

# Biased Aspirations and Social Inequalities at School: Evidence from French Teenagers

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# Outline

- 1 Motivation**
- 2 Data
- 3 Social inequalities in educational aspirations
- 4 Evidence on Inefficiency
- 5 Further explorations
- 6 Bonus: Impact of aspirations
- 7 Conclusions

# Research question

Low social mobility is a major concern:

- Social fairness
- Economic efficiency

This paper explores:

- Students' aspirations as a cause of self-perpetuating social inequalities in school achievement
- and the mechanisms leading to social inequalities in aspirations

# Motivation

How does family background influence student academic achievement?

Many mechanisms have been well-studied, but only nascent theoretical literature on the role of aspirations:

- Social inequalities in the *capacity* to aspire to one's potential
- Creating a poverty trap: low aspirations  $\Rightarrow$  low effort and investment  $\Rightarrow$  low outcomes  $\Rightarrow$  low aspirations...
- Appadurai (2004), Ray (2006), Dalton et al. (2015), Ray and Genicot (2015)

# Contribution of the paper

- 1 Measures social inequalities in academic and professional aspirations
- 2 Points to biases inconsistent with maximized utility:
  - Un-awareness of some educational options
  - Misperceptions of one's academic potential
- 3 Disentangles these biases from other mechanisms that could be consistent with maximized utility:
  - Opportunity cost of education
  - Professional aspirations
- 4 Investigates the effect of aspirations on later schooling outcomes

# Literature: social determination of aspirations

Social inequalities in academic preferences in the US:

- “Wisconsin Model” (Sewell et al. 1969, Sewell et al. 1970, Jenck et al., 1983):
  - at similar score of IQ and grades in 11th grade, US high-SES students are more likely to declare that they want to attend a 4-year college
- Hoxby and Avery (2013):
  - 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
  - despite the fact that selective institutions would often cost them less

⇒ No evidence on the underlying mechanisms

In our paper: decompose aspirations to understand what drives social differences in aspirations

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# French context

- Junior High School: grades 6 to 9
- Uniform curriculum for all students in Junior High School
- But stratified system of High Schools: **academic** and **vocational** tracks
- First irreversible choice determining future academic and professional paths



# Sample

- Survey data merged with administrative data
- 3415 grade 9 students in 50 junior high schools

# Aspirations in Nov. 2012

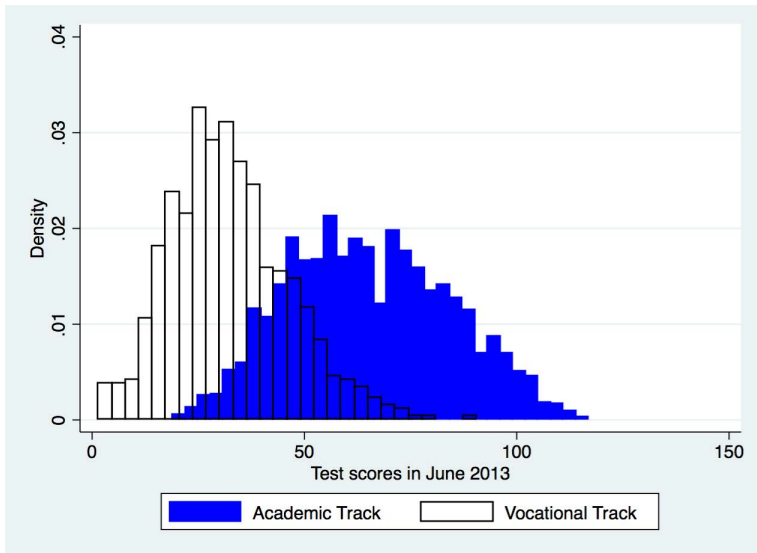
## Survey data:

- Aspirations for high school and higher education:
  - What they “know” = **salient** options
  - What they think is possible for them = **attainable** options
  - What they prefer = **aspiration**
- Professional aspirations, ranked by required diploma

# Family Characteristics

- Family Socio-Economic Status (SES) based on occupations (from admin. data)
    - **High-SES** (32%): at least one parent has an occupation that requires graduate studies
    - **Low-SES** (22%): maximum family SES requires no higher education
    - **Intermediate-SES** (46%)
  - Immigration status based on parents' countries of birth = *first generation* immigrants (from the survey)
    - **Immigrant family** = both parents were born abroad
    - 38% of immigrant families (of which 60% come from Africa)
- ⇒ Immigrant families are mostly also low-SES families
- 68% of immigrant are low-SES

# Academic performance by assignment track



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# Social inequalities in Educational Aspirations

	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel 1: Preferred options after Junior High</b>						
	Vocational High School			Academic High School		
Low SES family	0.140*** (0.015)	0.065*** (0.014)	0.068*** (0.016)	-0.214*** (0.019)	-0.073*** (0.017)	-0.050** (0.019)
Intermediate SES family	0.078*** (0.013)	0.030** (0.013)	0.029* (0.015)	-0.129*** (0.024)	-0.036* (0.022)	-0.021 (0.024)
Immigrant family	-0.033** (0.015)	-0.049*** (0.014)	-0.040*** (0.014)	0.012 (0.021)	0.046** (0.019)	0.037 (0.023)
Nb Obs	3322	3322	3322	3322	3322	3322
Adjusted R-squared	0.030	0.094	0.129	0.037	0.135	0.166
Mean among high-SES families	0.045	0.045	0.045	0.796	0.796	0.796
Mean among non-immigrant families	0.114	0.114	0.114	0.694	0.694	0.694

	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel 2: Preferred options after High School</b>						
	No Higher Education			Graduate studies		
Low SES family	0.164*** (0.016)	0.081*** (0.016)	0.077*** (0.018)	-0.133*** (0.021)	-0.067*** (0.019)	-0.041** (0.021)
Intermediate SES family	0.078*** (0.015)	0.027* (0.016)	0.020 (0.016)	-0.103*** (0.023)	-0.054** (0.023)	-0.033 (0.025)
Immigrant family	-0.029* (0.015)	-0.048*** (0.015)	-0.052*** (0.018)	0.009 (0.012)	0.024** (0.012)	0.029** (0.014)
Nb Obs	3313	3313	3313	3313	3313	3313
Adjusted R-squared	0.032	0.105	0.131	0.029	0.063	0.087
Mean among high-SES families	0.083	0.083	0.083	0.209	0.209	0.209
Mean among non-immigrant families	0.160	0.160	0.160	0.140	0.140	0.140

*Other controls for all panels:*

Deciles in test scores in Nov. 2012		Y	Y		Y	Y
Dummies for score on Raven matrices		Y	Y		Y	Y
Effort put into the test		Y	Y		Y	Y
Self-Perception of Behavioral Conduct		Y	Y		Y	Y
Class fixed effects			Y			Y

# Social inequalities in professional aspirations

	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel 3: Preferred Jobs</b>						
	No Higher Education			Graduate studies		
Low SES family	0.115*** (0.025)	0.027 (0.023)	0.048** (0.023)	-0.108*** (0.023)	0.003 (0.024)	-0.009 (0.025)
Intermediate SES family	0.074*** (0.025)	0.013 (0.023)	0.012 (0.026)	-0.066** (0.026)	0.013 (0.027)	0.019 (0.028)
Immigrant family	-0.062*** (0.017)	-0.085*** (0.018)	-0.074*** (0.021)	0.088*** (0.021)	0.113*** (0.020)	0.097*** (0.022)
Nb Obs	3330	3330	3330	3330	3330	3330
Adjusted R-squared	0.009	0.039	0.061	0.010	0.057	0.102
Mean among high-SES families	0.351	0.351	0.351	0.446	0.446	0.446
Mean among non-immigrant families	0.416	0.416	0.416	0.382	0.382	0.382
<i>Other controls for all panels:</i>						
Deciles in test scores in Nov. 2012		Y	Y		Y	Y
Dummies for score on Raven matrices		Y	Y		Y	Y
Effort put into the test		Y	Y		Y	Y
Self-Perception of Behavioral Conduct		Y	Y		Y	Y
Class fixed effects			Y			Y

# Consistency between educ. and prof. aspirations

- 1 Among students who aspire to a job that requires graduate studies...  
... only 22% mention graduate studies as their preferred option for after high school
- 2 Prof. aspirations do *not* explain social differences in educ. aspirations



# Partial Conclusion

- There are social inequalities in educational and professional aspirations
- Educ. aspirations *not* driven by prof. aspirations
- Are low-SES students right to aspire lower?
  - Yes: they do progress less than high-SES students (see appendix tables)
  - Probably because of factual constraints imposed by their SES
- But are their aspirations compatible with maximized individual utility?
  - Is there some evidence of inefficiency?

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# Are aspirations compatible with maximized utility?

- First, educ. aspirations *not* driven by prof. aspirations
  - So social diff. in educ. aspirations cannot be justified by:
    - anticipations of constraints on the labor market (discrimination or returns)
    - or social-identity driven tastes about future job
- Second, we explore information on:
  - how salient existing educational options are to them
  - their perception of their academic capacity

# Salient and Attain. options for High School

Variable	Vocational High Sch.	
	(1)	(2)
<b>Panel 1: Salient options</b>		
Low SES family	0.056** (0.023)	
Intermediate SES family	0.052** (0.026)	
Immigrant family	-0.026 (0.018)	
Nb Obs	2651	
Adjusted R-squared	0.051	
Mean high-SES families	0.811	
Mean non-immigrant families	0.833	
<b>Panel 2: Attainable options</b>		
Low SES family	0.046** (0.021)	-0.005 (0.011)
Intermediate SES family	0.062*** (0.024)	0.014 (0.010)
Immigrant family	-0.011 (0.020)	0.012 (0.010)
Salient options include a Vocational HS		0.901*** (0.019)
Salient options include an Academic HS		0.045 (0.028)
Nb Obs	2651	2651
Adjusted R-squared	0.043	0.750
Mean high-SES families	0.783	0.783
Mean non-immigrant families	0.799	0.799
Mean Salient after JH: no option	0.046	0.046
<i>Other controls for Panels 1 and 2:</i>		
Deciles in test scores in Nov. 2012	Y	Y
Dummies for score on Raven matrices	Y	Y
Effort put into the test	Y	Y
Self-Perception of Behavioral Conduct	Y	Y
Class fixed effects	Y	Y

# Salient and Attain. options for Higher Education

Variable	No option in Higher Educ.			Graduate studies		
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel 1: Salient options</b>						
Low SES family	0.059 (0.039)			-0.055 (0.035)		
Intermediate SES family	0.025 (0.035)			-0.039 (0.032)		
Immigrant family	-0.016 (0.026)			0.022 (0.022)		
Nb Obs	2651			2651		
Adjusted R-squared	0.085			0.117		
Mean high-SES families	0.317			0.377		
Mean non-immigrant families	0.414			0.278		
<b>Panel 2: Attainable options</b>						
Low SES family	0.081** (0.033)	0.068** (0.033)	0.038* (0.021)	-0.059*** (0.021)	-0.054** (0.022)	-0.034** (0.015)
Intermediate SES family	0.065** (0.033)	0.077** (0.034)	0.056** (0.023)	-0.054*** (0.019)	-0.057*** (0.020)	-0.039** (0.015)
Immigrant family	-0.033 (0.028)	-0.026 (0.026)	-0.015 (0.017)	0.021 (0.017)	0.018 (0.017)	0.011 (0.013)
Attainable options include a Vocational HS		-0.105*** (0.024)	-0.030 (0.021)		0.032* (0.017)	0.012 (0.013)
Attainable options include an Academic HS		-0.247*** (0.030)	-0.095*** (0.026)		0.086*** (0.018)	0.041*** (0.016)
Salient options include 1-4 yrs college			-0.535*** (0.020)			-0.012 (0.009)
Salient options include Graduate studies			-0.221*** (0.026)			0.421*** (0.025)
Nb Obs	2651	2651	2651	2651	2651	2651
Adjusted R-squared	0.088	0.141	0.488	0.094	0.107	0.369
Mean high-SES families	0.456	0.456	0.456	0.217	0.217	0.217
Mean non-immigrant families	0.568	0.568	0.568	0.139	0.139	0.139

*Other controls for Panels 1 and 2:*

Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y
Dummies for score on Raven matrices	Y	Y	Y	Y	Y	Y
Effort put into the test	Y	Y	Y	Y	Y	Y
Self-Perception of Behavioral Conduct	Y	Y	Y	Y	Y	Y
Class fixed effects	Y	Y	Y	Y	Y	Y

# Attainable options and Aspirations

Variable	Preferred Options after Junior High				Preferred Options after High School			
	Vocational High Sch. (1)	(2)	Academic High Sch. (3)	(4)	No Higher Educ. (5)	(6)	Graduate studies (7)	(8)
Low SES family	0.069*** (0.017)	0.036*** (0.013)	-0.049** (0.020)	0.007 (0.017)	0.077*** (0.018)	0.047*** (0.016)	-0.041** (0.021)	0.002 (0.013)
Intermediate SES family	0.028* (0.015)	0.023* (0.013)	-0.021 (0.025)	-0.021 (0.020)	0.020 (0.016)	0.013 (0.016)	-0.033 (0.025)	0.006 (0.017)
Immigrant family	-0.042*** (0.014)	-0.032*** (0.012)	0.035 (0.023)	0.011 (0.018)	-0.051*** (0.018)	-0.040** (0.017)	0.028** (0.014)	0.009 (0.009)
Attainable options include a Vocational HS		0.165*** (0.014)		0.007 (0.013)		0.081*** (0.013)		-0.006 (0.012)
Attainable options include an Academic HS		-0.337*** (0.022)		0.609*** (0.018)		-0.235*** (0.025)		0.027*** (0.009)
Attainable options include 1-4 yrs college		-0.004 (0.012)		0.091*** (0.015)		-0.096*** (0.013)		0.010 (0.010)
Attainable options include Graduate studies		0.040*** (0.011)		0.055*** (0.017)		-0.015 (0.012)		0.589*** (0.026)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y	Y	Y
Dummies for score on Raven matrices	Y	Y	Y	Y	Y	Y	Y	Y
Effort put into the test	Y	Y	Y	Y	Y	Y	Y	Y
Self-Perception of Behavioral Conduct	Y	Y	Y	Y	Y	Y	Y	Y
Class fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Nb Obs	3308	3308	3308	3308	3308	3308	3308	3308
Adjusted R-squared	0.130	0.302	0.162	0.430	0.132	0.214	0.086	0.474
Mean high-SES families	0.045	0.045	0.797	0.797	0.083	0.083	0.209	0.209
Mean non-immigrant families	0.114	0.114	0.696	0.696	0.160	0.160	0.140	0.140
Mean Attain. after JH: no option	0.067	0.067	0.159	0.159	0.281	0.281	0.009	0.009
Mean Attain. after HS: no option	0.165	0.165	0.533	0.533	0.263	0.263	0.015	0.015

# Partial Conclusion

Controlling for academic capacity and school environment:

- Social differences in attainable tracks explain most of differences in preferred tracks
- And differences in salient tracks explain a significant part of differences in attainable tracks

Points to 2 suboptimal mechanisms driving social inequalities in aspirations:

- Unawareness of some educational options  $\Rightarrow$  consistent with Appadurai (2004) and Ray (2006)
- Misperceptions of one's academic potential  $\Rightarrow$  consistent with Hoff papers (2006, 2011, 2016)

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## Other potential mechanisms

To explain social differences in **Attainable options** given similar salient options:

- **Social Fatalism**: overestimating the extent to which social background explain the probability of success
- **Scholastic Self-Esteem** (Harter scale): feeling about *current* scholastic capacity
- **Role of family example**: role model issues

To explain social differences in **Preferred options** (aspirations) given similar attainable options:

- *Affordability*: **Perceived cost** of education (opp. cost)
- *Taste*: **Parents' opinion**
- *Taste*: **Friends' opinion**

# Conclusions on detailed mechanisms

- Social Fatalism:
  - Excessive and widespread: may cause lower aspirations for low-SES and thus lower school outcomes
- Self-Esteem:
  - Low-SES students have a 0.145 SD lower scholastic self-esteem than equally-achieving high-SES classmates
    - Based on perceptions of *present* academic capacity
    - More pronounced for students in the top tercile
- Evidence that social fatalism, scholastic self-esteem, and sensitivity to family example explain part of social differences in attainable options (given similar salient options)
- Evidence that liquidity and credit constraints, as well as parent-sensitive preferences participate in social differences in aspirations (given similar attainable options)

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# Impact of aspirations

We find that:

- Once *academic capacity* and class fixed effects are controlled for
- adding rough or detailed controls for parents' SES and immigration status does *not* affect the correlations between aspirations and later academic outcomes
- Not due to poor quality measures
- Also, aspirations are still correlated with later outcomes *within SES*

NB on using class fixed effects:

- Allows to exclude any confounding factors linked to sorting between schools and classes
- Also makes the identification very demanding as we exclude any real effect that may exist across classes

⇒ Aspirations **impact** later outcomes

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# Main results

This paper shows that:

1. There is a social gap in aspirations for high school and higher education that is bigger than the gap in job preferences
  2. Evidence of suboptimal mechanisms explaining the gap:
    - Unawareness of some educational options
    - Misperceptions of one's academic potential
  3. Aspirations one year before entering high school cause lower test score at the end of the year and assignment to “lower” tracks
- ⇒ Unlikely to be optimal in terms of welfare

# Policy implications

- Double penalty for low-SES students:
  - More likely to suffer from the negative consequences of low aspirations on top of the negative consequences of their social origin
  - ⇒ Rapid divergence of school outcomes
- ⇒ Market failure that rationalizes some form of policy intervention to increase upward mobility
  - NOT equivalent to raising aspirations for all low-SES students
  - Aspirations need to be adjusted in ways that bring them in line with students' real potential
  - Call for policies raising awareness of existing options and pathways from education to jobs
  - together with self-esteem building, growth mindset, and role models programs