College Access and the Shifting Meritocracy: Test Scores, Class Rank and Race-Sensitive Admission Criteria

Sigal Alon,
Tel Aviv University

Marta Tienda
Princeton University

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Extended Abstract submitted for presentation at the 2005 Annual Meetings of the Population Association of America. This research is funded by the Mellon Foundation, and the institutional support of the Office of Population Research is gratefully acknowledged.

September, 2004

I. Introduction

Two controversies dominate the national policy debate about access to selective colleges and universities. One is about the weight assigned to standardized test scores and the second is about the use of color-sensitive practices in college admissions. Although usually discussed separately, both share a common root, namely rising access of the coming to college-age of the children of the affluent baby boomers, which increased demand for a relatively fixed number of slots at the most competitive universities. Combined with rapid ethno-racial diversification of the college age population, according to Duffy and Goldberg (1998), the 1980-1994 period represented a "tidal wave" of demand for college access, allowing the most prestigious institutions to select the most outstanding students from among the surplus of quality applicants. The fundamental challenge facing admission officers is deciding who is most deserving of admission. Stated as a question, on what achievement criteria is our educational meritocracy constructed? Both controversies about college access materialize directly from this question and in this study we aim to explore the link between them.

Although there is some debate about the benefits of attending selective institutions, (Hoxby, 2001; Dale and Kreuger, 1998) students who attend selective colleges and universities have higher graduation rates than similarly qualified students who attend less selective colleges and universities (Bowen and Bok, 1989; Alon and Tienda, 2003). Several recent studies also demonstrate a consistent positive association between institutional selectivity and several post-graduation outcomes, including higher completion of advanced degrees, higher earnings, and higher overall satisfaction with college experiences (Bowen & Bok 1998; Carnevale and Rose 2004).

From an institutional perspective, the challenges facing selective and highly selective colleges is to balance academic quality and diversity when building a class even as they confront an oversupply of high qualified applicants (Clarke & Shore 2001; Duffy and Goldberg 1998). On one hand, admission officers wish to admit the most qualified class based on academic achievements; on the other, they inspire to reap the benefits of a diverse student body along many dimensions, including but not limited to ethno-racial diversity. The inherent tension between merit and diversity arises because minorities, on average, have poorer educational preparation at the pre-collegiate level, and therefore achieve lower scores on their college board exams. Thus, an emphasis on test scores, while maintaining color-blindness, presumably reduces the racial and ethnic diversity of the student body (Bowen & Bok 1998; Koretz 2000), while race-sensitive admissions allegedly produce a less qualified, albeit more diverse, student body (Clarke & Shore, 2001; Thernstrom and Thernstrom, 2004).

If the test-score and affirmative action debates share a common root, the link between them is more complex. On one hand, rising demand for a relatively fixed number of slots at the most competitive institutions has certainly fueled growing disapproval of affirmative action in college admissions, but so too has the growing belief that standardized scores on college entrance exams are reliable indicators of merit. On the other hand, allegations that standardized tests are racially biased, challenges the very standardized tests as a measure of merit (Freedle 2003; Camara et al 1999). Critics of affirmative action have repeatedly argued that race-sensitive admissions are unfair because they give preference to minority applicants with lower scores on standardized tests to the exclusion of more qualified applicants. Although selective universities have always used multiple criteria in making admissions decisions, including test scores, grades, grades or class rank, curriculum, extra curricular activities and extenuating circumstances, in public eyes test scores appear to have become the default premier criterion for admissibility.[1] This apparent change in public perception about the "college-value" of test scores and high school grades occurred despite substantial empirical evidence showing that test scores on college entrance exams are inferior predictors of college success when compared to grades and class rank (Crouse & Trusheim 1988; Bowen and Bok, 1998).

Whether universities have, in fact, increased the weight assigned to standardized tests is an empirical question whose answer has profound complications for the future of affirmative action. This paper addresses several questions that engage the national policy debate about assessment of merit in access to college against the backdrop of rising demographic diversity. Specifically, has the relative weight of test- and performance-based college admission criteria changed over time? Because the merit or diversity controversy is mostly pertinent to highly selective institutions, we also consider changes in the valuation of admission criteria according to institutional selectivity and among demographic groups. The latter consideration is particularly important in light of the growing resistance to the use of race sensitive admission criteria even after the 2003 Grutter decision.

Section II reviews recent studies about the relative influence of test scores and high school grades on college access and documents recent shifts in the use of race-sensitive admission policies. In section III we derive testable hypotheses that address the research questions presented above. After describing the data and operational measures

[1] See Klitgard, 1985 Choosing Elites which documents that this was not the case between 1970 and 1980

in section IV, we present the empirical results in section V. The concluding section summarizes the key findings in light of the predictive validity of both test and performance-based merit criteria for admission and the context of rapid demographic change toward a more diverse college-age population.

Data

Our empirical analyses employ three datasets. To assess the change over time we analyze two nationally representative data sets—the High School and Beyond (HS&B) which cohort of high school graduates enter college in 1982, and the National Educational Longitudinal Survey (NELS:88) which cohort enter college in 1992. Missing data in both datasets is filled using the novel approach of Multiple Imputation. Since most of controversy regarding issues of quality and diversity is mostly pertinent to the top-tier institutions we also analyze the 1989 cohort of the College and Beyond (C&B) database that focus on students attending the nation's most selective institutions.

Dependent Variable

We use a multiple response category that differentiates among high school graduates with no postsecondary education; students who enroll in 2-year open-door colleges (those offering programs requiring 2 or less years to complete, including community colleges); in 4-year noncompetitive colleges; 4-year competitive (median SAT 900-1050); and in 4-year more competitive colleges (median SAT above 1050). The mean combined SAT score of the 1989 entering freshmen exceeded 1050 for all C&B institutions. The analysis on the upper tier of institutions, utilizing NELS:88 and

C&B datasets decomposes the "more competitive" category to very competitive (median SAT 1050-1150); highly competitive (median SAT 1150-1250); and most competitive (median SAT above 1250).

Findings' Summary

The results, depicted in Tables 1-7 demonstrate:

- An increase in the share of students who enrolled in one of the more competitive college and universities, i.e. very, highly and most competitive schools.
- Black and Hispanic students' advantage over whites in access is most pronounced at the more competitive institutions in both years, controlling for test scores, class rank and other background characteristics.
- An upward shift in weights assigned to test scores in granting access to the more selective institutions during this decade
- The magnitude of merit-based and color-sensitive criteria rises with institutional selectivity.
- Affirmative action practices are mostly confined to the most competitive institutions.
- Part of the advantage granted to minority students at most competitive schools is stemming from the special weight institutions place on their class rank

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Table 1: College Destinations of 1982 and 1992 High School Graduates by Race/Ethnicity HS&B and NELS:88

HSB 1982

College Destinations	Total	White	Black	Hispanic	Asian
Not Enrolled	37.0	34.3	47.2	51.0	16.2
2 Yr. Open Door	30.2	30.2	29.3	31.1	32.2
4 Yr. Non-competitive	8.1	8.2	10.0	4.6	4.6
4 Yr. Competitive	18.6	20.5	11.3	10.6	26.0
4 Yr. More Competitive	6.1	6.8	2.3	2.9	21.1
N	12,942	8,383	1,968	2,121	470

NELS 1992

College Destinations	Total	White	Black	Hispanic	Asian
Not Enrolled	25.4	24.3	31.7	31.2	14.3
2 Yr. Open Door	35.0	33.8	32.6	44.6	40.2
4 Yr. Non-competitive	10.2	9.5	18.8	6.5	7.0
4 Yr. Competitive	16.2	18.0	10.2	10.6	15.1
4 Yr. More Competitive	13.2	14.4	6.7	7.2	23.5
N	13,093	8,926	1,392	1,735	1,040

Table 2: Characteristics of 1982 and 1992 High School Graduates by Race/Ethnicity

	HSB 1982					NELS 1992				
	all	white	black	hisp	asian	all	white	black	hisp	asian
SAT										
Mean	826.5	864.3	672.0	699.1	881.3	813.2	849.6	661.5	685.6	890.2
Std. Dev.	206.1	196.6	170.0	176.4	219.4	222.4	210.9	192.1	206.1	236.4
pctile mean	49.7	55.2	27.3	31.2	56.4	50.4	55.2	31.0	33.9	58.3
% in top decile	11.6	14.0	1.8	2.6	20.1	9.8	11.5	1.5	3.0	18.7
% in bottom decile	11.4	6.8	30.2	27.1	6.8	9.6	5.9	23.8	23.0	4.6
Class Rank										
Mean	52.0	53.9	45.6	41.4	66.2	54.6	56.1	47.6	49.1	61.3
Std. Dev.	28.0	27.9	26.3	27.5	28.2	28.0	27.8	27.0	28.0	28.8
pctile mean	48.9	50.8	42.3	38.2	63.1	51.0	52.4	43.8	45.3	57.4
% in top decile	9.5	10.6	4.5	4.2	22.4	10.1	10.5	6.5	7.7	16.9
% in bottom decile	11.0	9.8	13.2	20.5	5.9	9.5	8.5	13.4	13.6	6.0
SAT/RANK corr										
all high school graduates	0.54	0.56	0.49	0.52	0.61	0.58	0.6	0.53	0.53	0.53
among students at more cmpt.inst.	0.39	0.39	0.41	0.44	0.38	0.35	0.4	0.24	0.36	0.19

Table 3: Determinants of five college destinations in 1982 and 1992, A multinomial Logistic regression, HS&B and NELS:88 (standard errors)
("2-year institutions" is the base category)

HSB 1982	no pse	noncompe	competit	more compt
black	-0.163 *	0.467 **	0.394 **	0.996 **
	(0.075)	(0.108)	(0.090)	(0.158)
hisp	-0.138 *	-0.071	0.135	0.283 †
	(0.069)	(0.117)	(0.085)	(0.149)
asian	-0.423 **	-0.130	0.488 **	1.387 **
	(0.147)	(0.248)	(0.149)	(0.186)
sat pct	-0.008 **	0.009 **	0.017 **	0.047 **
	(0.002)	(0.002)	(0.002)	(0.003)
clsrank pct	-0.010 **	0.013 **	0.017 **	0.034 **
	(0.002)	(0.002)	(0.002)	(0.003)
Constant	1.077	-2.916	-1.927	-6.160
N	12,942			

NELS 1992	no pse	noncompe	competit	more compt
black	-0.245 **	1.061 **	0.535 **	1.324 **
	(0.083)	(0.105)	(0.116)	(0.149)
hisp	-0.356 **	-0.086	-0.045	0.437 **
	(0.074)	(0.116)	(0.106)	(0.135)
asian	-0.601 **	-0.087	0.168	0.752 **
	(0.113)	(0.141)	(0.113)	(0.120)
sat pct	-0.007 **	0.013 **	0.021 **	0.059 **
	(0.001)	(0.002)	(0.002)	(0.002)
clsrank pct	-0.016 **	0.014 **	0.020 **	0.028 **
	(0.001)	(0.002)	(0.001)	(0.002)
Constant	1.851	-2.892	-3.520	-7.558
N	13,093			

† significant at 10%; * significant at 5%; ** significant at 1%
Models control for parental education, family income, type of high school, geographic region and sex. The two-way group dummies*sat/rank interactions are not statistically significant and are not included in the model. See Appendix B for full model results.

Table 4: Determinants of five college destinations in 1982 and 1992, A multinomial Logistic regression, Merged dataset (HS&B and NELS:88) (standard errors)
("2-year institutions" is the base category)

*merged data	no pse		noncompe		competit		more compt	
black	-0.172	*	0.487	**	0.383	**	0.924	**
	(0.074)		(0.106)		(0.090)		(0.150)	
hisp	-0.137	*	-0.087		0.171	*	0.240	†
	(0.068)		(0.114)		(0.084)		(0.143)	
asian	-0.419	**	-0.203		0.518	**	1.354	**
	(0.146)		(0.245)		(0.146)		(0.180)	
sat pct	-0.007	**	0.010	**	0.017	**	0.048	**
	(0.002)		(0.002)		(0.002)		(0.003)	
clsrank pct	-0.010	**	0.013	**	0.016	**	0.031	**
	(0.002)		(0.002)		(0.002)		(0.003)	
year	0.701	**	-0.276	†	-1.332	**	-1.043	**
	(0.120)		(0.167)		(0.174)		(0.329)	
sat*year	0.000		0.002		0.003		0.010	**
	(0.003)		(0.003)		(0.002)		(0.004)	
rank*year	-0.006	**	0.001		0.005	*	-0.001	
	(0.002)		(0.002)		(0.002)		(0.003)	
black*year	-0.071		0.556	**	0.108		0.396	†
	(0.112)		(0.148)		(0.146)		(0.213)	
Hispanic*year	-0.217	*	0.029		-0.268	*	0.189	
	(0.098)		(0.161)		(0.137)		(0.196)	
asian*year	-0.174		0.161		-0.411	*	-0.623	**
	(0.182)		(0.279)		(0.184)		(0.217)	
Constant	1.090		-2.746		-1.999		-6.292	
N	26,035							

† significant at 10%; * significant at 5%; ** significant at 1%
Models control for parental education, family income, type of high school, geographic region and sex.
None of the 3-way interactions (race, year, sat/rank) are statistically significant.
The two-way race*sat/rank interactions are not significant and are not included in the model.
Results obtained from a model including all interactions produce similar results.
year: 1=1992; 0=1982

Table 5: Characteristics of Students attending the more competitive institutions, NELS:88 and C&B

	NELS 1992			C&B 1989		
	Very	Highly	Most	Very	Highly	Most
Md SAT scores of freshmen (Barrons)	1050-1150	1150-1250	1250-1600	1050-1150	1150-1250	1250-1600
distribution (% out of more compt)	61.0	25.1	13.9	37.6	42.1	20.3
% out of total sample	8.0	3.3	1.8			
Student body Characteristics						
Race/Ethnicity						
%white	81.6	79.6	77.4	85.5	80.3	75.4
%black	6.8	4.5	4.7	7.2	6.5	7.3
%hisp	5.2	6.3	4.8	2.4	4.1	5.6
%asian	6.5	9.6	13.1	4.9	9.1	11.8
SAT						
Mean	1023.8	1112.8	1226.3	1131.5	1232.1	1333.1
Std. Dev.	175.5	156.6	136.5	153.0	128.2	121.9
% students with SAT scores						
below 1050	53.4	28.7	9.5	26.1	7.8	2.4
1050-1150	21.3	28.2	20.3	22.3	15.0	5.5
1150-1250	13.8	26.1	18.1	22.7	26.7	12.8
1250-1600	11.5	16.9	52.1	29.0	50.5	79.3
Class Rank						
Mean	76.5	82.3	87.5			
Std. Dev.	22.1	20.7	15.8			
% in top decile	24.6	38.3	54.3	49.1	54.2	68.8
N	1,829			29,741		

Table 6: Determinants of sevem college destinations in 1992, A multinomial Logistic regression, NELS:88 (standard errors)

("2-year institutions" is the base category)

	NELS 1992					
	no pse	noncompe	competit	Very	Highly	Most
black	-0.012	0.727 **	0.014	0.249 †	0.491 *	1.105 **
	(0.079)	(0.098)	(0.108)	(0.143)	(0.230)	(0.340)
hisp	-0.242 **	-0.280 **	-0.366 **	-0.290 *	0.025	0.690 *
	(0.069)	(0.111)	(0.099)	(0.139)	(0.216)	(0.320)
asian	-0.682 **	-0.085	0.146	0.468 **	0.969 **	1.122 **
	(0.110)	(0.139)	(0.108)	(0.127)	(0.158)	(0.203)
SAT: Top 10%	-0.442 †	0.871 **	0.974 **	1.883 **	2.588 **	3.743 **
	(0.224)	(0.194)	(0.178)	(0.175)	(0.203)	(0.275)
Rank: Top 10%	-0.707 **	0.661	1.286 **	1.496 **	1.857 **	2.399 *
	(0.139)	(0.148)	(0.108)	(0.135)	(0.163)	(0.224)
Constant	1.154	-1.861	-1.844	-3.254	-4.877	-7.488
N	13,093					

Table 7: Determinants of three top tier college destinations in 1989 and 1992, A multinomial Logistic regression, C&B and NELS:88 (standard errors)
("4-year very competitive institutions" is the base category)

	NELS 1992		C&B 1989		
					logit - most comp
	vs.very Competitive		**vs.very Competitive**		**vs.very/highly Competitive**
	Highly	Most	Highly	Most	Most
black	0.206	0.829 *	0.012	0.696 **	0.445 **
	(0.257)	(0.366)	(0.063)	(0.080)	(0.089)
hisp	0.274	0.949 **	0.161 †	0.666 **	0.302 *
	(0.246)	(0.359)	(0.088)	(0.104)	(0.125)
asian	0.535 **	0.736 **	0.610 **	0.693 **	-0.141
	(0.165)	(0.210)	(0.070)	(0.083)	(0.107)
SAT: Top 10%	0.686 **	1.855 **	0.209 **	1.866 **	1.670 **
	(0.133)	(0.229)	(0.077)	(0.080)	(0.049)
Rank: Top 10%	0.469 **	1.119 **	0.591 **	1.441 **	0.856 **
	(0.142)	(0.251)	(0.039)	(0.055)	(0.049)
b*sat10					-0.034
					(0.378)
h*sat10					-0.182
					(0.339)
a*sat10					0.180
					(0.131)
b*rank10					0.463 **
					(0.125)
h*rank10					0.380 **
					(0.153)
a*rank10					0.369 **
					(0.124)
Constant	-1.535	-4.018	0.731	-1.430	-2.451
N	1,829		29,741		29,741