

Cascading in Public Higher Education: Institutional Stratification of Access in the U.S.

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Research Question

- Has social stratification in U.S. postsecondary institutional destination increased over time?

Literature Review

- Access to postsecondary education in the U.S. has increased in recent decades (National Center for Educational Statistics, 2008)
- As more people attain a particular education credential, the value of that credential decreases (Collins, 1979; Weber, 1948)
- Credentials from elite institutions retain their value because they are – by definition – always in short supply (Bourdieu, 1984, 1988)

Literature Review

- Therefore, as postsecondary access increases so does competition for access to elite institutions, as people use prestigious credentials to distinguish themselves (Labaree, 1988, 1997)
- Lower SES households are relegated to less prestigious institutions because they have fewer resources to devote to the competition for elite postsecondary access (Raferty & Hout, 1993; Swirski & Swirski, 1997).

Literature Review

- Prior research finds a significant relationship between SES/ethnicity and selectivity of postsecondary institution even after controlling for academic preparation (Hearn, 1991; Karen, 2002).
- No research has looked at change over time in these relationships.
- No research has exploited recently available data on postsecondary education access of 2004 high school seniors.

Data

- Three national longitudinal datasets tracking progress from secondary education into postsecondary education/labor market:
 - High School and Beyond (HS&B:1980)
 - High school senior class of 1980
 - National Educational Longitudinal Study (NELS:1988)
 - High school senior class of 1992
 - Educational Longitudinal Study (ELS:2002)
 - High school senior class of 2004

Selected independent variables. Weighted mean, standard deviation, and un-weighted number of missing observations

	1980 (N=11,017)			1992 (N=12,142)			2004 (N=13,406)		
	Mean	Std dev	Nmiss	Mean	Std dev	Nmiss	Mean	Std dev	Nmiss
Parental education (1=less than HS, 4=baccalaureate, 6= PhD/professional)	2.88	1.33	1,513	3.17	1.40	1,136	3.35	1.27	0
12th grade educational Expectations (1=less than HS, 4=baccalaureate, 6= PhD/professional)	3.57	1.21	660	4.13	1.12	1,109	4.25	1.07	1,562
High school grades (1=mostly F's, 8=mostly A's)	5.76	1.41	467	5.83	1.43	1,344	5.96	1.36	810
Siblings	2.81	1.54	92	2.19	1.62	90	2.18	1.36	2681
Family income	70,365	40,888	1456	81,284	76,021	502	79,544	67,310	0
Test score	50.28	8.8	1836	51.3	9.15	177	51.32	8.94	228
College track	0.39	0.49	562	0.45	0.50	35	0.54	0.49	228
Student govt.	0.18	0.40	770	0.15	0.36	222	0.12	0.35	61
Journalism	0.20	0.40	736	0.18	0.39	223	0.16	0.38	54
Professional club	0.50	0.50	891	0.46	0.50	234	0.43	0.50	92
Drama/debate	0.15	0.36	720	0.15	0.36	219	0.14	0.35	56

Outcome variable #1

- (Average SAT score)/10 at first postsecondary institution attended by student
- Note: ACT scores converted to SAT scores
- Problems with this variable:
 - Outcome variable is missing for students who do not attend postsecondary education or who attend an institution that does not require SAT scores (i.e. community college, non-selective 4-year college) leading to potential selection bias.

Predicted average SAT score of first institution attended for different characteristics

Characteristics	1980	1992	2004
Male, White, 5 th SES decile, senior test score=50, grades=Bs & Cs	1024	1022	996
Male, Black, 5 th SES decile, senior test score=50, grades=Bs & Cs	1005	1007	978
Female, White, 5 th SES decile, senior test score=50, grades=Bs & Cs	1016	1009	991
Female, Black, 5 th SES decile, senior test score=50, grades=Bs & Cs	996	994	974
Female, Hispanic, 5 th SES decile, senior test score=50, grades=Bs & Cs	1033	1022	1013
Female, Asian, 5 th SES decile, senior test score=50, grades=Bs & Cs	1058	1045	1042
Male, White, 5 th SES decile, senior test score=60, grades=As	1117	1134	1128
Male, White, 10 th SES decile, senior test score=60, grades=As	1186	1220	1198
Male, Black, 3 rd SES decile, senior test score=40, grades=Cs & Ds	962	948	857
Male, Black, 3 rd SES decile, senior test score=50, grades=As & Bs	1028	1040	1025
Male, Asian, 3 rd SES decile, senior test score=50, grades=As & Bs	1090	1091	1093

Outcome variable #2

- Category representing selectivity of first postsecondary education institution attended
- Coding:
 - 0= did not attend PSE, 1= attended 2-yr institution or less, 3= attended non-selective 4-yr institution, 4= attended selective 4-yr institution, 5= attended very selective 4-yr institution
- Data source:
 - Selectivity cell clusters of the 1992 Cooperative Institutional Research Project (CIRP)

Ordinal selectivity of first postsecondary institution, weighted column percentages (not including missing observations) and un-weighted frequencies.

	1980	1992	2004
Did not attend PSE	41.3%	30.4%	31.7%
	3,689	3,538	3,488
2 year institution or less	21.4%	27.4%	25.7%
	2,248	3,241	3,012
Non-selective 4-year institution	27.5%	31.1%	32.2%
	2,781	3,777	4,172
Selective 4-year institution	8.0%	8.8%	8.8%
	744	1,143	1,285
Very selective 4-year institution	1.9%	2.3%	1.6%
	225	365	277
Missing	1,330	78	1,172
Total	11,017	12,142	13,406

Selectivity of first postsecondary institution by race (weighted row percentages, missing observations not included)

	Did not attend PSE	2 yr. inst or less	Non-selective 4-year inst	Selective 4-year inst	Very selective 4-year inst
1980					
White	39.9%	20.9%	28.4%	9.0%	1.8%
Black	44.9%	18.4%	31.4%	3.8%	1.5%
Hispanic	53.3%	26.9%	14.7%	3.3%	1.8%
Asian	14.1%	30.2%	29.7%	17.2%	8.8%
Native	53.4%	25.6%	17.8%	3.1%	0.0%
1992					
White	28.7%	26.6%	32.9%	9.7%	2.1%
Black	37.1%	24.5%	31.9%	5.0%	1.5%
Hispanic	37.2%	35.6%	20.6%	4.8%	1.9%
Asian	21.1%	29.2%	27.3%	13.9%	8.6%
Native	51.2%	28.7%	17.0%	3.2%	0.0%
2004					
White	28.3%	24.1%	36.0%	10.0%	1.7%
Black	37.5%	24.7%	33.8%	3.7%	0.4%
Hispanic	42.9%	34.9%	16.9%	4.2%	1.1%
Asian	20.1%	25.2%	27.7%	20.3%	6.8%
Native	50.1%	25.3%	19.2%	3.7%	1.7%
Mixed race	36.0%	22.5%	29.9%	10.4%	1.2%

Selectivity of first postsecondary institution by selected SES decile
(weighted row percentages, missing observations not included)

	Did not attend PSE	2 yr. inst or less	Non-selective 4-year inst	Selective 4-year inst	Very selective 4-year inst
1980					
2 nd Decile	58.3%	19.8%	18.8%	2.5%	0.6%
4 th Decile	53.6%	19.5%	22.6%	3.6%	0.7%
6 th Decile	39.4%	23.5%	29.4%	6.7%	1.0%
8 th Decile	24.2%	23.4%	39.2%	11.4%	1.8%
10 th Decile	5.0%	18.7%	46.9%	20.7%	8.7%
1992					
2 nd Decile	50.6%	28.4%	18.1%	2.4%	0.5%
4 th Decile	38.9%	33.2%	24.3%	3.4%	0.2%
6 th Decile	26.8%	28.0%	37.3%	7.0%	1.0%
8 th Decile	17.7%	24.3%	43.7%	12.9%	1.4%
10 th Decile	6.4%	15.5%	39.9%	25.9%	12.4%
2004					
2 nd Decile	50.2%	28.3%	18.1%	3.0%	0.3%
4 th Decile	38.9%	30.5%	25.9%	3.7%	1.1%
6 th Decile	29.4%	28.9%	34.1%	6.8%	0.8%
8 th Decile	19.8%	25.5%	41.9%	10.7%	2.1%
10 th Decile	11.1%	11.2%	44.3%	26.4%	7.0%

Selectivity of first PSE attended by parental education (weighted row percentages, missing observations not included)

	Did not attend PSE	2 yr. inst or less	Non-selective 4-year inst	Selective 4-year inst	Very selective 4-year inst
1980					
Less than high school diploma/GED	64.0%	14.4%	18.9%	1.8%	1.0%
High school diploma/GED	51.6%	20.6%	23.4%	4.0%	0.4%
Some college (including voc/assoc degree)	33.4%	27.5%	29.9%	8.2%	1.0%
Baccalaureate degree	19.3%	21.9%	40.3%	15.3%	3.2%
Master's degree	13.6%	21.6%	43.4%	16.6%	4.8%
PhD/first professional degree	7.7%	19.2%	41.6%	21.1%	10.4%
1992					
Less than high school diploma/GED	51.7%	31.2%	14.3%	2.0%	0.7%
High school diploma/GED	42.4%	31.3%	22.3%	3.7%	0.4%
Some college (including voc/assoc degree)	28.2%	31.6%	33.2%	6.2%	0.9%
Baccalaureate degree	18.0%	22.7%	43.5%	12.9%	2.8%
Master's degree	12.6%	19.1%	40.9%	20.8%	6.6%
PhD/first professional degree	9.6%	16.5%	40.5%	22.9%	10.5%
2004					
Less than high school diploma/GED	52.6%	30.6%	13.2%	3.5%	0.2%
High school diploma/GED	47.1%	28.3%	20.9%	3.2%	0.5%
Some college (including voc/assoc degree)	35.4%	29.5%	30.1%	4.4%	0.6%
Baccalaureate degree	21.2%	24.1%	40.1%	12.7%	2.0%
Master's degree	17.3%	18.0%	43.9%	16.8%	3.9%
PhD/first professional degree	15.2%	14.3%	40.2%	23.9%	6.5%

Policy Implications

Increase Awareness of the problem among policymakers and institutional leaders

- Research on trends

- Communicating findings of research to policymakers

Improve equity of distribution of students among selective institutions

- Improve information to low SES students

- Targeting low SES high schools for guidance counseling funds

- Guidance counseling training

Expand enrollment at public selective institutions

- Money

- Faculty productivity

- Formula funding

Improve nonselective institutions

- Improve graduation rates

- Quality of learning outcomes

- Funding opportunities

- Quality remediation

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