

Supplementary Online Material

Participants

Invitations were sent to admissions officers to participate in person at the NACAC annual meeting. This recruitment resulted in data from 145 participants (all available timeslots were filled, but 35 participants did not show up for their appointment). Because power analyses suggested that this was an insufficient number of participants to identify the expected effects, we subsequently recruited additional attendees to participate online several weeks after the conference; these participants were from the same pool of 1,017 conference attendees who met the inclusion criteria (31% overall response rate). Given that the effects of the detailed condition were not moderated by any of the characteristics of the participant or the admissions office, it is unlikely that selection bias constitutes a problem for this study.

Both in person and fully online participants completed identical computer-based surveys, which were administered using Qualtrics survey software. The in-person administration was used because it made providing compensation easier (all participants received \$50 gift cards), and the experimenters would be available to answer any questions in real time.

For the in-person data collection, participants entered a room in the conference center with 10 computers and were asked to sit at one of the computers. They were then given a paper consent form to sign. Fully online participants viewed and completed the consent form on the first page of the online survey. Besides these differences, the procedure for all participants was identical. Supplementary analyses showed that the findings were not moderated by in-person versus fully online participation. Many participants were the only person from their institution in the study, but a few institutions had several employees. At the end of the experiment, participants

were asked not to discuss the content of these materials with anyone else to avoid contamination effects.

Pilot Testing

A pilot survey was conducted to ensure that participants understood the protocol and to obtain feedback on questions regarding admissions office practices, admissions officer demographics, and other covariates. We pilot tested the survey with six admissions officers at the 2014 annual conference of the Michigan Association of College Admissions Counseling (MACAC). These participants were recruited from the attendee list provided by MACAC, and only admissions officers from selective colleges participated. Each pilot participant received a \$50 amazon.com gift card. The participants gave useful information on how information on high school context is used in their admissions offices, how to simulate admissions files so that they were appropriate for the selectivity group, and a number of logistical issues.

Development of Admissions Files

The Education Longitudinal Study (ELS:2002) was used to create the grades, test scores, and coursework for each simulated admissions file. ELS is a federal dataset that contains a nationally representative sample of 10th graders in 2002 that were tracked longitudinally with follow-up data collected two, four, and ten years later. For the purposes of this study, ELS is preferable to federal datasets that track only college students (e.g., Beginning Postsecondary Students Longitudinal Study), because ELS contains extensive data on all colleges and universities to which students applied as well as their complete high school coursework, grades, and test scores. As a result, we were able to compile nationally-representative information about college applicants at particular institutions, whereas publicly available information almost

exclusively focuses on the characteristics of incoming students (i.e., those who are accepted and decide to attend, who may differ considerably from the overall applicant pool).

Within the ELS dataset, we identified the students who applied to each institution, and then grouped institutions by selectivity tier (most competitive, highly competitive, and very competitive). The deciles for high school GPA (weighted and unweighted), standardized test scores (ACT and SAT), and AP coursework for students who applied to each selectivity tier were computed. These figures allowed us to select how these applicants' credentials would compare to other students who were also applying to institutions in that tier. Because more selective schools reject a greater percentage of applicants, we made the percentiles for applicants' credentials higher at more selective tiers. Specifically, the grades, test scores, and AP coursework for the higher-SES, high-achieving applicant were all in the 90th percentile for most competitive schools, 80th percentile for highly competitive, and 70th percentile for very competitive. Similarly, these three metrics for the higher-SES, middle-achieving applicant were in the 60th, 50th, and 40th percentiles for institutions that were most, highly, and very competitive, respectively.

This percentile decision was more complicated for the low-SES applicant, since he was intended to simulate a student who maximized the opportunities available at his high school, while still having some of the adverse effects of his background. It is well established that measures of SES are highly associated with standardized test scores (Zwick, 2002) and curriculum rigor (Klugman, 2013). Therefore, we assigned this applicant high grades (80th percentile in the most competitive tier; 90th percentile among low-SES applicants in the most competitive tier), strong but comparatively modest test scores (50th percentile in the top tier; 75th percentile among low-SES applicants in the top tier), and a lower number of AP courses taken

given his limited access to this curriculum (30th percentile). This applicant's high school grades and scores were adjusted for tier level (70th and 40th percentile for highly competitive and 60th and 30th for very competitive, respectively). The number of AP courses was set to the 30th percentile for all tiers, since this engagement was already low, and the participants needed to infer that he was maximizing his educational opportunities. To illustrate applicants' relative qualifications, an overview of their academic indicators for the most competitive tier, along with high school information, is provided in Table S1.

We did not use class rank in either the limited or detailed conditions. Although it is a line on the Common Application's counselor sheet, class rank is not consistently provided to colleges. The most recent data on this seems to be from 2006, when only 61.1% of counselors said they regularly provided numeric rank to colleges (NACAC, 2007). Among private high schools, this is only 10.1%. Some high schools will replace with grade distributions or percentiles, but this is far less than half of high schools. Interestingly for our study, high schools are the least likely to provide rank when they serve the wealthiest students (57.3% provided) and the poorest (55.1% provided) (NACAC, 2007). Even when class rank is provided, there is no consistency in how it is calculated. Some schools do not weight the rank by course rigor, which makes it nearly useless for selective admissions. Other schools do use weights, but the weights are home grown; others might include all courses in class rank, others only "college prep" courses. As a result, the percentage of colleges who say that class rank is "considerably important" in the admissions process has fallen from 42% in 1993 to 15% in 2013 (Clinedinst, 2015). In 1993, it was nearly as important as standardized test scores, and slightly more important than GPA; in 2013, it was identified as less important than recommendations, essay or demonstrated interest.

The same three personal statements were used for the participants at all levels of selectivity, drawn from actual examples provided by admissions offices. Personal statements were randomly assigned to files. To ensure that these statements were believable when assigned to any applicant, they did not refer to high school achievement, extracurricular activities, or any form of experience that would provide insight into the applicant's socioeconomic status (e.g., trips abroad, overcoming financial obstacles).

ELS data also informed the creation of extracurricular activities. These data are less detailed for extracurriculars than for academics; students reported whether or not they participated or were a "leader" in various types of activities (e.g., sports, performance, academic club, community service, paid employment). Extracurricular activities were designed to be similar in quality and quantity for all three applicants. At all selectivity levels, each applicant participated in one varsity sport, at least one student organization, and at least one paid job or regular volunteering commitment. In addition, involvement was increased for files reviewed by admissions officers at more selective schools. Specifically, applicants engaged in more leadership for highly competitive schools than for very competitive, and the amount of involvement was greater at the most competitive schools than for highly competitive. Within the Qualtrics survey software, each of these application sections was presented on a separate page, and participants were allowed to go back to earlier pages if they desired. Participants provided ratings of the quality of academic record, extracurricular activities, and personal statement at the end of the corresponding page with that information. The top of the page with the academic profile also stated the applicant's sex (male), race/ethnicity (White/Caucasian), U.S. citizenship (yes), college (engineering), and father's and mother's education (both had master's degrees for the higher-SES, high achieving applicant; doctorate and

master's for the higher-SES, middle-achieving applicant; and high school diploma and some high school for the low-SES applicant). After reading all sections, participants also provided their admissions recommendation if that applicant had applied to the institution at which they work.

Analyses

To provide further evidence for the external validity of this study, we identified students in the ELS dataset who were similar to each of the three simulated applicants on several measures: composite SAT/ACT, academic GPA (weighted), number of AP/IB courses, and parent education level. We computed the probability of acceptance for these ELS students within each tier level (since the academic qualifications of the simulated application files differed by tier level), and we computed the average across tiers to provide a comparison with the values in the present study. The ELS predicted probabilities of acceptance were .86 for students who were similar to the higher-SES, high-achieving student, and they were .71 for both the lower-SES student and the higher-SES, middle-achieving student. These probabilities are somewhat higher than we found in the experiment, most likely due to the increased competitiveness of admissions since fall 2004; the inability to see wait list recommendations in ELS; and the lack of extracurricular activities, essays, and contextual characteristics in the ELS model. Given the systematic effects of both improvements in applicant qualifications over time and the acceptance of some ELS students who were initially waitlisted, it would have been surprising if the acceptance rates in the ELS data were *not* higher than those in the present study.

As a final robustness test, we conducted the analyses described in the main text while treating the ordinal and binary outcomes as continuous; such analyses provide further evidence that the findings are not unique to the particular analytical decisions that we made. As expected,

the results and patterns of significance were virtually identical when using ordinary least squares regression analyses and hierarchical linear modeling analyses that treated the outcome as continuous.

Supplementary References

Clinedinst, M. (2015). *State of college admission 2014*. Washington, DC: National Association for College Admission Counseling.

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Vigdor, J. L., & Clotfelter, C. T. (2003). Retaking the SAT. *Journal of Human Resources*, 38(1), 1-33.

Zwick, R. (2002). *Fair game: The use of standardized tests in higher education*. New York: Routledge.

Table S1. Overview of Applicants' Academic and School Indicators for the Most Competitive Tier

Academic or School Indicator	Applicant		
	Low SES	High SES, middle achieving	High SES, high achieving
Unweighted HSGPA	3.92	3.76	3.96
Weighted HSGPA	4.19	4.19	4.51
Number of honors/AP classes	10	13	18
ACT composite	27	28	32
SAT critical reading + math	[Did not take SAT]	1340	1480
High school name	Smalltown	Sometown	Anytown
State	Indiana	Ohio	Michigan
Institutional control	Public	Public	Public
Number of students	643	1,278	1,642
Graduation rate	65%	95%	96%
College enrollment (4 year)	25%	85%	93%
College enrollment (2 year)	21%	10%	5%
Average ACT composite	19	25	26
Average SAT (CR+M)	960	1170	1200
% free/reduced lunch	66%	10%	2%
% limited English proficiency	6%	1%	1%
Number of APs offered	3	20	20
% who receive 3+ on APs	35%	72%	80%

Note. Horizontal bars distinguish between academic and high school information as well as high school information that appears in all conditions and that which appears only in the detailed condition (toward the bottom of the table). Weighted HSGPA was computed by adding ½ point for an honors class and a full point for an AP class; description of the weighting approach was provided to participants within the simulated application files. The academic qualifications for each applicant varied across selectivity tiers, whereas high school information was identical across all tiers. Students from low-SES backgrounds are less likely to retake multiple standardized admissions tests than are students from higher-SES backgrounds (Vigdor & Clotfelter, 2003), which is why we decided to include only an ACT score for the low-SES applicant.