (0.032)
Pref. options after HS includes 1-2 years college	-0.123*** (0.044)	-0.114*** (0.043)	-0.020 (0.035)	-0.020 (0.035)
Pref. options after HS includes 3-4 years college	0.014 (0.042)	0.005 (0.041)	0.011 (0.029)	0.008 (0.029)
Pref. options after HS includes finding a job	-0.377*** (0.051)	-0.274*** (0.051)	-0.078** (0.038)	-0.053 (0.039)
Pref. options includes Vocational HS		-0.247*** (0.046)		-0.049* (0.030)
No response for pref. options after JHS		-0.207*** (0.034)		-0.085*** (0.026)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y
Deciles in average yearly grade			Y	Y
Class fixed effects and Controls	Y	Y	Y	Y
Mean among high-SES families	0.677	0.677	0.677	0.677
Mean among non-immigrant families	0.224	0.224	0.224	0.224
Nb Obs	2815	2810	2815	2810
Adjusted R-squared	0.633	0.641	0.808	0.809

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. In this table, test scores in June 2013 are normalised test scores. Coefficients can be interpreted as standardized effect sizes. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' average yearly grade and test scores in Nov. 2012 are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.



Table A10: Track Assignment at Equal Academic Performance All Over the Year and Equal Initial Aspirations, Using Detailed Aspirations

Variable	Entered Voca. HS (1)	Entered Acad. HS (2)	Entered Acad. HS (3)	Stayed in Middle Sch. (4)	Stayed in Middle Sch. (5)	Stayed in Middle Sch. (6)
Low-SES family	0.061*** (0.013)	0.048*** (0.012)	-0.059*** (0.013)	-0.042*** (0.011)	-0.002 (0.008)	-0.006 (0.008)
Immigrant family	-0.022 (0.014)	-0.029** (0.013)	0.015 (0.015)	0.025** (0.012)	0.007 (0.009)	0.005 (0.008)
Pref. options includes Vocational HS	0.243*** (0.028)	0.212*** (0.025)	-0.214*** (0.027)	-0.176*** (0.022)	-0.029** (0.014)	-0.037** (0.015)
No response for pref. options after JHS	0.065*** (0.018)	0.055*** (0.017)	-0.076*** (0.017)	-0.063*** (0.014)	0.011 (0.012)	0.009 (0.012)
No response for pref. options after HS	0.002 (0.015)	-0.006 (0.013)	0.007 (0.015)	0.016 (0.014)	-0.009 (0.008)	-0.010 (0.008)
Pref. options after HS includes 1-2 years college	-0.009 (0.021)	-0.013 (0.019)	0.010 (0.020)	0.014 (0.018)	-0.000 (0.011)	-0.001 (0.011)
Pref. options after HS includes 3-4 years college	-0.016 (0.017)	-0.015 (0.014)	0.019 (0.017)	0.017 (0.013)	-0.003 (0.009)	-0.002 (0.009)
Pref. options after HS includes finding a job	0.085*** (0.030)	0.054* (0.028)	-0.086*** (0.031)	-0.046* (0.026)	0.000 (0.014)	-0.009 (0.013)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y
Deciles in test scores in June 2013	Y	Y	Y	Y	Y	Y
Deciles in average yearly grade	Y	Y	Y	Y	Y	Y
Class fixed effects and Controls	Y	Y	Y	Y	Y	Y
Mean among high-SES families	0.064	0.064	0.918	0.918	0.018	0.018
Mean among non-immigrant families	0.197	0.197	0.775	0.775	0.027	0.027
Nb Obs	2810	2810	2810	2810	2810	2810
Adjusted R-squared	0.504	0.575	0.561	0.667	0.050	0.079

The table reports the coefficients of an OLS regression including class fixed effects and a control for students' gender. 'Low-SES Family' is a dummy variable indicating that a student is from a family with low socioeconomic status. 'Immigrant Family' is a dummy variable indicating that both parents of a student are born outside of France. Students' preferences after Junior High School, average yearly grades, and test scores in June 2013 are controlled for in these regressions. Students' average yearly grade and test scores in June 2013 are controlled for by deciles. The standard errors are clustered at the school level and robust; they are reported in parenthesis. \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.



***Le LIEPP (Laboratoire interdisciplinaire d'évaluation des politiques publiques) est un laboratoire d'excellence (Labex).  
Ce projet est distingué par le jury scientifique international désigné par l'Agence nationale de la recherche (ANR).  
Il est financé dans le cadre des investissements d'avenir.***

*(ANR-11-LABX-0091, ANR-11-IDEX-0005-02)*

***[www.sciencespo.fr/liepp](http://www.sciencespo.fr/liepp)***

**Directeurs de publication:**  
Bruno Palier et Etienne Wasmer

Sciences Po - LIEPP  
27 rue Saint Guillaume  
75007 Paris - France  
+33(0)1.45.49.83.61  
[liepp@sciencespo.fr](mailto:liepp@sciencespo.fr)

