

Aspirations and the Perpetuation of Social Inequalities

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Motivation

The effect of social background on school environment and performances is well-known:

- Parental inputs
- Differential access to public goods through neighborhood sorting
- Peer effects

Motivation

The effect of social background on school environment and performances is well-known:

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- Differential access to public goods through neighborhood sorting
- Peer effects

But only nascent theoretical literature on the role of aspirations in self-perpetuating social inequalities

- 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
- Appadurai (2004), Ray (2006), Dalton et al. (2015), Ray and Genicot (2015)

Very thin empirical evidence

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

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Leaves two big questions opened:

- 1 Dynamic effects of aspirations?
- 2 Where does this social gap in aspirations come from?

Contribution of the paper

- 1 Provides first causal evidence on the impact of aspirations on later academic performances (and track choices)
- 2 Studies the causes of this social gap in aspirations:
 - a. Academic achievement: test scores and grades
 - b. Other class effects: peers, teachers' attitude
 - c. Disentangle between taste, feeling of capability and salience of existing options:
 - Salient options = information
 - Attainable options = adds perception of one's potential
 - Preferred option = adds taste

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Survey data in November 2012

Questionnaires for 6049 grade 9 students in 59 French JHS:

- Independent test
- Aspirations for high school, higher education and jobs:
 - What they “know” = salient options
 - What they think is possible for them = attainable options
 - What they prefer = aspiration
- Academic self-esteem (Harter scale)
- Immigration background: parents' countries of birth

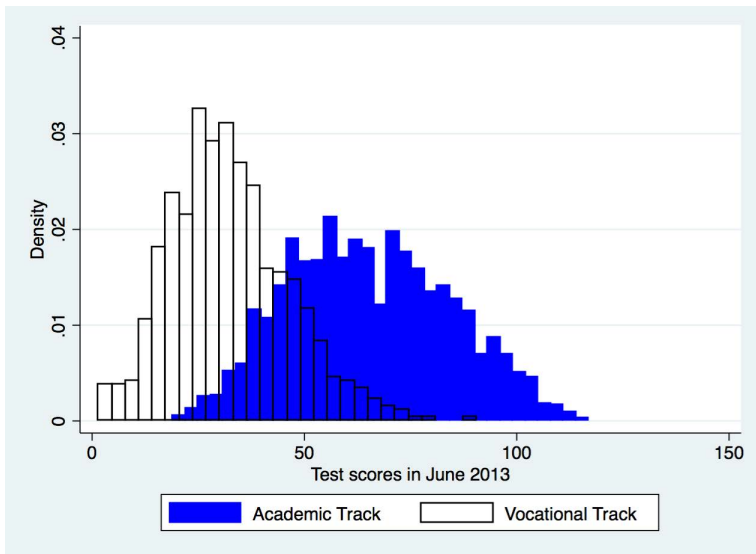
Administrative data in 2013

- Social background: parents' SES based on occupations
- Teachers' grades: average yearly grade during grade 9
- Test scores at the national exam at the end of grade 9 (end of JHS)
- Assignment to high school tracks in grade 10

Data (cont'd)

- Merge the 2 databases on school, gender and date of birth
- 3415 grade 9 students in 50 junior high schools
- Structure of the data:
 - Aspirations, academic self-esteem and test scores in Nov 2012
 - Teachers' grades over the year
 - Test scores in June 2013
 - Track assignment in Sept 2013

Academic performance by assignment track



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Academic Progress over the Academic Year

Variable	Test scores in June 2013		
	(1)	(2)	(3)
Pref. options includes Vocational HS	-0.371*** (0.042)	-0.355*** (0.042)	-0.351*** (0.041)
No response for pref. options after JHS	-0.269*** (0.030)	-0.251*** (0.031)	-0.247*** (0.031)
Low-SES family	-0.376*** (0.030)	-0.269*** (0.027)	
Max. family SES is manual laborer			-0.375*** (0.041)
Max. family SES is low-skilled white-collar			-0.287*** (0.031)
Max. family SES is craftsman or storekeeper			-0.273*** (0.057)
Max. family SES is intermediate occupation			-0.210*** (0.031)
No parent has ever worked			-0.445*** (0.054)
Immigrant family	-0.064** (0.029)	-0.006 (0.025)	0.014 (0.023)
Deciles in test scores in Nov. 2012	Y	Y	Y
Class fixed effects		Y	Y
Deciles in average yearly grade			
Mean among high-SES families	0.677	0.677	
Mean for families with max. SES of high-skilled			0.693
Mean among non-immigrant families	0.224	0.224	0.224
Mean among students with pref. for Acad. HS	0.268	0.268	0.268
Nb Obs	3113	3113	3113
Adjusted R-squared	0.579	0.630	0.632

Track Assignment

Variable	Entered Voca. HS		
	(1)	(2)	(3)
Pref. options includes Vocational HS	0.407*** (0.030)	0.390*** (0.031)	0.388*** (0.031)
No response for pref. options after JHS	0.151*** (0.019)	0.145*** (0.020)	0.144*** (0.020)
Low-SES family	0.103*** (0.014)	0.108*** (0.014)	
Max. family SES is manual laborer			0.139*** (0.023)
Max. family SES is low-skilled white-collar			0.126*** (0.019)
Max. family SES is craftsman or storekeeper			0.073*** (0.028)
Max. family SES is intermediate occupation			0.087*** (0.019)
No parent has ever worked			0.169*** (0.048)
Immigrant family	-0.018 (0.014)	-0.019 (0.016)	-0.024 (0.016)
Deciles in test scores in Nov. 2012	Y	Y	Y
Class fixed effects		Y	Y
Mean among high-SES families	0.064	0.064	
Mean for families with max. SES of high-skilled			0.060
Mean among non-immigrant families	0.197	0.197	0.197
Mean among students with pref. for Acad. HS	0.120	0.120	0.120
Nb Obs	3113	3113	3113
Adjusted R-squared	0.334	0.345	0.347

IV Strategy

- Exogenous source of variation of aspirations?
 - Influences aspirations
 - And outcomes but only through aspirations
- Salient options: “what do you know?”
 - Conditional on parental SES, academic performance, and class fixed effects
 - Remaining differences in salient options can be considered as random

IV Estimates on Academic Progress

Variable	First Stage Acad. HS preferred after JHS			IV Test score in June 2013		
	(1)	(2)	(3)	(4)	(5)	(6)
Acad. HS preferred after JHS				0.640*** (0.115)	0.634*** (0.111)	0.602*** (0.109)
Acad. salient opt. after JHS	0.470*** (0.027)	0.455*** (0.031)	0.454*** (0.032)			
Low-SES family	-0.075*** (0.018)	-0.047** (0.023)		-0.336*** (0.033)	-0.258*** (0.029)	
Max. family SES is manual laborer			-0.032 (0.034)			-0.362*** (0.044)
Max. family SES is low-skilled white-collar			-0.066** (0.027)			-0.278*** (0.031)
Max. family SES is craftsman or storekeeper			-0.030 (0.047)			-0.283*** (0.058)
Max. family SES is intermediate occupation			-0.032 (0.029)			-0.215*** (0.032)
No parent has ever worked			-0.027 (0.055)			-0.430*** (0.057)
Immigrant family	0.035* (0.020)	0.026 (0.024)	0.024 (0.024)	-0.082** (0.035)	-0.028 (0.029)	-0.008 (0.028)
Deciles in test scores in Nov. 2012	Y	Y	Y	Y	Y	Y
Class fixed effects		Y	Y		Y	Y
Mean among high-SES families	0.795	0.795		0.677	0.677	
Mean for families with max. SES of high-skilled			0.798			0.693
Mean among non-immigrant families	0.702	0.702	0.702	0.224	0.224	0.224
Mean among students with pref. for Acad. HS	-	-	-	0.268	0.268	0.268
Nb Obs	2501	2501	2501	2501	2501	2501
Adjusted R-squared	0.184	0.212	0.211	0.559	0.608	0.614

IV Estimates on Track Assignment

Variable	First Stage Acad. HS preferred after JHS			IV Entered Vocational HS		
	(1)	(2)	(3)	(4)	(5)	(6)
Acad. HS preferred after JHS				-0.162** (0.068)	-0.167** (0.079)	-0.165** (0.079)
Acad. salient opt. after JHS	0.430*** (0.030)	0.416*** (0.034)	0.417*** (0.035)			
Low-SES family	-0.037** (0.018)	-0.020 (0.021)		0.060*** (0.014)	0.081*** (0.014)	
Max. family SES is manual laborer			0.009 (0.032)			0.057** (0.024)
Max. family SES is low-skilled white-collar			-0.035 (0.024)			0.101*** (0.020)
Max. family SES is craftsman or storekeeper			0.000 (0.044)			0.028 (0.032)
Max. family SES is intermediate occupation			-0.012 (0.028)			0.079*** (0.019)
No parent has ever worked			0.027 (0.051)			0.057 (0.044)
Immigrant family	0.043** (0.020)	0.027 (0.024)	0.023 (0.024)	-0.049*** (0.016)	-0.036** (0.016)	-0.032** (0.015)
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
Class fixed effects		Y	Y		Y	Y
Mean among high-SES families	0.795	0.795		0.064	0.064	
Mean for families with max. SES of high-skilled			0.798			0.060
Mean among non-immigrant families	0.702	0.702	0.702	0.197	0.197	0.197
Mean among students with pref. for Acad. HS	-	-	-	0.120	0.120	0.120
Nb Obs	2501	2501	2501	2501	2501	2501
Adjusted R-squared	0.211	0.236	0.236	0.445	0.472	0.473

Second IV Strategy

- Exogenous source of variation of aspirations?
 - Influences aspirations
 - And outcomes but only through aspirations
- Academic Self-Esteem
 - Conditional on parental SES, academic performance, and class fixed effects
 - Remaining differences in self-esteem can be considered as random
 - Instrument = Distance between effective self-esteem and predicted self-esteem based on academic performances, parental SES, and class fixed effects

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Academic Aspirations after Junior High School

Variable	Vocational HS			
	(1)	(2)	(3)	(4)
Panel 1: Preferred options after JHS				
Low-SES family	0.113*** (0.013)	0.063*** (0.013)	0.054*** (0.014)	0.030*** (0.011)
Immigrant family	-0.025 (0.016)	-0.043*** (0.015)	-0.033** (0.015)	-0.007 (0.013)
Poss. options includes Vocational HS				0.382*** (0.023)
No response for poss. options after JHS				0.005 (0.018)
Mean among high-SES families	0.045	0.045	0.045	0.045
Mean among non-immigrant families	0.113	0.113	0.113	0.113
Nb Obs	3113	3113	3113	3113
Adjusted R-squared	0.024	0.070	0.106	0.336
Panel 2: Attainable options after JHS				
Low-SES family	0.130*** (0.019)	0.079*** (0.019)	0.064*** (0.021)	0.054*** (0.019)
Immigrant family	-0.057*** (0.021)	-0.076*** (0.020)	-0.067*** (0.022)	-0.074*** (0.023)
Known options includes Vocational HS				0.206*** (0.020)
No response for known options after JHS				-0.056* (0.029)
Mean among high-SES families	0.152	0.152	0.152	0.152
Mean among non-immigrant families	0.236	0.236	0.236	0.236
Nb Obs	3113	3113	3113	2501
Adjusted R-squared	0.019	0.049	0.087	0.123
Deciles in test scores in Nov. 2012		Y	Y	Y
Class fixed effects			Y	Y

Partial conclusion

Aspirations for:

- 1 Vocational HS: the gap is a matter of taste, feeling of capability and salience

Academic Aspirations after High School

Variable	Finding a job				Masters			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel 1: Preferred options after HS								
Low-SES family	0.139*** (0.012)	0.076*** (0.013)	0.061*** (0.015)	0.050*** (0.013)	-0.146*** (0.024)	-0.093*** (0.022)	-0.061*** (0.023)	-0.011 (0.016)
Immigrant family	-0.020 (0.015)	-0.042*** (0.014)	-0.051*** (0.017)	-0.050*** (0.016)	0.008 (0.015)	0.025* (0.014)	0.032* (0.017)	0.009 (0.012)
No response for poss. options after HS				0.070** (0.028)				-0.126*** (0.027)
Poss. options includes 1-4 yrs college				-0.084*** (0.020)				-0.106*** (0.029)
Poss. options includes Masters				-0.064*** (0.019)				0.561*** (0.029)
Mean among high-SES families	0.081	0.081	0.081	0.081	0.239	0.239	0.239	0.239
Mean among non-immigrant families	0.160	0.160	0.160	0.160	0.159	0.159	0.159	0.159
Nb Obs	3008	3008	3008	3008	2913	2913	2913	2913
Adjusted R-squared	0.028	0.082	0.113	0.152	0.036	0.066	0.092	0.504
Panel 2: Attainable options after HS					Masters			
No response								
Low-SES family	0.138*** (0.026)	0.059** (0.026)	0.059** (0.030)	0.022 (0.017)	-0.155*** (0.019)	-0.092*** (0.018)	-0.070*** (0.021)	-0.037** (0.015)
Immigrant family	0.009 (0.024)	-0.016 (0.023)	0.007 (0.028)	0.010 (0.019)	0.009 (0.015)	0.028** (0.014)	0.035* (0.018)	0.019 (0.014)
No response for known options after HS				0.583*** (0.039)				-0.039** (0.019)
Known options includes 1-4 yrs college				-0.141*** (0.033)				-0.036* (0.021)
Known options includes Masters				-0.048* (0.027)				0.415*** (0.026)
Mean among high-SES families	0.341	0.341	0.341	0.341	0.260	0.260	0.260	0.260
Mean among non-immigrant families	0.415	0.415	0.415	0.415	0.177	0.177	0.177	0.177
Nb Obs	3106	3106	3106	2495	3106	3106	3106	2495
Adjusted R-squared	0.018	0.051	0.065	0.524	0.037	0.078	0.087	0.369
Deciles in test scores in Nov. 2012		Y	Y	Y		Y	Y	Y
Class fixed effects			Y	Y			Y	Y

Partial conclusion (cont'd)

Aspirations for:

- 1 Vocational HS: the gap is a matter of taste, feeling of capability and salience
- 2 Working directly after HS: the gap is both a matter of taste and salience, not of feeling of capability
- 3 Doing a masters: the gap is both a matter of feeling of capability and salience, not of taste

Other explanatory factors

Data allow to explore some explanatory factors:

- Beliefs about one's chances to succeed depending on his background:
 - Can explain part of the gap between the preferences and the salient options
- Self-esteem:
 - Can explain part of the gap between the aspiration window and the salient options

Beliefs on success probability wrt background

Variable	Gap between the probability of succeeding for a student from an advantaged neighborhood compared to a student...		
	from a disadvantaged	whose parents are	with a family member
	neighborhood	immigrants	who succeeded
	(1)	(2)	(3)
Low-SES family	-0.182 (0.110)	-0.064 (0.144)	-0.114 (0.092)
Immigrant family	-0.083 (0.109)	-0.405*** (0.124)	-0.179 (0.117)
Deciles in test scores in Nov. 2012	Y	Y	Y
Class fixed effects	Y	Y	Y
Mean among high-SES families	3.673	2.705	0.846
Mean among non-immigrant families	3.169	2.355	0.380
Nb of obs	3052	3044	3052
Adjusted R-squared	0.0365	0.0506	0.0313

Self-esteem

Variable	Scholastic self-esteem
Low-SES family	-0.171*** (0.046)
Immigrant family	-0.062 (0.043)
Deciles in test scores in Nov. 2012	Y
Class fixed effects	Y
Mean among high-SES families	0.319
Mean among non-immigrant families	-0.123
Nb of obs	3067
Adjusted R-squared	0.273

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Main results

This paper shows that:

1. Aspirations one year before entering high school cause lower test score at the end of the year and assignment to “lower” tracks
2. There is a social gap in aspirations for high school and higher education (although no gap in job preferences)

Main results

3. The social gap in aspirations is explained by several factors:
 - a. Academic achievement explains a big part of the gap
 - b. At equal test scores, and within class, low-SES students have different salient options than their high-SES classmates
 - c. And different perceptions of their capacity
 - d. And different tastes

Welfare implications:

- Preferences are not only based on taste
- Unlikely to be optimal in terms of welfare