Social Environment, Beliefs, and Outcomes

Does Teen's Social Environment Influence Beliefs and Outcomes?

Sergio Ernesto Barrera
Virginia Tech

Acknowledgement: This research was conducted with restricted access to Bureau of Labor Statistics (BLS) data. The views expressed here do not necessarily reflect the views of the BLS.

Motivation

- Differences in beliefs by SES lead to higher education gaps. Low SES youth underestimate
  - net returns to college ($\Rightarrow$ lower **enrollment**).

    (Bettinger, Long, Oreopoulis & Sanbonmatsu 2012; Bleemer & Zafar 2018)
  - benefits or likelihood of attending elite institutions ($\Rightarrow$ less **quality** schools).

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    (Dynarski, Michelmore, Libassi, & Owen 2021; Hoxby & Turner 2015) .
- Explained by differences in social environment i.e. community adult and peers have less college completion or attended less selective colleges.

  (Hoxby and Avery 2013)

Motivation: Continued

- If youth's social environment affects beliefs about college and application/enrollment decisions,
  - Then likely affects younger teen's perceptions of high school completion and labor market opportunities.
  - Since lower expected returns to school lead to declines in arrests/incarceration.

    (Lochner 2004; Lochner & Moretti 2005; Byron, Hyman, Vasquez 2022)
  - This may also affect beliefs about other outcomes like arrests or early parenthood.

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3. How much do differences in beliefs explain inequality in these outcomes?
    - **Oaxaca Blinder Decomposition:** report percent of explained outcome gaps attributable to beliefs, neighborhoods, parents, peers, human capital, etc.
    - In this presentation - racial and ethnic gaps, future work-SES gaps.

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2. Beliefs can reflect **information frictions** that suggest policy improvements.
   - Information-Education campaigns improve education outcomes.

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- This paper will not distinguish, but previous work has attempted this to evaluate policies designed to increase representation in higher ed. (Barrera 2021)

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    (Bell, Chetty, Jaravel, Petkova& Van Reenan 2019; Chetty, Hendrin, Jones & Porter 2019)
- **Contribution:** By linking neighborhood effects to potential mechanism (beliefs), can
  - Identify at risk youth but also design policies that don't require costly moves.

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  1. See high school student, between 15-16 years old. Observe,
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2. See what happens to them. Able to answer,
   - Do they graduate high school or college?
   - When do they have children, are they arrested?
   - How many hours do they work?
   - Do they join the military?

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- **Negative Shocks:**
  - **Family Shocks:** count of events that occurred in family: parent death, parent unemployment, parent divorce or absence, household hospitalization.
  - **Victim Shock:** count of events that occurred to individual: been bullied, seen shooting, been homeless, home break in, felt unsafe, victim of violence.
    (DeLuca, Papageorge, Boselovic, Gershenson, Gray, Nerenberg, Sausedo, & Young 2021)

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- **Neighborhood Attributes:**
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- Sample restricted to those not missing any of the covariates.

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- For ease of presentation only important covariates shown, but whole list of afore mentioned controls is used.

Table 1: School Beliefs

VARIABLES	Prob School Next Year	Prob HS Grad by 20	Prob Prob Deg by 30
Reported 8th grade GPA	0.5266	2.0885**	8.4886***
	(0.4783)	(0.9441)	(1.2227)
Tract: Pct HS Diploma Only	0.0301	0.1179**	0.3311***
	(0.0671)	(0.0515)	(0.1242)
Tract: Pct Some College	-0.0268	-0.0217	-0.0442
	(0.0380)	(0.0475)	(0.1087)
Tract: Pct Bachelors +	-0.0196	-0.0452	0.1196
	(0.0470)	(0.0507)	(0.1011)
Avg Years of Parents Schooling	0.9064***	0.6023***	2.5043***
	(0.2466)	(0.2199)	(0.5624)
Pct Peers College Plans (25 ppts)	0.5155	1.8272**	5.0087***
	(0.3344)	(0.7117)	(0.7101)
County: Crime per 1k people	0.0211	0.0262*	-0.0425**
	(0.0224)	(0.0144)	(0.0193)
Pct Peers had Sex (25 ppts)		0.5647*	-1.5043**
		(0.3347)	(0.7058)
Parent Serve in Military	0.2564	1.4814*	1.0971
	(0.7118)	(0.7644)	(1.4788)
Constant	84.5800***	65.4903***	-22.5834
	(5.3937)	(6.2247)	(14.3205)
Observations	2,742	1,528	1,528

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

- Optimism regarding school outcomes positively associated with more education, military service, less crime and sex at young ages.

Table 2: Beliefs Arrest & Parenthood

VARIABLES	Prob Arrest Next Year	Prob Arrested | Stole Car	Prob Parent by 20
Ever had Sex by age 15	3.5279***	-7.0346***	8.9518***
	(0.6837)	(2.2750)	(1.2952)
County: Crime per 1k people	0.0260*	-0.0945**	0.0490**
	(0.0143)	(0.0410)	(0.0227)
Parent Ever in Jail	3.6199**	-8.1541**	6.1406**
	(1.7044)	(3.9747)	(2.7823)
Pct Peers Cut Class (25 ppts)	0.8497***	0.9114	0.1987
	(0.2280)	(0.9678)	(0.5654)
Pct Peers had Sex (25 ppts)		-0.1221	1.7990***
		(0.8366)	(0.5620)
Victim Shocks	1.0885**	-1.0101	0.0032
	(0.4286)	(1.3159)	(0.9515)
Tract: Pct HS Diploma Only	-0.0070	0.3675***	0.0664
	(0.0568)	(0.1284)	(0.0988)
Avg Years of Parents Schooling	0.1735	-0.6275	-0.6974*
	(0.1488)	(0.7961)	(0.3893)
Pct Peers College Plans (25 ppts)	0.4653	2.8593**	-0.4499
	(0.3297)	(1.2481)	(0.4952)
Constant	5.1618	50.6843***	21.9754**
	(4.6997)	(15.0871)	(9.3952)
Observations	2,742	1,528	1,528

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- Being parent young, or actual arrest seem more likely with exposure to more crime, incarceration, risky peer behavior, victimization, less education.
- **However** exposed to **more** crime, jail and **less** education believe theft **less risky.**

Table 3: Work Beliefs

VARIABLES	Prob Work | No School	Prob Work | School	Likelihood Serve Military
Suspended 10-15 years old	0.9095	4.7654***	0.0006
	(1.1760)	(1.5484)	(0.0827)
Tract: Unemployment Rate	-0.2843***	-0.1379	0.0145
	(0.1074)	(0.1297)	(0.0095)
Tract: Pct HS Diploma Only	0.0290	0.2238**	0.0112**
	(0.0978)	(0.0923)	(0.0052)
Tract: Pct Ever Military	0.1393**	0.1772**	0.0066
	(0.0647)	(0.0894)	(0.0058)
Parent Serve in Military	1.6731	2.9300**	0.0850
	(1.0306)	(1.4572)	(0.0804)
County: Crime per 1k people	0.0307	0.0362	0.0028**
	(0.0288)	(0.0324)	(0.0013)
Pct Peers Cut Class (25 ppts)	0.9499**	1.4772***	0.0315
	(0.4615)	(0.5172)	(0.0326)
Pct Peers had Sex (25 ppts)			-0.0577*
			(0.0320)
Pct Births Mother Under 20 County	-0.2237	-0.4036*	-0.0048
	(0.1823)	(0.2261)	(0.0101)
Mom's Age at First Birth	-0.2722**	-0.3059*	-0.0139*
	(0.1236)	(0.1804)	(0.0083)
Avg Years of Parents Schooling	0.1249	-1.5330***	0.0010
	(0.2665)	(0.3490)	(0.0232)
HH Net Worth ($10k)	-0.0258	-0.0922**	0.0009
	(0.0313)	(0.0382)	(0.0019)
Family Shocks	-0.2702	1.1885**	-0.0331
	(0.4541)	(0.4812)	(0.0270)
Constant	83.0050***	71.9101***	2.4752***
	(7.7853)	(7.9957)	(0.3841)
Observations	2,742	2,742	1,310

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- Working as teen seems more likely with more military, employment, high school completion, cutting class, and less young births, family resources/stability.
- Military service more likely with HS completion crime, less with sex at young ages.

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4. Likelihood of military service has similar negative relation as work with crime, sex at young ages, and positive relation with HS completion.

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Table 4: Outcomes

VARIABLES	HS Drop out	College Grad 30	Been Arrested	Parent by 20	Serve Military
Prob HS Grad by 20 (10 ppts)	-0.0426***	-0.0122**	0.0054	-0.0050	0.0052
	(0.0086)	(0.0062)	(0.0083)	(0.0090)	(0.0045)
Prob Deg by 30 (10 ppts)	-0.0057*	0.0177***	-0.0024	-0.0057*	0.0006
	(0.0034)	(0.0029)	(0.0038)	(0.0031)	(0.0023)
Prob Parent by 20 (10 ppts)	0.0132***	-0.0013	0.0109**	0.0128**	-0.0017
	(0.0036)	(0.0037)	(0.0051)	(0.0052)	(0.0034)
Prob Arrest Next Year (10 ppts)	0.0006	-0.0060	0.0242***	-0.0019	0.0022
	(0.0048)	(0.0057)	(0.0071)	(0.0065)	(0.0038)
Military Likelihood: Likely					0.1057***
					(0.0297)
Military Likelihood: Very Likely					0.1054**
					(0.0413)
HH Net Worth ($10k)	0.0002	0.0021***	-0.0000	-0.0004	-0.0004
	(0.0003)	(0.0007)	(0.0006)	(0.0003)	(0.0003)
Family Shocks	0.0024	-0.0378***	0.0145	0.0005	-0.0038
	(0.0062)	(0.0085)	(0.0108)	(0.0067)	(0.0042)
Victim Shocks	-0.0011	-0.0121	0.0456***	0.0021	-0.0005
	(0.0113)	(0.0084)	(0.0144)	(0.0120)	(0.0097)
Suspended 10-15 years old	0.0446	-0.0450*	0.1167***	0.0357	0.0021
	(0.0351)	(0.0242)	(0.0245)	(0.0303)	(0.0190)
ASVAB AFQT	-0.0012***	0.0031***	-0.0003	-0.0003	0.0007**
	(0.0004)	(0.0006)	(0.0005)	(0.0004)	(0.0003)
Constant	1.0987***	-0.7328***	0.4017***	0.4741***	0.0151
	(0.1352)	(0.1649)	(0.1259)	(0.1444)	(0.1126)
Observations	1,528	1,528	1,528	1,528	1,310

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

- Strong positive relation Beliefs and corresponding outcomes, all else constant.
- Positive correlation belief parent by 20, and actual HS dropout, arrests. Negative correlation between belief college grad and actual HS dropout, parent by 20.

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- Next we see how much differences in beliefs explain racial and ethnic gaps,
  - since Black and Hispanic youth more likely to come from households and neighborhoods with lower SES and education rates (hence different beliefs).
  - some research has claimed pessimism explains racial wealth gaps.

  (Boerma & Karabarbounis 2021)

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- Also report percent of explained gap by type of covariate, to show importance of magnitude.
- **Caveat:** Important to note that these groups of covariates can differ because of structural inequities and should not be identified with "culture."

Oaxaca Blinder: Black vs White Outcomes

Table 5: Black vs White Outcomes

VARIABLES	Arrest	Parent by 20	HS Dropout	College
Beliefs	0.0152**	0.0018	0.0146*	0.0018
% of Explained Gap	13.01	0.97	7.97	0.61
Neighborhood	-0.0062	0.0438	0.0179	-0.0058
% of Explained Gap	-5.31	23.51	9.77	-1.96
HH Environment	0.0259*	0.0257**	0.0048	0.0893***
% of Explained Gap	22.17	13.79	2.62	30.20
Peers	-0.0051	0.0206**	0.0145	0.0098
% of Explained Gap	-4.37	11.06	7.91	3.31
Academic	0.0434**	0.0265**	0.0773***	0.1588***
% of Explained Gap	37.16	14.22	42.17	53.70
Socio-behavioral	0.0420***	0.0316***	0.0296***	0.0216***
% of Explained Gap	35.96	16.96	16.15	7.30
Other	0.0016	0.0362***	0.0245**	0.0203
% of Explained Gap	1.37	19.43	13.37	6.87
White Outcome	0.2655***	0.1096***	0.0987***	0.4007***
Black Outcome	0.3394***	0.2668***	0.2176***	0.2694***
explained	0.1168***	0.1863***	0.1833***	0.2957***
unexplained	-0.0429	-0.0291	-0.0643*	-0.1644***
N White	821	821	821	821
N Black	386	386	386	386

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Oaxaca Blinder: Hispanic vs White Outcomes

Table 6: Hispanic vs White Outcomes

VARIABLES	Parent by 20	HS Dropout	College
Beliefs	0.0061	0.0389***	0.0021
% of Explained	3.92	39.25	1.20
Neighborhood	0.0915**	-0.0097	-0.0671*
% of Explained	58.80	-9.79	-38.41
HH Environment	0.0331**	0.0107	0.1228***
% of Explained	21.27	10.80	70.29
Peers	0.0152***	0.0029	0.0028
% of Explained	9.77	2.93	1.60
Academic	0.0249***	0.0499***	0.0983***
% of Explained	16.00	50.35	56.27
Socio-behavioral	0.0078*	0.0030	0.0040
% of Explained	5.01	3.03	2.29
Other	-0.0231	0.0035	0.0118
% of Explained	-14.85	3.53	6.75
White Outcome	0.1096***	0.0987***	0.4007***
Hispanic Outcome	0.2208***	0.2013***	0.1851***
explained	0.1556***	0.0991**	0.1747***
unexplained	-0.0444	0.0035	0.0410
N White	821	821	821
N Hispanic	308	308	308

Robust standard errors in parentheses

Summary of Oaxaca Blinder Decomposition

- Differences in beliefs have very limited explanatory value in explaining racial and ethnic inequality.
  - Beliefs explain 13% and 8% Black-White Arrest, HS dropout gap respectively.
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- HH environment, peer composition, neighborhood, and human capital differences are still important on their own.
- Results consistent with Barrera JMP 2021, find no significant role beliefs in Black/White college gaps, but important role for family wealth, human capital.

Conclusion

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- **However:** These beliefs don't explain racial/ethnic gaps in these outcomes, exception being HS dropout, arrests.
  - But Work still needs to be done if explains SES gaps in outcomes.

Future Work

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- Perhaps capture information frictions through information experiments that provide information.
  - Does a salient information campaign about benefits of school, affect risky behavior at young ages?
- Think of exogenous changes to policies to get at rationally internalized observables.