

How People Evaluate Socioeconomically Advantaged and Disadvantaged College Applicants

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All study materials, preregistrations, data, and syntax are publicly available and can be accessed at https://osf.io/kpseq/?view_only=ac94bb40ab1f455d8a4c319a89293140.

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Abstract

Many universities aim to diversify their campuses along class lines by considering applicants' socioeconomic circumstances. However, it is unclear how evaluations of applicants change—or do not—based on knowing their circumstances. Attribution research suggests that people account for the effects of advantage by negatively adjusting their evaluations and for the effects of disadvantage by positively adjusting them. We theorize that people adjust their evaluations based on implicit theories of dis/advantage and that they hold one theory of disadvantage (“headwinds”), but two of advantage (“tailwinds” and “bicycle”). The tailwinds and bicycle theories differ in whether advantage is seen as a sufficient cause of performance or not. Consistent with our theorizing, we find that evaluations of college applicants are asymmetric: on average, people adjust their evaluations positively for disadvantage more than they adjust negatively for advantage. This pattern stems from most people adjusting positively for disadvantage, but for advantage, some people adjusting negatively and others not adjusting at all. Through simulations, we show that asymmetric adjustments for dis/advantage lead to an admitted class that is less socioeconomically diverse than if adjustments were symmetric. Our findings suggest an additional explanation for why universities may struggle to diversify, despite having the stated intention and information available to do so.

Keywords: social class, diversity, college admissions, attribution, decision-making

Supplemental materials (anonymized for review):

https://osf.io/kpseq/?view_only=ac94bb40ab1f455d8a4c319a89293140

Statement of Limitations

This research examined how lay people and college admissions officers evaluate college applicants upon learning about their socioeconomically dis/advantaged backgrounds. To test this question, we developed experiments that allowed us to carefully compare how evaluations differ for disadvantaged versus advantaged applicants, prioritizing internal validity at the cost of some external validity. Participants evaluated hypothetical applicants in isolation, and we did not ask them to consider specific admission criteria. This allowed us to isolate the effects of dis/advantage on evaluations, but it is unclear whether the same patterns would emerge in a context with other applicants, more information about applicants (e.g., essays), or with institutional priorities influencing one's evaluations. We also depicted a limited range of applicants. We primarily presented applicants who had above-average achievement, high levels of disadvantage or advantage, and with no accompanying information about their gender or race. Our results may or may not generalize to applicants with different levels of achievement or dis/advantage, or whose other identities are known. Lastly, most of our studies sampled U.S.-based, online participants, hence we do not know if the results would be different with participants from other countries and cultures.

How People Evaluate Socioeconomically Advantaged and Disadvantaged College Applicants

Selective U.S. universities have disproportionately affluent student bodies. Despite the “Ivy-Plus”¹ universities’ stated commitment to socioeconomic diversity and an increase in enrollment of lower-income students over the last decade, students from the top one percent of the income distribution outnumber those from the entire bottom half (Chetty et al., 2020; Levine, 2025; Starck et al., 2021). Yet, for students from socioeconomically disadvantaged backgrounds, attending these institutions can be greatly beneficial, enhancing their prospects of securing prestigious jobs, pursuing graduate education, and rising to the top of the income distribution (Chetty et al., 2023).

One common way that colleges seek to increase the socioeconomic diversity of their admitted classes is by using a “holistic review”² process, which assesses applicants’ achievements within the socioeconomic context of their high school and neighborhood. Holistic review is seen as a tool that can help account for disparities in academic achievement by parental income: 31% of SAT test takers from families in the top one percent of the income distribution scored 1300 or higher, whereas only 2.4% from the bottom quintile did (Bleemer, 2023; Chetty et al., 2023). However, social scientists are only beginning to understand how and why considering applicants’ socioeconomic circumstances impacts their evaluation (e.g., Belmi et al., 2024; Mabel et al., 2022; Munguia Gomez & Levine, 2022). In this work, we examine how

¹ The eight Ivy League colleges, Duke, MIT, Stanford, and the University of Chicago.

² Holistic review can mean evaluating a file, person, or context as a whole, and is most common at selective universities (Bastedo et al., 2018; Hossler et al., 2019).

people evaluate college applicants when made aware of their socioeconomic advantage or disadvantage, why they evaluate them as they do, and the consequences of these evaluations on the socioeconomic composition of admitted college classes.

Asymmetric Implicit Theories of Disadvantage and Advantage

In overview, we propose that people *asymmetrically* evaluate socioeconomically disadvantaged and advantaged applicants. We theorize that these evaluations are guided by people's implicit theories or beliefs about how socioeconomic disadvantage and advantage affect individuals. These beliefs provide a framework for interpreting information about applicants' socioeconomic circumstances and integrating them into an overall impression of them. Beliefs about disadvantage lead to revising impressions positively whereas beliefs about advantage lead to revising impressions negatively or not revising them at all. To the extent that beliefs about socioeconomic advantage are more varied than those about socioeconomic disadvantage, then overall adjustments for advantage will be less negative than adjustments for disadvantage are positive.

Evaluations Based on Dis/Advantageous Circumstances

We theorize that evaluations of applicants based on their socioeconomic circumstances are guided by *implicit theories* about how socioeconomic dis/advantage affects individuals. Implicit theories (or the conceptually similar *schemas*) refer to beliefs that tend to be implied or poorly articulated, rather than explicitly discussed, and which guide the interpretation and integration of new information (Dweck et al., 1993, 1995; Morris & Larrick, 1995; Tamir et al., 2007; Taylor & Crocker, 1981). Prior research has documented such theories in diverse domains: beliefs about the malleability of intelligence influence inferences drawn from academic performance (Dweck et al., 1995); causal schemas guide attributions to external pressures versus

internal dispositions (Kelley, 1972, 1973; Reeder et al., 2001; Thibaut & Riecken, 1955); and culturally variable social theories lead to dispositional versus situational attributions (Menon et al., 1999; Morris & Peng, 1994). Extending this work, we propose that people hold implicit theories about socioeconomic dis/advantage and that these theories guide their inferences about individuals who are socioeconomically dis/advantaged.

We propose that people hold a *headwinds theory* of socioeconomic disadvantage and either a *tailwinds theory* or *bicycle theory* of socioeconomic advantage. We describe the headwinds and tailwinds theories first, and then the bicycle theory. Scholars have explicitly likened situations to physical forces—the “strength of the wind” (Heider, 1958), “gale-force winds” (Gilbert, 1998), “wind and water current” (Reeder et al., 2001), “headwinds/tailwinds” (Davidai & Gilovich, 2016), and the “tailwinds of advantage” and “headwinds of hardship” (Phillips & Lowery, 2020)—to theorize about how people reason about causality, attribution, and social inferences. We propose that lay people also understand the effects of socioeconomic dis/advantage by thinking about their effects as those of headwinds and tailwinds.

The headwinds theory conceptualizes disadvantage as a force that makes it harder to attain a favorable outcome, like running against the wind makes it harder to complete a race. Under this theory, varied forms of socioeconomic disadvantage—limited educational resources (Bradley et al., 2001; Orr, 2003), additional responsibilities outside of school (Soria et al., 2013), increased stress (E. Goodman et al., 2005)—are seen as making performance more difficult. Conversely, the tailwinds theory conceptualizes advantage as a force that makes it easier to perform well, like running with the wind at one’s back. Under this theory, socioeconomic advantage is exemplified in test-taking tips and tricks (Buchmann et al., 2010), the ability to retake exams (J. Goodman et al., 2020), access to and fluency with digital technologies

(Goudeau et al., 2021; Mzidabi et al., 2024), and parental or paid help on assignments (Addi-Racah & Dana, 2015; Calarco, 2020).

Under these theories, the effects of socioeconomic disadvantage and advantage are believed to be “direct and inescapable” (Reeder et al., 2001). Just as a water current exerts a directional force on a swimmer, regardless of the swimmer’s actions, so too does disadvantage and advantage. In other words, disadvantages are believed to have a negative effect and advantages a positive one, *regardless* of a person’s intentions or effort.

The headwinds and tailwinds theories are likely to trigger compensatory inferences about other causes of performance. Under these theories, dis/advantage necessarily influences performance; therefore, learning about an individual’s dis/advantage requires accounting for it alongside other causes of performance.³ We posit that this leads to the following compensatory inferences: for the same level of performance to occur in the presence of disadvantage, the contribution of an applicant’s talent and/or effort must be higher; conversely, when advantage is present, the contribution of talent and/or effort must be lower. This reflects the classic discounting principle—“given a wind favorable to the rower, inferences about the rower’s level of ability should be discounted” (Kelley, 1972; Morris & Larrick, 1995; Reeder et al., 2001, pp. 1225). The compensatory inferences we propose are more likely when dis/advantage is seen as a sufficient cause of performance – that is, when the dis/advantageous circumstance alone can

³ In performance and evaluative contexts, such as college admissions, an individual’s effort and talent are central to impressions and are assumed to be causes of performance (Frieze, 1976; Frieze & Weiner, 1971; Reeder et al., 2001).

influence performance. However, we propose that people also think about advantage in a non-sufficient way.

We propose that people also understand the effects of socioeconomic advantage by thinking about advantage as using a bicycle – as a benefit that can only be reaped through effort. Just as a bicycle only helps one move forward if one turns the pedals, the benefits of advantage are only realized if effort is applied. Under this theory, socioeconomic advantage is exemplified in access to tutoring or quality, well-resourced schools (Adelman, 1999; Duncan & Murnane, 2011)—they help improve students’ skills, but only if they put in effort to attend class, complete assignments, and study.

When encountering information about advantage, the *bicycle* theory is less likely to lead to compensatory inferences about other causes of performance. Under this theory, socioeconomic advantage is seen as a necessary, but not sufficient cause of performance. When a causal factor is seen as necessary but not sufficient to produce an outcome, people are less likely to discount other causes (McClure, 1998; Morris & Larrick, 1995; Reeder & Brewer, 1979). Hence, because under this theory socioeconomic advantage is not a sufficient cause of an applicant’s performance, learning that it was present does not lead to discounting their effort or talent. Those perceptions are likely to remain unchanged.

How Beliefs Lead to Asymmetric Evaluations

We propose that more varied beliefs about advantage, compared to disadvantage, result in asymmetric evaluations of applicants. The headwinds model suggests positive inferences about a disadvantaged applicants’ effort and talent. In contrast, beliefs about advantage are split: the tailwind model suggests negative inferences, while the bicycle model suggests no change. Because disadvantage is consistently seen as necessitating more effort and talent, while

advantage is seen as either reducing the need for them *or* still requiring them to produce an outcome, we expect average evaluations of advantaged applicants to be less negative than evaluations of disadvantaged applicants are positive.

This prediction may seem at odds with findings that people negatively judge the competence of disadvantaged individuals and positively judge that of advantaged individuals (Connor et al., 2021; Durante et al., 2017; Durante & Fiske, 2017). However, those studies focus on cases where competence must be inferred from socioeconomic background alone. Our theorizing focuses on situations where people evaluate applicants based not only on their socioeconomic background but also on additional (albeit noisy) information about their competence, such as test scores and GPA. This integration creates a distinct evaluative process. For example, when people have performance data (a signal of competence) on male and female coders, their evaluations rely less on gender stereotypes (Bohren et al., 2019). Likewise, we theorize that when competence signals are available, people integrate them with socioeconomic information to evaluate applicants.

Current Studies

Across four studies, we examined whether people evaluate socioeconomically advantaged and disadvantaged applicants asymmetrically. Study 1 surveyed college admissions officers on their evaluations of such applicants. Study 2 uses a pre-registered internal meta-analysis to synthesize the results of 12 experiments in which participants first evaluated an applicant based on their achievements, then re-evaluated them after learning about their socioeconomic background. Study 3 tested whether beliefs about dis/advantage drive asymmetric evaluations. Study 4 simulated admissions outcomes to illustrate the impact of these evaluative patterns.

We conducted a pre-registered internal meta-analysis in Study 2 for two main reasons. First, because we had conducted multiple experiments testing the same question, we wanted to assess the evidence for/against our hypothesis with all our data. Second, we wanted to minimize subjectivity about which experiments were “valid” tests of our hypotheses and should be considered. However, we knew that internal meta-analyses can make false effects appear true, so we tried to mitigate this risk (Vosgerau et al., 2019). To avoid selective inclusion of data, we included all experiments conducted to date—“pre-tests,” “pilots,” and a preregistered experiment—that tested the same hypothesis with the same type of stimuli. We also leveraged the fact that we were still determining how to best test the hypotheses to mitigate p-hacking: we preregistered analyses that we had only conducted on a few of the individual experiments and never on the aggregated data. We encourage readers to examine our supplemental methods for more detail on our meta-analytic approach, as well as to look at the results from the individual experiments, which we report in full. To make it easier for readers to draw conclusions based on the individual study results, and not only the meta-analytic results, we also summarize them in Table S10.

Throughout our studies we sought to balance internal and external validity. In terms of internal validity, for example, we created stimuli for Studies 2 and 3 that conveyed socioeconomic advantage and disadvantage of similar intensity (i.e., where the relative levels of disadvantage and advantage were perceived as similarly dis/advantageous). We describe this and similar efforts to maintain internal validity in the context of the studies and in the supplement (see “Testing for Experimental Artifacts and Alternative Explanations”). In terms of external validity, we prioritized generalizability to college admissions evaluations. We sampled college admissions officers (Study 1), as well as designed stimuli (Studies 2-3) to closely represent the

information that college admissions officers use in their evaluations. For example, we conveyed applicant's socioeconomic information in the form of the College Board's Landscape™ tool, which describes an applicant's neighborhood and school. This tool is currently in use by over 200 colleges and increasing (Bastedo et al., 2018; Mabel et al., 2022). Some stimuli required striking a balance between internal and external validity. For example, in Studies 2-3, to avoid floor and ceiling effects in the evaluation of applicants, we set applicants' performance level slightly above average (55th-65th percentile). This allowed for an internally valid test, such that participants had "room" to adjust their evaluations of an applicant without reaching the bottom or top of the scale. This means, however, that our results stem from evaluations of near-average applicants, and their generalizability to very low and high-scoring applicants is uncertain.

Transparency and Openness (All Studies)

We report all studies' sample sizes, data exclusions, manipulations, and measures in the manuscript and, in the case of the twelve Study 2 experiments, in the supplement. Sample sizes for all studies were determined in advance. We preregistered our meta-analytic approach (Study 2), the first experiment of Study 2, and Study 3 on AsPredicted.org. All study materials, preregistrations, data, and syntax are publicly available at the Open Science Framework (OSF) repository and can be accessed at https://osf.io/kpseq/?view_only=ac94bb40ab1f455d8a4c319a89293140. We analyzed data using Stata (version 18.5), and all results, including those in the supplement, were reproduced by a research assistant. Informed consent was obtained for all studies and all study procedures were approved by the relevant Institutional Review Boards.

Study 1: Admissions Officers

First, we sought to address how professional college admissions officers might adjust their evaluations of applicants upon learning about their disadvantaged or advantaged socioeconomic circumstances. We prioritized a relatively controlled experimental design, while capitalizing on practicing professionals' experiences.

Methods

Sample

We recruited 293 current and former college admissions officers at an annual college admissions conference (NACAC 2023) in Baltimore, MD (age: $M = 36.7$, $SD = 10$; 57.3% female; 60% White/White American, 14.4% Black/African American, 12.3% Latinx/Hispanic/Latinx American, 6.3% Asian/Asian American; 7% Other; admissions experience: $M = 10$ years, $SD = 7.8$). Participants reported their political attitudes (74.6% identified as slightly liberal, liberal, or extremely liberal, 16% identified as moderate, and 9.4% identified as slightly conservative, conservative, or extremely conservative) and details about their educational institution: its selectivity (< 20% acceptance rate = 16.7%, 20-40% = 13.2%, 40-60% = 15%, 60-80% = 30.7%, and > 80% = 24.3%), type of degree granted (4-year = 87.8%, 2-year = 5.2%, other = 7%), and consideration of applicant need (need-blind = 45.2%, need-aware = 41%, other = 13.8%). A sensitivity analysis conducted in G*Power 3.1 suggested that the sample size provided 95% power to detect effects as small as $d = 0.22$ within-subjects and $d = 0.42$ between-subjects (two-tailed t-test, $\alpha = .05$).

Materials and Procedure

Participants considered two applicants: one disadvantaged and one advantaged, in counterbalanced order (advantaged first $n = 146$; disadvantage first $n = 147$). For the first

applicant, we asked participants to imagine evaluating a college applicant “who has the average qualifications of someone you would admit... their SAT scores, grades, coursework, etc. are average among your admitted students.” Then, we asked them to “imagine that as you read through their application you realized that they came from a socioeconomically [advantaged/disadvantaged] background.” For the second applicant, participants read, “Again, imagine an applicant who has the average qualifications of someone you would admit. But now imagine that... they came from a socioeconomically [disadvantaged/advantaged] background.”

For each applicant, participants indicated whether the information about their background would change their impression of the applicant (1 *Not at all change* to 7 *Extremely change*) and in what way the background information would change their impression (-1 *It would worsen my impression*, 0 *It would not change my impression*, 1 *It would improve my impression*).

Participants also indicated their agreement with four statements, two for each applicant (-3 *Strongly Disagree*, 0 *Neither*, 3 *Strongly Agree*), about what socioeconomic disadvantage or advantage implies about their effort (e.g., “Socioeconomically advantaged applicants need to work hard in order to achieve high scores and accomplishments,” “Effort is always needed to overcome the challenges of socioeconomic disadvantage”). We created an average composite for their responses regarding the advantaged applicant ($r = .37$) and another for the disadvantaged applicant ($r = .46$).

Finally, participants answered an open-ended exploratory question about how college admissions would look if they could design it to be as fair as possible (we do not report analyses for this question) and questions about their own demographics and educational institutions.

Results

For each dependent variable, we examine responses between-subjects—i.e., between the first evaluation that participants made—and within-subjects—i.e., between each participant's first and second evaluations. The results are consistent.

Participants reported that they would only somewhat adjust their evaluation if the applicant was advantaged but would adjust significantly more if the applicant was disadvantaged. This pattern emerged between ($M_{Advantage} = 2.2$, $SD = 1.48$ vs. $M_{Disadvantage} = 3.33$, $SD = 1.67$; $t[288] = 6.10$, $p < .001$, $d = 0.72$) and within subjects ($M_{Advantage} = 2.12$, $SD = 1.44$ vs. $M_{Disadvantage} = 3.26$, $SD = 1.71$; paired-samples t-test, $t[289] = 11.82$, $p < .001$, $d = 0.69$).

Most officers reported that their impressions of a disadvantaged applicant would improve, while their impressions of an advantaged applicant would not change. Between subjects: 66.7% said disadvantage would improve their impression, 33.3% would not change, and 0% would worsen it. For advantage, 11.1% reported improvement, 69.4% no change, and 19.4% worsening ($\chi^2 [2, 288] = 103.4$, $p < .001$). Within subjects: 65.4% said disadvantage would improve their impression, 34.26% would not change it, and 0.35% would worsen it. For advantage, 8.9% reported improvement, 72.5% no change, and 18.6% worsening (McNemar test, $\chi^2 [1, 288] = 93.1$, $p < .001$).

Participants reported greater agreement that disadvantage implies effort than that advantage does. This pattern emerged between ($M_{Disadvantage} = 1.61$, $SD = 0.97$ vs. $M_{Advantage} = 0.25$, $SD = 1.38$; $t[288] = 9.73$, $p < .001$) and within subjects ($M_{Disadvantage} = 1.81$, $SD = 0.95$ vs. $M_{Advantage} = 0.18$, $SD = 1.33$; paired-samples t-test, $t[288] = 17.57$, $p < .001$).

Discussion

Admissions officers reported that they would adjust their evaluations of an applicant more if they learned that they were socioeconomically disadvantaged than advantaged. Most said that their impression of a disadvantaged applicant would improve, while their impression of an advantaged applicant would remain unchanged. These patterns held across officers from college and universities varying in their selectivity, consideration of financial need, and type of degree offered (see Table S2), suggesting that these results are not limited to the admissions officers or criteria from certain types of schools.

Study 2: Internal Meta-Analysis of Experiments 1-12

Whereas Study 1 examined how admissions officers evaluate imagined applicants, Study 2 examined how people adjust their evaluations of the same specific applicants after learning about their socioeconomic background. Study 2 is a preregistered internal meta-analysis (https://aspredicted.org/AHT_DXC) comprising data from 12 experiments that share a common method.⁴ In all the experiments, participants first evaluated an applicant based on their academic achievement, then re-evaluated them after learning about their advantageous or disadvantageous socioeconomic context (Experiment 1 was preregistered: https://aspredicted.org/ALW_EPK). This two-stage process allowed us to compare how people adjust their evaluations in response to

⁴ We deviated slightly from the preregistration to fix oversights in how we applied exclusions (see supplemental Table S1 for more detail). Ahead, we report results with the corrected exclusions; we report full results with the corrected exclusions and the original preregistered exclusions in supplemental Tables S6-S9 and S11-S14. As the tables make apparent, the impact of this deviation is negligible and does not affect the interpretation of any results.

advantage versus disadvantage information. We provide greater detail about each experiment, including individual methods and results, in the supplement.

Methods

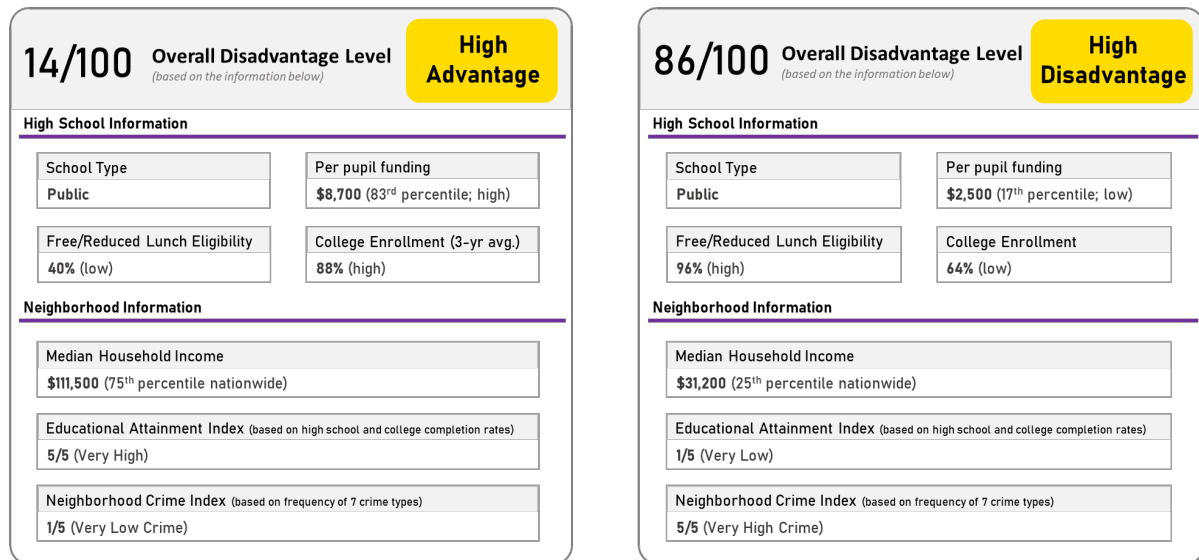
Sample

We recruited online participants who responded to an advertisement (for each individual experiment) on Amazon Mechanical Turk. After exclusions and using only data from comparable conditions across experiments, the final sample size for the meta-analyses was 2,704 (49.75% female; $M_{age} = 38.19$, $SD_{age} = 13.01$; 74.8% White/Caucasian, 7.4% Asian/Asian-American, 6.8% Black/African-American, 4.3% Hispanic/Latino, 3.9% Mixed/Multiracial, 2.9% Other or not categorized).

Materials and Procedure

Participants simulated the role of an admissions officer evaluating a college applicant to their competitive university. We randomly assigned participants to evaluate a socioeconomically disadvantaged or advantaged applicant (Context: Disadvantage, Advantage).

The socioeconomic information about the applicant described their high school and neighborhood (Fig. 1) and was based on the College Board's Landscape™ tool. We designed the disadvantage and advantage information to be symmetric in their intensity. For example, the median household income and per pupil funding for disadvantage were at the 25th and 17th percentiles, whereas for advantage they were at the 75th and 83rd percentiles. The specific information varied slightly across experiments (see Tables S35 and S36 for all the stimuli).

Figure 1*Sample Experimental Stimuli*

Note. Information about the applicant’s socioeconomically advantaged (left) or disadvantaged background (right).

Participants evaluated the applicant before and after learning about their socioeconomic context. First, participants evaluated the applicant based only on their academic achievement (e.g., SAT score, GPA). In all experiments, the SAT score was between the 55th and 65th percentile (inclusive), whereas the GPA, which featured in three experiments, was always 3.8 out of 4.0. Then, participants learned that socioeconomic information about the applicant was available and answered comprehension questions about the type of information they would see. Finally, participants saw the applicant’s socioeconomic context information, alongside the academic achievement, and were asked to evaluate the applicant again.

Participants provided an admissions evaluation: they assessed “the overall quality of the applicant (along with the associated admissions decision)” on a scale (*Unqualified [definitely reject]* to *Exceptional [definitely admit]*) like those used in actual admissions processes (*Resolution of compliance review of Princeton University’s undergraduate admissions, 2015*).

Participants also rated impressions of effort, talent, and warmth (each experiment included a subset of these measures; see Table S4). To measure effort, participants rated the applicant's hard work, motivation, resilience, and perseverance on extent (*Not at all to Extremely*) or agreement (*Extremely below average to Extremely above average*) scales. Talent was measured through ratings of smartness, intelligence, reasoning ability, and critical thinking on the same scales. Warmth was measured through ratings of friendliness and extroversion on the same scales.

Results

Analyses

For each variable (admissions evaluations, effort, talent, and warmth), we examined how participants adjusted their ratings from before learning about the applicant's socioeconomic context (Time 1) to after (Time 2). We conducted multiple analyses examining average overall adjustment (i.e., how much, on average, participants adjusted for dis/advantage), the directions of adjustment (i.e., the proportion of adjustments that were negative, zero, or positive), and the magnitude of adjustment (i.e., the absolute extent to which an evaluation changed).

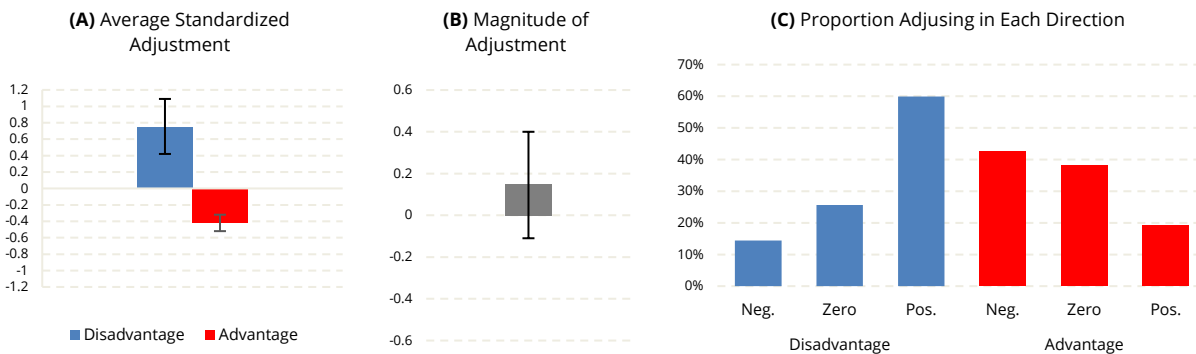
For brevity, we report a subset of all analyses for admissions evaluations and impressions of effort and talent (see the supplement for greater detail on all analyses and their results). We report overall adjustment; significant differences ($p < .001$) in the odds of adjusting in any direction (positive or negative) and in a compensatory direction (i.e., positively for disadvantage and negatively for advantage); and the magnitude of adjustment conditional on having adjusted. Warmth impressions showed no significant differences and are reported only in the supplement.

Admissions Evaluations

On average, participants adjusted their admissions evaluations positively for disadvantage ($d = 0.75$, 95% $CI = [0.41, 1.08]$) and negatively for advantage ($d = -0.42$, 95% $CI = [-0.52, -0.32]$); $N = 1538$, $K = 3$; Fig. 2A). Consistent with our hypothesis, their adjustments were asymmetric: they adjusted positively for disadvantage information more than adjusted negatively for advantage information.

Figure 2

Meta-analysis of adjustment to admissions evaluation



Note. Adjustment to admissions evaluations ($N = 1538$, $K = 3$) upon learning that an applicant was socioeconomically advantaged or disadvantaged. (A) shows the average adjustment effect size and direction, (B) shows the effect size for the difference between advantage and disadvantage in absolute magnitude of adjustment, conditional on adjusting (a positive value indicates more adjustment for disadvantage and a negative value indicates more adjustment for advantage), and (C) shows the proportion of people who adjusted positively, negatively, or did not adjust.

There was not a significant difference in the magnitudes of adjustment, conditional on adjusting, for advantage versus disadvantage ($d = 0.15$, 95% $CI = [-0.10, 0.39]$, $z = 1.17$, $p = .241$). In other words, among participants who adjusted, they did not adjust significantly more or less for disadvantage versus advantage. Figure 2B shows the effect size and confidence interval, which does not omit zero, for the difference between the magnitudes.

The directions in which people adjusted for advantage versus disadvantage significantly varied (Fig. 2C). Most participants adjusted positively for disadvantage (59.95%) but were split between negative adjustment (42.52%) and no adjustment (38.23%) for advantage. In other words, they were more likely to adjust positively for disadvantage than negatively for advantage (*Odds Ratio [OR]* = 2.03, 95% *CI* = [1.66, 2.49], $z = 6.81$, $p < .001$) and more likely to adjust than not adjust for disadvantage than for advantage ($OR = 1.81$, 95% *CI* = [1.45, 2.25], $z = 5.30$, $p < .001$). These results reveal that the overall adjustment asymmetry stemmed from people adjusting for disadvantage primarily in one way, but for advantage in one of two ways.

Effort and Talent Impressions

Participants adjusted their impressions of the applicant's effort similarly to their admissions evaluations. They adjusted their effort impressions positively for disadvantage ($d = 0.85$, 95% *CI* = [0.63, 1.06]) more than they adjusted negatively for advantage ($d = -0.53$, 95% *CI* = [-0.70, -0.37]). Again, the adjustment magnitudes were not asymmetric ($d = -0.01$, 95% *CI* = [-0.20, 0.19], $z = 0.05$, $p = .960$), but the directions were. Most adjusted their effort impressions positively based on disadvantage information (66.57%) but were mixed based on advantage information: some adjusted negatively (46.77%) and others did not adjust (41.89%). As with the admissions evaluations, participants were more likely to adjust their effort impressions positively for disadvantage than negatively for advantage ($OR = 2.38$, 95% *CI* = [1.90, 2.97], $z = 7.56$, $p < .001$) and more likely to adjust than not adjust for disadvantage than for advantage ($OR = 2.43$, 95% *CI* = [1.86, 3.16], $z = 6.58$, $p < .001$).

Adjustments for talent impressions were less asymmetric than for effort. On average, participants adjusted positively for disadvantage ($d = 0.33$, 95% *CI* = [0.21, 0.46]) and negatively for advantage ($d = -0.22$, 95% *CI* = [-0.35, -0.09]), but the absolute difference between these

effects is qualitatively smaller than for effort. As with effort, the adjustment magnitudes were not asymmetric ($d = -0.01$, 95% $CI = [-0.18, 0.17]$, $z = 0.07$, $p = .942$). However, unlike with effort, participants adjusted positively for disadvantage (44.14%) about as often as they did not adjust (43.12%). For advantage, participants mostly did not adjust (54.96%) or adjusted negatively (30.71%). Still, participants were more likely to positively adjust for disadvantage than negatively adjust for advantage ($OR = 1.60$, 95% $CI = [1.20, 2.12]$, $z = 3.24$, $p = .001$).

Discussion

Study 2 finds that participants adjusted their admissions evaluations asymmetrically for disadvantaged and advantaged applicants. On average, they adjusted their evaluations of an applicant positively when the applicant was disadvantaged, but negatively and less so when the applicant was advantaged.

The asymmetry stemmed from differences in the *direction* of adjustment, rather than in the magnitude of adjustment. Those who adjusted were just as likely to shift their evaluations to the same extent for a disadvantaged and advantaged applicant, which suggests that they did not see disadvantage as hindering success more than advantage facilitates. However, they were more likely to adjust *at all* for disadvantage than advantage, and more likely to adjust positively for disadvantage than negatively for advantage. This pattern suggests asymmetrical beliefs about how dis/advantage affects applicants and is consistent with our theory that people may hold one theory of disadvantage, but two about advantage.

The asymmetry in adjustment was even more pronounced in impressions of the applicant's effort and less evident in impressions of talent. This result suggests that an applicant's context may have more bearing on people's inferences about how hard-working than

how talented they are.⁵ There was also minimal adjustment to impressions of warmth and no asymmetry (see supplemental table S9), which reveals that participants adjusted their impressions in a more nuanced manner than simply positively for disadvantage and negatively for advantage (a halo effect). To more directly test whether beliefs about dis/advantage influence how people adjust their impressions, we conducted another experiment.

Study 3: Manipulating Implicit Theories to Shift Effort Inferences

Study 3 (preregistered: https://aspredicted.org/GQB_N7N) tested whether shifting people's implicit theories about how socioeconomic advantage affects applicants—and what that advantage reveals about them—impacts their evaluation. We hypothesized that conceptualizing advantage as a “tailwind” that propels success regardless of effort, rather than as a “bicycle” that aids progress but requires effort, would lead more evaluators to negatively adjust their impressions of an applicant's effort and fewer to leave their impression unchanged.

Methods

Sample

We recruited 1,199 participants on Amazon Mechanical Turk. After the pre-registered exclusions, the sample was 745 participants (56.91% female; $M_{age} = 40.70$, $SD_{age} = 12.44$). A sensitivity analysis conducted in G*Power 3.1 suggested that the final sample size provided 95% power ($\alpha = .05$) to detect effects as small as $d = 0.39$ (two-tailed t-test) and $w = 0.20$ (contingency table, $df = 1$) when comparing the smallest experimental cells.

⁵ We find this pattern in participants' qualitative explanations about why the context information changed or did not change their impression: 43% of participants mentioned effort compared to 11% for talent. See supplement: “Effort and talent in qualitative explanations for adjustment.”

Materials and Procedure

We randomly assigned participants to one of four experimental conditions: Disadvantage-Control, Advantage-Control, Advantage-Wind, and Advantage-Bicycle. As in Study 2, participants evaluated a college applicant based only on their academic achievements and then again after learning about their socioeconomic circumstances, with one modification: Before seeing the applicant's information (see Tables S35-S36 for the full stimuli), participants read guidance on how to interpret the dis/advantage information.

Conditions. For Disadv.-Control and Adv.-Control participants, the guidance comprised a sample disadvantaged or advantaged applicant with explanatory text.

For Adv.-Wind and Adv.-Bicycle participants, the guidance introduced an analogy to shape their beliefs about the relationship between socioeconomic advantage and effort: (a) advantage as a wind at one's back, which reduces the need for effort, or (b) advantage as a bicycle, which requires effort to reap its benefits. We illustrated these analogies as depicted in Figure 3.

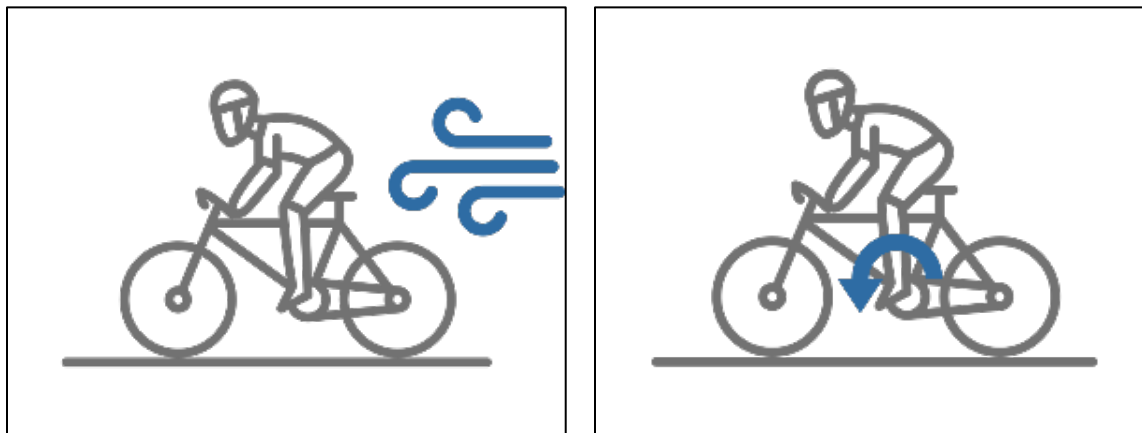
In the Adv.-Wind condition, participants read the following excerpt: "...Having socioeconomic advantage is like cycling with the wind at one's back. A wind at a cyclist's back moves them forward, whether they are trying to move forward or not...Just like a cyclist may not have to exert as much effort if they also have the wind helping them move forward, an applicant with socioeconomic advantage may not have to exert as much effort to perform well on a test like the SAT."

In the Adv.-Bicycle condition, participants read this parallel excerpt: "...Having socioeconomic advantage is like riding a bicycle. A bicycle transfers a cyclist's effort into forward movement... Just like a cyclist that completes a race on a bicycle still has to turn the

pedals to get to the finish line, an applicant with socioeconomic advantage still has to exert effort to perform well on a test like the SAT.”

Figure 3

Experimental Stimuli (Study 3)



Note. Graphics included in stimuli to influence participants’ beliefs about the relationship between socioeconomic advantage and effort: advantage as a tailwind (left) and advantage as a bicycle (right).

Measures. Participants across all conditions evaluated the applicant both before and after learning their socioeconomic context. They rated the applicant’s hard work and effort (-3 *Extremely Below Average*, 0 *Average*, 3 *Extremely Above Average*), which we averaged into composites (Time 1 $r = .92$ and Time 2 $r = .95$). They also made an admissions decision (1 *Definitely Reject*, 4 *Waitlist*, 7 *Definitely admit*).

After the second evaluation, participants indicated their agreement with three statements about how either disadvantage or advantage (matching condition) relates to effort (-3 *Strongly disagree* to 3 *Strongly Agree*). These items measured participants’ beliefs about whether a socioeconomically dis/advantage context implies effort. We included the same two pairs of statements from Study 1, plus an additional one for each condition (“Being socioeconomically advantaged does not mean that an applicant had to work less hard” or “Being socioeconomically

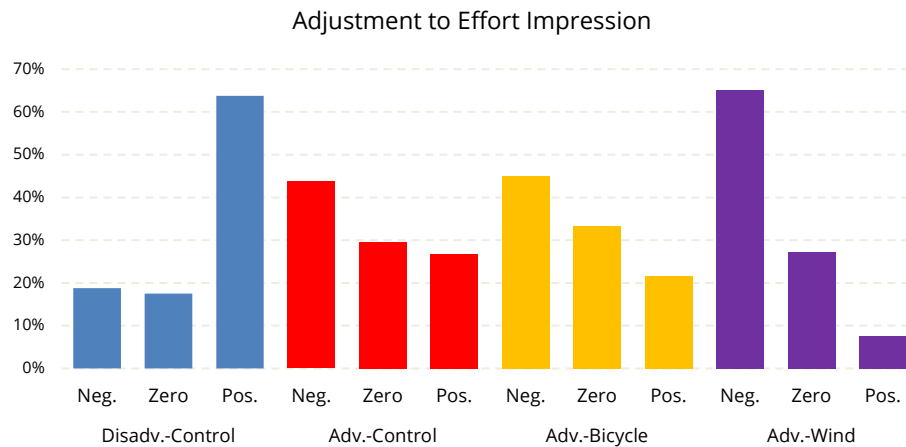
disadvantaged means that an applicant had to work harder”). We created an average composite for responses about the advantaged applicant ($\alpha = .72$) and another for the disadvantage applicant ($\alpha = .83$).

Results

For each of our dependent variables (effort and admissions evaluations), we examined overall adjustment and directions of adjustment. For clarity and brevity, we focus on the analyses most relevant to the effects of manipulating advantage beliefs on effort impressions and on the overall evaluation asymmetry. All analyses are in the supplement.

The manipulation shifted participants’ beliefs. Compared to Adv.-Control participants ($M = 4.73$, $SD = 1.22$), Adv.-Wind participants believed socioeconomic advantage necessitates effort significantly less ($M = 4.32$, $SD = 1.38$, two-sided $t[379] = 3.04$, $p = .003$), while Adv.-Bicycle participants believed it necessitates effort marginally more ($M = 5.03$, $SD = 1.09$, two-sided $t[385] = 2.55$, $p = .011$). These results suggest that the manipulations shifted beliefs as intended; however, our tailwinds manipulation was more effective than the bicycle manipulation. As expected, beliefs correlated with adjustment to effort impressions ($r = .31$) and admissions evaluations ($r = .25$).

A larger share of participants *negatively adjusted* their effort impressions in the Adv.-Wind condition than in the Adv.-Bicycle condition ($\chi^2[1, 402] = 16.32$, $p < .001$; Fig. 4). More also negatively adjusted in the Adv.-Wind condition than in the Adv.-Control ($\chi^2[1, 381] = 17.65$, $p < .001$), but the Adv.-Bicycle and Adv.-Control conditions did not significantly differ ($\chi^2[1, 387] = 0.08$, $p = .785$).

Figure 4*Adjustment Directions (Study 3)*

Note. Proportion in each experimental condition who adjusted positively, negatively, or did not adjust their effort impressions.

A smaller, but non-significant, share of participants *did not adjust* their effort impressions in the Adv.-Bicycle compared to Adv.-Wind condition ($\chi^2[1, 402] = 1.75, p = .186$). The share of non-adjusters also did not differ significantly between Adv.-Bicycle and Adv.-Control ($\chi^2[1, 387] = 0.65, p = .419$) or Adv.-Wind and Adv.-Control ($\chi^2[1, 381] = 0.23, p = .629$).

The Adv.-Wind manipulation reversed the adjustment asymmetry in admissions evaluations. While there was no significant asymmetry between the Adv.-Control ($M = -0.28, SD = 1.30$) and Disadv.-Control conditions ($M = 0.22, SD = 1.44$), we can still ascertain the effect of shifting adjustment in line with the tailwinds model: on average, Adv.-Wind participants adjusted negatively ($M = -0.55, SD = 1.22$) twice as much as Adv.-Control participants (two-sided $t[379] = 2.07, p = .039$) and twice as much as Disadv.-Control participants adjusted positively. In other words, the Adv.-Wind manipulation reversed the asymmetry – participants adjusted negatively for advantage more than they adjusted positively for disadvantage.

Discussion

Study 3 finds evidence that people's beliefs about socioeconomic advantage influence how they adjust their evaluations of an applicant when learning about their socioeconomic circumstances. As theorized, participants who were led to think about advantage as a tailwind were more likely to negatively adjust their impressions of an advantaged applicant's effort. Moreover, the previously observed adjustment asymmetry between disadvantage and advantage was mitigated when comparing disadvantage adjustment to the advantage adjustment of these participants. Contrary to our expectations, participants who were led to think about advantage as a bicycle were not significantly less likely to negatively adjust, nor significantly more likely to not adjust. The lack of adjustment differences for these participants may reflect the smaller effect that the bicycle manipulation, compared to the tailwind manipulation, had on shifting beliefs about advantage. Alternatively, it may reflect a more complex or different relationship between advantage beliefs and adjustment. As a whole, this study provides evidence that beliefs about socioeconomic advantage shape inferences about effort and admissions evaluations, but this evidence comes primarily from our manipulations increasing tailwinds beliefs than bicycle beliefs.

Study 4: Simulations of Admitted College Classes Under Different Evaluation Approaches

Studies 1-3 show an asymmetry in how socioeconomic context information influences the evaluation of college applicants. In Study 4, we use simulations to examine its impact on the socioeconomic composition of an admitted class.

Methods

Data

We created a dataset of 35,000 hypothetical college applicants with family incomes and SAT scores matching those of 2023 test-takers. The size approximates the applicant pool of a highly selective private university (e.g., The University of Chicago Class of 2024: 34,372 applicants; The University of Chicago, n.d.).

We assigned each applicant an income quintile based on the 2023 SAT report (The College Board, 2023). We assigned each applicant an SAT score by sampling from the College Board's summary statistics for each income quintile (The College Board, 2023). We validated our dataset by comparing score distributions to those reported by the College Board and by researchers linking SAT scores with parental income (Chetty et al., 2020; The College Board, 2023). The share of applicants in our dataset matched reported distributions within 4% percentage points, supporting its validity.

Simulations

We simulated college admissions decisions under three approaches to incorporating socioeconomic information in admissions evaluations: no adjustment, symmetric adjustment, and asymmetric adjustment. We set an admissions rate of 7.1% for all approaches, per the University of Chicago's 2024 admissions rate (The University of Chicago, n.d.).

In the no-adjustment approach, applicants were admitted based solely on SAT scores, with the top 7.1% selected. The symmetric adjustment approach represented admissions officers adjusting for both advantage and disadvantage under a winds model, adjusting SAT percentiles accordingly. Applicants in the lowest income quintile received a +10-percentile adjustment, those in the second lowest received a +5-percentile adjustment, the middle quintile remained

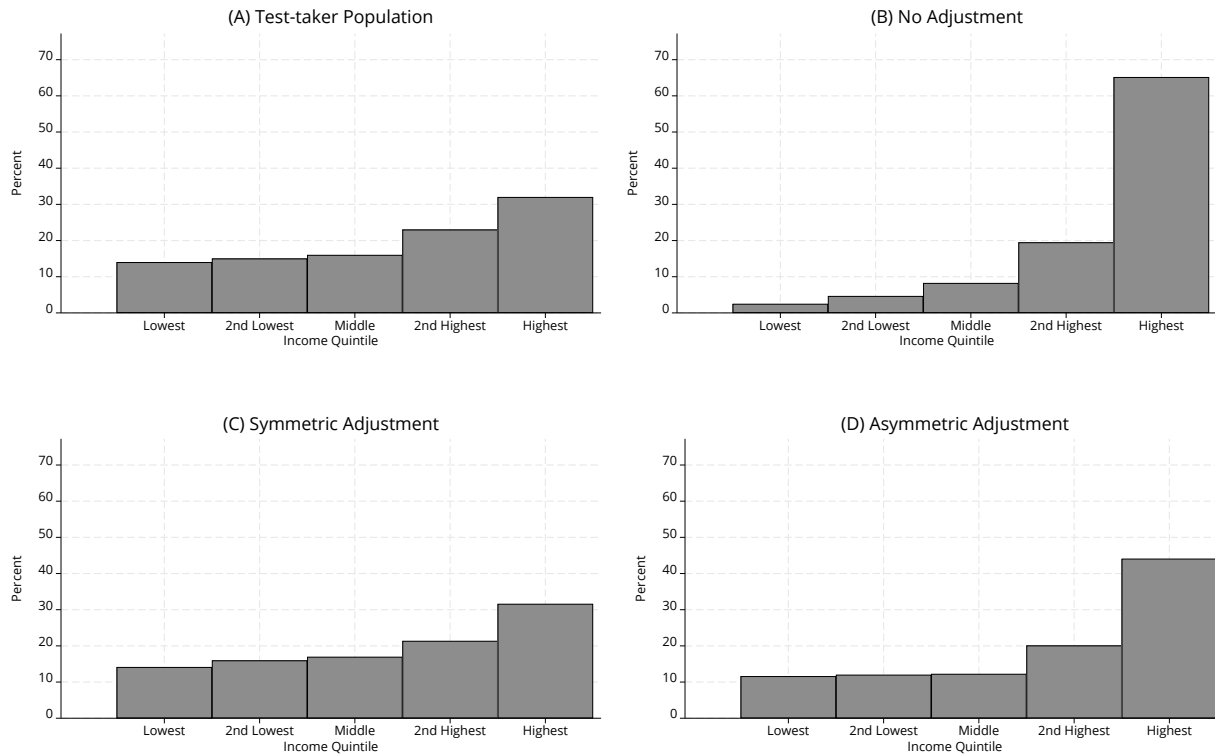
unchanged, the second highest received -5-percentile adjustment, and the highest received a -10-percentile adjustment. The adjustments were of different magnitudes because we assumed officers would adjust differently depending on the applicant's level of dis/advantage.

The asymmetric adjustment approach modified SAT percentiles similarly but only adjusted 54% of applicants in the highest two quintiles, per the proportion of Study 2 participants who negatively adjusted their effort impressions of an advantaged applicant negatively. All disadvantaged applicants received an adjustment to illustrate the impact of adjusting for advantage relative to the symmetric approach.

Results

Figure 5 presents the socioeconomic composition of the test-taking population (i.e., the applicant pool in this simulation) and the admitted class under each approach. The test-taker population was 32% from the top income quintile, followed by 23%, 16%, 15%, and 14%, in descending order. The no-adjustment approach produced the most unequal admitted class, with 65% from the top quintile, followed by 19%, 8%, 5% and 2%.⁶ The symmetric adjustment approach resulted in the most representative admitted class, closely matching the applicant pool at 32%, 21%, 17%, 16%, and 14%. The asymmetric adjustment approach produced a less representative class than the symmetric approach but remained more representative than no adjustment, yielding an admitted class of 44%, 20%, 12%, 12%, and 12% across the quintiles.

⁶ Percentages rounded to whole numbers for all approaches.

Figure 5*Income distributions*

Note. Income quintile representation (A) of SAT test-takers in the high school class of 2023, and of simulated college classes admitted using different evaluation approaches: (B) no adjustment to SAT scores based on income, (C) symmetric adjustment: SAT percentile point adjustments (+10, +5, 0, -5, -10) for each income quintile (lowest to highest, respectively), and (D) asymmetric adjustment: the same percentile point adjustments as (C), but the -5 and -10 adjustments only apply to 54% of all applicants in the highest two quintiles.

Discussion

These results show how admissions officers' consideration of socioeconomic circumstances can shape the socioeconomic makeup of an incoming class, either reinforcing or reducing inequality. Asymmetrically adjusting for applicants' circumstances led to a more representative class than relying on test scores alone, but it did not achieve the level of representativeness reached by treating advantage and disadvantage equally. In contrast,

symmetrically accounting for both disadvantage and advantaged produced a class closely matching the applicant pool's socioeconomic distribution.

General Discussion

Across studies, college admissions officers and laypeople evaluated disadvantaged and advantaged college applicants asymmetrically. In Study 1, most admissions officers reported that they would positively adjust their evaluation of an applicant upon realizing they were socioeconomically disadvantaged, but that they would not change their impression if they were socioeconomically advantaged. In Studies 2 and 3, laypeople adjusted their evaluations more, on average, when learning that an applicant was disadvantaged than advantaged. These asymmetric patterns of adjustment were even more pronounced when assessing an applicant's effort, and less pronounced when assessing talent. However, this pattern disappeared entirely for judgments of warmth. These patterns together suggest a nuanced logic to how people update their evaluations of applicants.

Consistent with our theorizing, we found that people adjust their evaluations based on their beliefs about how socioeconomic disadvantage and advantage affect applicants. We expected that people would conceptualize the effects of socioeconomic disadvantage and advantage as headwinds and tailwinds, that is, as forces that make performance harder or easier, respectively. People would then adjust their impressions of applicants, particularly about their effort, based on these theories—the headwinds theory would prompt positive adjustment and the tailwinds theory negative adjustment. However, we further theorized that people would also think about the effects of socioeconomic advantage as a benefit that can only be reaped through effort, just as a bicycle only helps one move forward if one turns the pedals, which does not prompt adjustment. We expected that more varied beliefs about advantage (tailwind and bicycle),

compared to disadvantage (headwind), would result in asymmetric evaluations of applicants. In Study 3, we manipulated people's theories about advantage and found that this changed how they adjusted their evaluations of applicants; specifically, more people adjusted their evaluations negatively when they were led to think about advantage as a tailwind. Manipulating people's theories also mitigated the asymmetry in adjustment for disadvantage versus advantage.

Asymmetric adjustment for applicant's socioeconomic circumstances can limit the socioeconomic diversity of admitted college classes. In Study 4 we simulated college admissions decisions that accounted for socioeconomic circumstances in different ways. Relying only on test scores (i.e., not accounting for circumstances), exacerbated the socioeconomic skew of the applicant pool. Symmetrically accounting for circumstances led to the most representative admitted class—nearly identical to the applicant pool—whereas asymmetrically accounting led to a less representative class. These results reveal how beliefs about socioeconomic dis/advantage can translate to admissions decisions that reinforce or reduce inequality.

Implications of Asymmetric Socioeconomic Context Adjustment

This work reveals a novel barrier to socioeconomic representation in college: people integrate information about applicants' socioeconomic advantage and disadvantage asymmetrically. This pattern is both practically and theoretically important.

Practically, this work highlights the challenge of increasing socioeconomic diversity on college campuses by evaluating applicants in light of their circumstances (Espinosa et al., 2015). Our findings suggest that the effectiveness of holistic review depends on evaluator's beliefs. Simply having access to socioeconomic information does not ensure that evaluators will integrate it into their evaluations consistently or at all. While shifting evaluators' beliefs may seem like a solution, interventions focused on individuals, as opposed to systems, may be

ineffective, short-lived, and elicit reactance (Chater & Loewenstein, 2023; Greenwald et al., 2022; Onyeador et al., 2024). Instead, colleges aiming to diversify their campuses may find greater success with admissions policies that automatically contextualize achievements, such as admitting top scorers within each income quintile.

Theoretically, this work broadens our understanding of how people perceive others based on their dis/advantages. In line with prior research, we found that people evaluate applicants consistent with an implicit theory of dis/advantage as a physical force (Heider, 1958; Jones, 1990; Reeder et al., 2001). Most people (three-fifths in Study 2) evaluated disadvantaged applicants more favorably, consistent with the belief that disadvantage functions as a “headwind” – it makes success harder, thus demanding greater effort. In the words of one admissions officer we surveyed, “...as opposed to students who have greater support and resources – [a disadvantaged applicant] likely had to work harder independently to achieve the same result.”⁷ Similarly, for advantage, some people (two-fifths in Study 2) evaluated advantaged applicants less favorably, consistent with the belief that advantage functions as a “tailwind” – it makes success easier, thus demanding less effort. As one admissions officer explained, “I would generally expect that someone with a lot of advantages would have more potential to exceed the average, and if they were average among many candidates having had a lot of advantages to succeed, their true potential was likely lower than average but boosted by privileges.” However,

⁷ This quote and the ensuing ones are from an exploratory question included in a survey from an unrelated, published research project also surveying admissions officers. The quotes can be found in this data file: [not included for anonymity]

these implicit theories of dis/advantage are not able to account for the other two-fifths of people who did not change their evaluations of advantaged applicants.

We theorize that people also hold a “bicycle” implicit theory of advantage. That is, that people believe advantage provides a benefit, but one that can only be reaped through effort, like turning the pedals on a bicycle. Consistent with this theory of advantage, two-fifths of participants in Study 2 did not change their evaluation of advantaged applicants. Thinking about socioeconomic advantage as having access to tutoring or well-resourced schools is captured by this theory: those advantages help students, but only if they put in the work to benefit from them. This idea was reflected by admissions officers who noted, for example, that advantaged students “have more access to testing and resources” and that their evaluations would “not [be] positive or negative, but realize [sic] that test scores are often higher due to access to tutoring and special courses”. We encourage future research that seeks to further test the existence of this implicit theory, unpack its contents (How do people talk about it? What are its assumptions? What are common examples?), and to test if captures the way people think about other advantageous factors (e.g., having a majority identity).

Limitations and Extensions

The design of our stimuli and experiments allowed us to control for and rule out alternative explanations for the asymmetry. Our Study 2 stimuli presented symmetrical levels of advantage and disadvantage, and we tested that they were perceived as similarly dis/advantageous. In terms of alternative explanations, if people expected the college applicant to be advantaged in the first place (e.g., based only on their test score), they would have adjusted their impression less if the applicant turned out to be advantaged versus disadvantaged. However, we measured people’s expectations and they were about equally agnostic with respect

to the applicant's level of dis/advantage (or even slightly expected the applicant to be disadvantaged). We also did not find that the asymmetry was created by imagining applicants of different identities (e.g., a poor Black applicant versus a rich White one) or by halo-effect positive impressions of disadvantaged applicants and negative impressions of advantaged applicants (as evidenced by the null effect for warmth). See the supplement's "Testing for experimental artifacts and alternative explanations" for greater detail about our tests.

Nevertheless, additional limitations should be considered when interpreting the current work (summarized in Table 1). One primary limitation is the controlled but narrow set of stimuli. We designed and pretested limited stimuli to avoid experimental artifacts influencing adjustment but did not systematically examine how adjustments vary across levels of dis/advantage, performance, or demographic factors (e.g., race, gender). It is possible, for example, that the patterns of adjustment might be different for low versus high performers (we focused on slightly better than average levels of performance). Future research should explore these interactions. Another primary limitation is that most experiments surveyed U.S.-based Amazon Mechanical Turk participants and focused solely on hypothetical college admissions evaluations, raising questions about generalizability. Our U.S.-centric sample also limits broader conclusions, as attributions vary across cultures (e.g., Morris & Peng, 1994; Turner et al., 2024). Future research should test adjustment in actual selection decisions and across diverse countries and occupations.

Future research should also examine how individual-level factors influence patterns of adjustment. One individual-level difference that may matter is political ideology. Indeed, we find that political ideology is associated with effort adjustment (see "Effort adjustment based on participant demographics" in the supplement), such that liberal and conservative participants differ in whether they adjust for advantage, but not disadvantage. Our theorizing suggests that

political ideology is related to adjustment through the implicit theories people hold, but the reason why is unclear. Are liberals and conservatives motivated to hold implicit theories that align with the outcomes they prefer, as in the case of the counterfactuals that people selectively imagine (Effron et al., 2024)? Have they been exposed to different narratives—through lived experience, media, etc.—that have shaped their understanding of socioeconomic advantage? We encourage future research to examine these questions.

Conclusion

This paper provides evidence for an asymmetry in how people evaluate socioeconomically disadvantaged versus advantaged college applicants: On average, people adjust their evaluations of disadvantaged applicants positively more than they adjust their evaluations of advantaged applicants negatively. This asymmetry stems from people's implicit theories about how dis/advantage affects applicants. People hold two theories about advantage—that it affects applicants like a tailwind or a bicycle—but only one about disadvantage—that it affects them as a headwind. The two theories of advantage lead some people to adjust negatively and some not to adjust, leading to lower overall adjustment compared to adjustment for disadvantage, which is most often positive. These beliefs are consequential—by influencing whether people account for applicants' advantages, they can shape the socioeconomic composition of an admitted college class. Overall, we find that people's beliefs about socioeconomic dis/advantage can influence who gets admitted to college, thereby providing an additional explanation for why universities may struggle to diversify their campuses.

Table 1*Assessment of Limitations.*

Dimension	Assessment
Internal Validity	
Is the phenomenon examined with experimental methods?	Yes (Studies 1-3)
Were the manipulations validated with manipulation checks?	Yes
What possible artifacts were ruled out?	Unbalanced intensity of the dis/advantage stimuli (Exp. 1, 2, & 10) Unbalanced a priori expectations of dis/advantage, based on the applicant's level of performance (Exp. 7) Unbalanced demographic expectations, based on the applicant's dis/advantage (Exp. 6) Unbalanced range to adjust evaluations positively and negatively (pretests)
Are boundary conditions examined?	No. We focus on applicants with slightly above average levels of performance and with relatively high levels of disadvantage or advantage.
Is the phenomenon's mechanism examined?	Yes (Study 3)
Statistical Validity	
For which studies were sample sizes, study designs and measures, hypotheses, and data analysis plans preregistered?	Study 2's Experiment 1, Study 2's meta-analytic approach, and Study 3
Were the reliability and validity of all dependent measures established (here or elsewhere)?	Reliability is reported for all scales. The dependent measures for which we examine adjustment correspond to established dimensions of social judgment.
Generalizability and ecological validity	
Were different experimental methods used?	Yes, lab (Studies 2-3) and lab-in-the-field (Study 1)
Were methods artificial/hypothetical?	Yes
Are the results generalizable to different identity groups?	Yes: we do not find significant differences based on participants' gender and income and only marginal differences based on age and race. We find differences based on political attitudes, which is consistent with our theorized mechanism. (For more detail, see Supplemental Table S28)
Are the results generalizable across different contexts/settings?	Unsure (not tested)
Are the results generalizable across different cultures/countries?	Unsure (not tested)
Is the phenomenon examined in terms of intersectional identity?	No, we did not examine other dimensions of the applicant's identity (except in Study 2's Experiment 6).
What are the main limitations in generalizability?	Primarily limitations on generalizability based on the current data are the use of hypothetical college admissions decisions and online U.S.-based samples. Additionally, we do not know how the results may vary for applicants with different levels of performance and dis/advantage.

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