



# How university diversity rationales inform student preferences and outcomes

Jordan G. Starck<sup>a,1</sup> , Stacey Sinclair<sup>a</sup>, and J. Nicole Shelton<sup>a</sup>

<sup>a</sup>Department of Psychology, Princeton University, Princeton, NJ 08540

Edited by Mary C. Waters, Harvard University, Cambridge, MA, and approved January 25, 2021 (received for review July 2, 2020)

It is currently commonplace for institutions of higher education to proclaim to embrace diversity and inclusion. Though there are numerous rationales available for doing so, US Supreme Court decisions have consistently favored rationales which assert that diversity provides compelling educational benefits and is thus instrumentally useful. Our research is a quantitative/experimental effort to examine how such instrumental rationales comport with the preferences of White and Black Americans, specifically contrasting them with previously dominant moral rationales that embrace diversity as a matter of intrinsic values (e.g., justice). Furthermore, we investigate the prevalence of instrumental diversity rationales in the American higher education landscape and the degree to which they correspond with educational outcomes. Across six experiments, we showed that instrumental rationales correspond to the preferences of White (but not Black) Americans, and both parents and admissions staff expect Black students to fare worse at universities that endorse them. We coded university websites and surveyed admissions staff to determine that, nevertheless, instrumental diversity rationales are more prevalent than moral ones are and that they are indeed associated with increasing White–Black graduation disparities, particularly among universities with low levels of moral rationale use. These findings indicate that the most common rationale for supporting diversity in American higher education accords with the preferences of, and better relative outcomes for, White Americans over low-status racial minorities. The rationales behind universities' embrace of diversity have nonlegal consequences that should be considered in institutional decision making.

diversity | education | instrumentality | morality | inequality

Much research has examined an important source of debate regarding political, organizational, and educational efforts to foster and support racial diversity—whether or not to pay attention to demographic group memberships, such as race [i.e., diversity ideologies; 1–5]. However, this discourse ignores another key distinction that characterizes such efforts, particularly in the context of higher education—why an entity chooses to pay attention to group memberships (i.e., diversity rationales). Efforts to expand and support racial diversity in majority-White educational institutions in the United States were originally justified by moral rationales—defined as rationales supported by intrinsic values or principles (6). For example, the *Brown v. Board of Education* 1954 ruling mandated integration of public schools out of concern for human dignity (7), and affirmative action policies were effectively defended on the grounds that they helped counter unjust discrimination (e.g., ref. 8). However, recent decades of judicial rulings pertaining to the use of race-conscious policies at institutions of higher education have favored alternative arguments that emphasize how diversity “promotes learning outcomes, and better prepares students for an increasingly diverse workforce and society. . .” (9, 10). Such instrumental rationales value diversity as an asset that facilitates organizations' ability to accomplish their routine objectives, and they have become the dominant rationale used by universities to defend race-conscious policies in the courts.

The legal success of instrumental rationales warrants examination of how they have shaped the discourse about, and experience of, higher education. A multidisciplinary array of legal (6, 10–12), education (13), organizational (14), and sociological (15, 16) scholarship argues that instrumental diversity rationales owe their popularity to the fact that they cast diversity and inclusion efforts as convergent with broader organizational or societal interests, broader interests which are by definition beholden to and representative of racial majority group (i.e., White American) interests. Consequently, it is argued, these rationales tacitly prioritize the benefits of diversity and inclusion efforts for the majority group over the interests of racial minorities themselves (10). The present research is a quantitative/experimental effort to examine how instrumental, as compared to moral, rationales for diversity shape the expectations and experiences of racial majority and minority group members. In accordance with the aforementioned theorizing, we hypothesized that instrumental diversity rationales should 1) be especially appealing to White Americans but not to low-status racial minorities, 2) dominate diversity discourse in higher education, and 3) be associated with worse relative outcomes for low-status minority students. In what follows, we delineate the basis of each of these hypotheses and test them using a range of methods and data sources. Consistent with extant literature (17), we focus on Black Americans as paradigmatic of low-status ethnic groups in the US, but we examine other groups when the data are available.

**Diversity Rationale Preferences and Expectations.** We hypothesized that there are at least three reasons instrumental diversity rationales should be uniquely appealing to White Americans. First,

## Significance

There are numerous reasons why institutions of higher education may choose to embrace diversity. A common rationale sanctioned by the US Supreme Court is that diversity provides compelling educational benefits and is thus instrumentally useful. We show that such instrumental rationales are the predominant rationale for diversity efforts in American higher education, are preferred by White Americans and not by Black Americans, that they are expected to advantage White Americans, and that they correspond to greater racial disparities in academic achievement. Overall, these findings suggest that the rationales behind universities' embrace of diversity have nonlegal consequences that should be considered in institutional decision making.

Author contributions: J.G.S., S.S., and J.N.S. designed research; J.G.S. performed research; J.G.S. and S.S. analyzed data; and J.G.S., S.S., and J.N.S. wrote the paper.

The authors declare no competing interest.

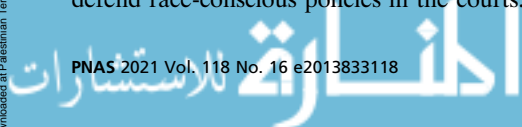
This article is a PNAS Direct Submission.

This open access article is distributed under [Creative Commons Attribution-NonCommercial-NoDerivatives License 4.0 \(CC BY-NC-ND\)](https://creativecommons.org/licenses/by-nc-nd/4.0/).

<sup>1</sup>To whom correspondence may be addressed. Email: [jstarck@princeton.edu](mailto:jstarck@princeton.edu).

This article contains supporting information online at <https://www.pnas.org/lookup/suppl/doi:10.1073/pnas.2013833118/-DCSupplemental>.

Published April 12, 2021.



both researchers and champions for diverse student bodies acknowledge that the purported educational benefits described in instrumental diversity rationales largely serve to provide educational value to White individuals (10, 13, 18). For example, Columbia University, Harvard University, Stanford University, and the University of Pennsylvania plainly stated in a 1978 amicus brief to the Bakke court (19) that the “purpose [of race-conscious admissions policies] is not only or even primarily to confer benefits upon members of minorities,” but rather their primary argument was that “the inclusion of qualified minority group members in a student body serves important educational objectives” (p.11). As conceptualized, these objectives were to be achieved by introducing novel points of view to campus, implying that the educational beneficiaries of these efforts were those for whom minority perspectives were novel (i.e., majority group members). Prior work demonstrates that university students have internalized this notion and expect to benefit directly from interacting with peers whose backgrounds differ from their own (20).

Second, instrumental rationales likely afford a greater sense of belonging to White Americans compared to moral rationales. While organizations acknowledging and celebrating racial diversity tend to make White individuals feel excluded (21), research in business contexts shows that instrumental rationales expand lay conceptualizations of diversity so that the term can be more inclusive of White people (22). This expansion provides White individuals a means of belonging in multicultural university contexts.

Finally, instrumental rationales, relative to moral rationales, may alleviate risks of social identity threat for White Americans, who are often concerned with being stereotyped as prejudiced (23). Moral diversity rationales often invoke the existence of prejudice and discrimination, enhancing White Americans’ concern with being labeled prejudiced due to their race. In contrast, the framing of instrumental rationales de-emphasizes societal discrimination, likely reducing White Americans’ concomitant social identity threat.

Though White Americans may prefer instrumental rationales because of an increased perception of educational value, greater sense of belonging, and reduced social identity threat, there is little reason to think that racial minorities, particularly low-status groups such as Black Americans, would share this preference. First, the literature on the educational benefits of racial diversity—upon which instrumental diversity rationales are based—highlights outcomes for White students that often fail to present for minority students [e.g., critical thinking skills increase as a function of diversity coursework for White but not minority students (18, 24)], and there is little evidence that institutions have even attested that minorities similarly stand to benefit from diversity until relatively recently (10). Second, it is not clear whether either diversity rationale would better encourage a sense of belonging for racial minorities. Since purporting to value diversity can augment racial minorities’ engagement (25) and Black Americans’ sense of trust and comfort in an organization (26), perhaps any signal of valuing diversity, regardless of rationale, might increase racial minorities’ sense of belonging. If anything, couching diversity and inclusion within moral messaging—generally perceived as a stronger form of messaging (27)—may more emphatically signal to racial minorities that the university is a place that prioritizes their belonging. Third, instrumental rationales might amplify social identity threat for low-status minorities who are stigmatized in educational domains, in comparison to moral rationales, by weakening antiprejudice norms that might otherwise be bolstered by moralizing the push for diversity (28). Together, these factors make it unlikely that racial minorities, such as Black Americans, would share White Americans’ hypothesized preference for instrumental diversity rationales.

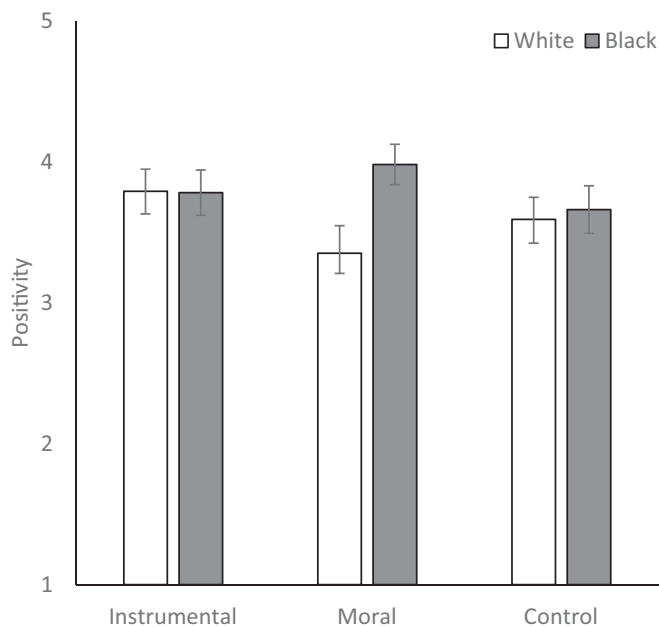
**Prevalence of Instrumental and Moral Diversity Rationales.** Though no work has yet quantified just how pervasive instrumental rationales are in higher education, there are several reasons to expect them to abound. First, if, as we expect, White Americans prefer instrumental rationales, their relatively high numerical representation and structural power would likely incentivize university decisionmakers to adopt approaches that appeal to this segment of the community (15). Second, because judicial rulings have increasingly favored instrumental arguments for race-conscious admissions policies over moral arguments (6, 10, 29), universities may correspondingly utilize instrumental rationales in order to comply with legal precedent. Third, beyond merely inducing compliant behavior, Supreme Court rulings can change social perceptions by increasing the extent to which a position is perceived to be widespread (30). Thus, rulings affirming instrumental rationales might encourage university decisionmakers to adopt instrumental approaches by making them seem like the default, normative approach to diversity. In sum, based on the likely appeal of instrumental rationales to the majority group, the necessity of adhering to legal precedent, and the potential of a perceived norm of espousing instrumental rationales, we expect that universities would be more likely to utilize instrumental than moral rationales.

**Diversity Rationales and Racially Disparate Outcomes.** We expect that instrumental commitments to diversity engender organizational cultures that less effectively protect against racially disparate outcomes. This expectation is directly tied to the reasons that White Americans prefer instrumental rationales. Instrumental rationales both broaden the identity dimensions relevant to the concept of diversity (22) and, by focusing only on the benefits diversity can provide, understate racial disadvantage. While we argue above that these factors lead White Americans to anticipate increased belonging and reduced social identity threat at instrumentally motivated universities, they can also diminish the attention given to the prospect of racial inequality. For example, participants completing a hiring task on behalf of an instrumentally motivated firm were less interested in hiring a racial minority as a means of increasing a firm’s diversity, instead opting for candidates who contributed to diversity along other mentions [e.g., religion and nationality (22)]. These findings indicate that instrumental rationales diminish the extent to which people focus specifically on racial representation in their diversity pursuits. If instrumental approaches to diversity produce social contexts in which people are less attentive to the prospect of racial inequality, then they should also correspond with more racially disparate outcomes.

Instrumental rationales may also less effectively secure racially equitable outcomes because their rhetoric and relative prevalence convey a weaker institutional commitment to racial diversity. Since people view moral arguments and commitments as especially strong (27, 31), instrumental commitments to diversity may come across as relatively weak. Instrumental rationales may also project a weak commitment because of their prevalence. If instrumental approaches are as commonplace as expected, universities who employ instrumental language might be perceived as simply complying with diversity norms rather than expressing a genuine commitment. Both factors might lead community members to perceive weaker institutional commitments to racial diversity, thus less effectively compelling them to comply with or advance this commitment in their own actions. Should this be the case, the relatively weak commitment engendered by instrumental rationales should result in more racially disparate outcomes.

## Results

**Diversity Rationale Preferences and Expectations.** Studies 1 through 3 ( $n = 409$ ) presented online, White American participants with an instrumentally motivated university diversity statement, a



**Fig. 1.** Positivity as a function of diversity rationale and participant race in nationally representative sample (Study 4). The error bars represent 95% CIs.  $n_{\text{White}} = 179$ ,  $n_{\text{Black}} = 171$ .

morally motivated university diversity statement, and, in Study 3, a control statement that championed curricular diversity instead of social diversity. Asked to imagine they were a prospective student at each university, participants answered questions about each ostensible university as they read their diversity statements. As predicted, in Studies 1 and 2, participants preferred to attend instrumentally motivated universities over morally motivated ones at significantly above-chance rates of 74.6% ( $\chi^2(1, n = 185) = 44.762, P < 0.001$ ) and 61.0% ( $\chi^2(1, n = 123) = 5.93, P = 0.015$ ), respectively. Furthermore, across all studies, participants consistently felt more positively about instrumentally motivated universities than both morally motivated (all  $P$ s  $< 0.003$ ) and control universities ( $P = 0.022$ ; see *SI Appendix, Table S1*). There was no difference between their positivity toward morally motivated ( $M = 3.42, SD = 1.16$ ) and control universities ( $M = 3.51, SD = 1.09; P = 0.542$ ). White respondents' preference for instrumentally motivated universities over morally motivated ones held even after adjusting for how much participants comprehended and agreed with the diversity statements (*SI Appendix, Table S2*).

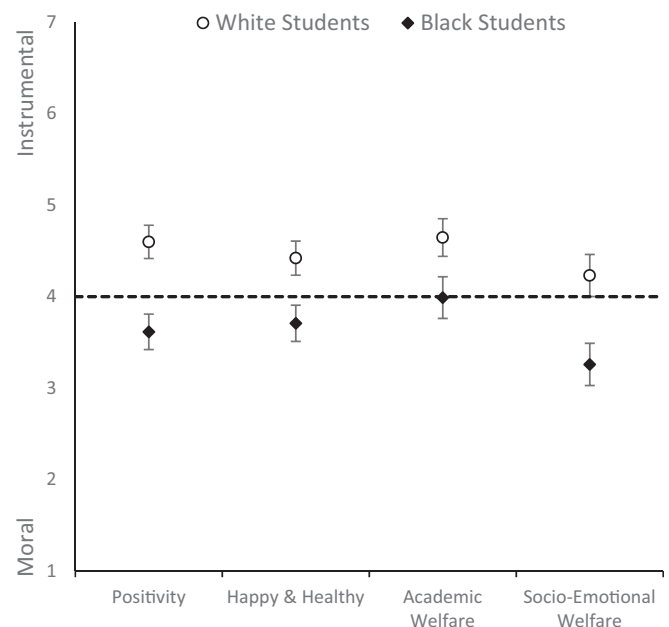
Study 4 replicated these findings with two online samples of White ( $n = 179$ ) and Black ( $n = 171$ ) participants, both designed to be nationally representative on the dimensions of age and gender within race. As shown in Fig. 1, White participants again felt more positively about an instrumentally motivated university ( $M = 3.78, SD = 1.09$ ) than either a morally motivated ( $M = 3.35, SD = 1.33; P < 0.001$ ) or control university ( $M = 3.59, SD = 1.11; P = 0.014$ ), and they also felt more positively about the control university compared to the morally motivated university ( $P = 0.011$ ). In contrast, Black participants preferred the morally motivated university ( $M = 3.98, SD = 0.96$ ) to both the instrumentally motivated ( $M = 3.78, SD = 1.07; P < 0.001$ ) and control university ( $M = 3.66, SD = 1.13; P < 0.001$ ), and they marginally preferred the instrumentally motivated university over the control university ( $P = 0.056$ ). There is a clear divergence in White and Black individuals' rank preferences regarding universities' diversity rationales.

Also as predicted, across Studies 1 through 4, White Americans' relative positivity toward the instrumental diversity rationales

was mediated by the fact that they thought they would receive more educational value from, belong more at, and have their social identities threatened less at instrumentally motivated universities compared to morally motivated universities (*SI Appendix, Fig. S1*). This was not the case for Black Americans (*SI Appendix, Table S1*).

We complemented the online experiments above with ecologically valid samples of key university stakeholders: student caregivers (e.g., parents, grandparents, etc.,  $n = 255$ , Study 5) and admissions officers ( $n = 186$ , Study 6). We asked caregivers of students who were either in the midst of or had just completed the college admissions process about their preferences for universities with instrumental and moral diversity rationales. Caregivers' preferences were consistent with those of our online participants. On a 1 (pro morally motivated university) to 7 (pro instrumentally motivated university) bipolar scale, White caregivers' ( $n = 101$ ) preferences differed significantly from 4, the neutral point on the scale, in favor of the instrumentally motivated university ( $t(100) = 2.052, P = 0.043, M_{\text{Diff}} = 0.32, CI [0.01, 0.63]$ ). Black caregivers ( $n = 39$ ) preferred the opposite ( $t(37) = -3.075, P = 0.004, M_{\text{Diff}} = -0.80, CI [-1.33, -0.27]$ ; see *SI Appendix, Fig. S2* for the preferences of all racial subsamples for whom we have data). Admissions officers are attuned to the racial differences we observed in other samples. We asked admissions officers to anticipate the preferences of prospective White and Black students. They expected White prospective students to prefer an instrumentally motivated university over a morally motivated one ( $t(183) = 6.48, P < 0.001, M_{\text{Diff}} = 0.60, CI [0.42, 0.78]$ ) and Black prospective students to prefer the opposite ( $t(182) = -3.887, P < 0.001, M_{\text{Diff}} = -0.39, CI [-0.58, -0.19]$ ; Fig. 2). Additionally, both samples' responses generally supported our hypothesized mediators (*SI Appendix, Table S3*).

To directly assess how stakeholders expect differently motivated universities to affect students, we also asked these participants to project how students would fare at either university. While White caregivers did not anticipate any difference in how



**Fig. 2.** Admissions officers' projections of White and Black prospective students' preferences and experiences as a function of diversity rationale ( $n = 183$  to 186). The numbers above (below) four indicate a preference for an instrumentally motivated (morally motivated) university. The error bars represent 95% CIs.

happy and healthy their children would be at either school ( $t(100) = 1.420, P = 0.159, M_{Dif} = 0.208, CI [-0.08, 0.50]$ ), Black caregivers expected their children to be happier and healthier at morally motivated universities ( $t(38) = -2.113, P = 0.041, M_{Dif} = -0.56, CI [-1.10, -0.02]$ ; *SI Appendix, Fig. S2*). Admissions officers had similar, though more divergent, expectations. They expected White students to be generally happier and healthier ( $t(184) = 4.509, P < 0.001, M_{Dif} = 0.43, CI [0.24, 0.61]$ ) and to fare relatively better academically ( $t(185) = 5.89, P < 0.001, M_{Dif} = 0.63, CI [0.42, 0.84]$ ) and socioemotionally ( $t(182) = 1.80, P = 0.07, M_{Dif} = 0.21, CI [-0.02, 0.45]$ ) at the instrumentally motivated university. In contrast, they expected Black students to be generally happier and healthier ( $t(183) = -2.947, P = 0.004, M_{Dif} = -0.30, CI [-0.49, -0.10]$ ) and to fare relatively better socioemotionally ( $t(183) = -6.43, P < 0.001, M_{Dif} = -0.75, CI [-0.98, -0.52]$ ) at the morally motivated university (Fig. 2). Whether admissions officers were White or non-White did not significantly affect their responses on these measures ( $P_s > 0.14$ ).

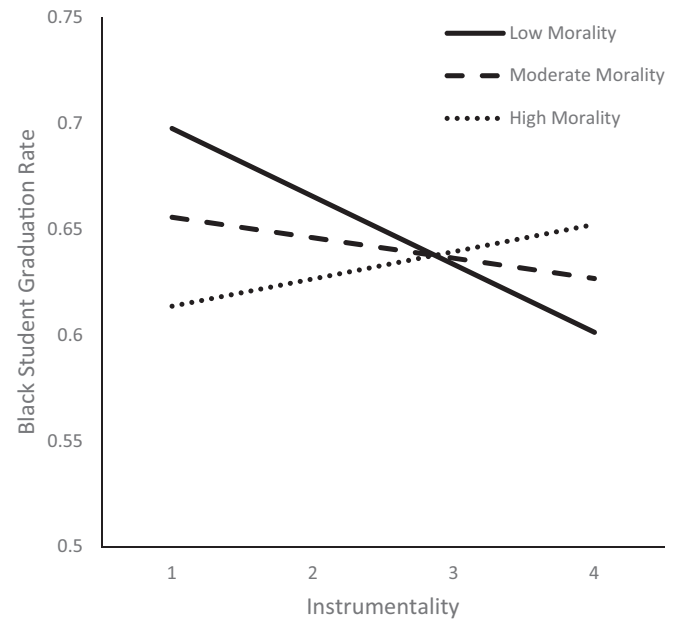
In sum, across various samples and operationalizations (*SI Appendix, Tables S3 and S4*), Studies 1 through 5 show that White participants prefer and generally expect better outcomes at instrumentally motivated compared to morally motivated universities. In contrast, Black participants prefer and expect the opposite. Furthermore, admissions officers are cognizant of these racially discrepant preferences and share these racially discrepant expectations.

**Rationale Prevalence.** To ascertain how prevalent instrumental and moral diversity rationales are in higher education, we paired an analysis of universities' website text (Study 7) with the admissions officer questionnaire. The diversity statements that universities post on their websites provide a useful signal of their organizational ethos given the attention necessary to produce such text (32, 33) and prior research illustrating how such text may reflect institutional culture and outcomes (34, 35). We therefore systematically searched for and downloaded official content expressing the institutional commitment to diversity on the websites of national universities ranked by the US News and World Report (USNWR) in the 2017 to 2018 school year [ $n = 188$  (36)]. Two independent coders rated the extent to which each university's web text invoked instrumental (ICC = 0.87) and moral (ICC = 0.87) diversity rationales from 1 (not at all) to 4 (very much). Overall, use of both rationales was common, with 85% of universities using at least some instrumental and 72% at least some moral language. Universities did, however, utilize instrumental rationales ( $M = 2.48, SD = 0.97$ ) more than they did moral ones ( $M = 2.02, SD = 0.93; t(187) = 4.68, M_{Dif} = 0.46, SE_{MDif} = 0.10, P < 0.001$ ). Subtracting universities' level of instrumental language from their level of moral language revealed that 56% of universities were more instrumentally than morally motivated whereas only 34% were more morally than instrumentally motivated (see *SI Appendix, Fig. S3* for distribution of diversity rationale codes).

Given the possibility that universities publicly comport their official language regarding diversity only to signal their compliance with legal norms but that such language does not reflect how they privately approach diversity, we also asked admissions officers about their perceptions of diversity rationales in higher education ( $n = 186$ , Study 5). The admissions officers' perceptions corroborated our coding of university websites. Admissions officers indicated (on a 0, Not at all Prevalent to 10, Very Prevalent scale) that instrumental rationales ( $M = 8.16, SD = 1.72$ ) were used significantly more in higher education than were moral rationales ( $M = 7.42, SD = 2.13; t(185) = 4.890, M_{Dif} = 0.74, SE_{MDif} = 0.15, P < 0.001$ ) and that both were used significantly more than a colorblind approach to admissions which would not account for students' race at all ( $M = 6.05, SD =$

2.61;  $P_s < 0.001$ ). Overall, we find support in both universities' online rhetoric and admission officers' perceptions that universities employ instrumental rationales to a greater degree than they do moral rationales.

**Diversity Rationales and Racially Disparate Outcomes.** In Study 8, we used the coded university diversity content ( $n = 188$ ; Study 7) to evaluate the extent to which the instrumental and moral language on universities' websites are associated with a critical academic outcome: graduation rates of Black and White students. We conducted a multilevel regression model examining graduation rates as a function of universities' degree of instrumental rationale use, degree of moral rationale use, student race nested within school, all interaction terms, and a set of covariates. Crucial to our hypotheses, there was a significant three-way interaction between student race, instrumental rationale use, and moral rationale use ( $t(181) = -2.335, P = 0.021$ ; additional model details are reported in *SI Appendix*). Follow-up analyses examined graduation rates for Black and White students separately. Neither rationale was associated with the graduation rates of White students (*SI Appendix, Table S6.5*). For Black students' graduation rates, however, there were significant main effects of both instrumental ( $B = -0.054, SE = 0.027, CI [-0.11, 0.00], P = 0.045$ ) and moral ( $B = -0.070, SE = 0.032, CI [-0.13, -0.01], P = 0.031$ ) rationales, as well as a marginally significant interaction ( $B = 0.024, SE = 0.012, CI [0.00, 0.05], P = 0.053$ ). Specifically, when universities' use of moral rationales was low (at one SD below the mean), their degree of instrumental rationale use was negatively related to Black students' graduation rates ( $B = -0.027, SE = 0.015, CI [-0.06, 0.00], P = 0.070$ ) but was unrelated otherwise (both  $P_s > 0.265$ ; Fig. 3 and *SI Appendix, Table S6.3*). Overall, these data indicate that the disparities between White and Black students' graduation rates increase as universities are increasingly instrumentally motivated, especially when they have little moral motivation (supplemental analyses directly



**Fig. 3.** Model-implied relationship between instrumental rationale use and graduation rates of Black students at low ( $B = -0.027, SE = 0.015, CI [-0.06, 0.00], P = 0.07$ ), moderate ( $B = -0.005, SE = 0.010, CI [-0.03, 0.02], P = 0.63$ ), and high ( $B = 0.018, SE = 0.016, CI [-0.01, 0.05], P = 0.27$ ) levels of moral rationale use, adjusting for Religiosity, Student Body Size, and (log)Endowment. Low and High denote  $\pm 1$  SD from mean (i.e., Moderate) moral rationale use.  $n = 185$ .

modeling the disparities between White and Black students' graduation rates, presented in *SI Appendix, Table S6.1*, also support this conclusion). Additional analyses revealed that diversity rationales related to Latinx students' graduation rates (*SI Appendix, Fig. S4 and Table S6.4*) as they did Black students', and related to Asian students' (*SI Appendix, Table S6.2*) similarly to how they did White students' (i.e., no significant relationship). Overall, these analyses indicate that the extent to which universities embrace instrumental rationales and eschew moral ones is associated with worse graduation rates for low-status racial minority students.

## Discussion

We have shown that instrumental rationales are preferred by White but not Black Americans, that they are understood as suiting White students best, that they are the most common approach to diversity in higher education, and that, especially in the absence of a moral approach, they are associated with greater racial disparities in graduation rates. Together, these findings illustrate that the most common approach to diversity in higher education ironically reflects the preferences, and privileges the outcomes, of White Americans. Further, these findings support the theoretical perspective that diversity and inclusion efforts gain traction primarily when they serve to advance majority group interests (11, 12), highlighting the difficulty of motivating racial inclusivity in a way that is both broadly appealing and maximally effective at attenuating racial hierarchies.

We have emphasized instrumental rationales when interpreting our findings because instrumental rationales have become the most prevalent and legally sanctioned approach to institutional diversity. However, our findings could also be interpreted as indicating that moral rationales are preferred by Black Americans and disfavored by White Americans, are understood as suiting Black students best, and have the potential to attenuate the negative effects associated with instrumental rationales. Indeed, another way to examine participants' preferences is to compare how positively participants felt about each rationale across racial groups, a comparison which illuminates that cross-race differences in positivity emerge particularly for moral rationales. The racial difference in support for moral rationales is consistent with historical analyses positing that moral concerns have been central to the legal fight over racial inclusion policies (37), suggesting that it might be fruitful for future research to examine why moral rationales are so contested. Whether interpreting our data through an instrumental or moral lens, these findings challenge notions that modern commitments to diversity and inclusion are manifestations of moral resolve and that diversity and inclusion efforts are singularly focused on benefiting racial minorities.

Though we coded diversity statements in this work, the statements are unlikely themselves the key causal agent of disparate outcomes but rather shape and reflect organizational cultures and norms. In arguing why instrumental diversity rationales would accord with worse institutional outcomes, we posited that they correspond with inattention to racial disadvantage and a weaker institutional commitment to diversity. These factors may manifest at several levels within an organization, including institutional decision making, interpersonal interactions, or individual attitudes and behaviors. While future work should clarify the organizational mechanisms tying instrumental rationales to greater racial disparities, the current data suggest that universities seeking more racially equitable outcomes should consider the motivations shaping their organization's approach to diversity. In order to maximize their appeal and safeguard the welfare of underrepresented students, universities might consider cultivating a culture that values diversity for a more balanced mix of reasons.

In addition to investigating the mechanisms by which instrumental rationales may produce disparate outcomes, future work should more expansively investigate the relationship between

diversity rationales and diverse groups and contexts. It is especially important to consider how different minority groups feel about and are affected by instrumental diversity rationales since we observed heterogeneity in outcomes across different minority groups and non-Black minority groups such as Asian Americans play a crucial role in contemporary litigation of affirmative action policies in higher education (38). Similarly, while we examined participants' preferences and expectations regarding diversity statements devoid of other contextual details, future work might consider how participants' preferences interact with additional information about the university (e.g., its status) or the statement (e.g., the issuer of the statement).

We focused on higher education because it was the first sector to introduce an instrumental diversity rationale (6), has played a key part in and remains at the forefront of national debates regarding diversity efforts, and is a uniquely important institution in its ubiquity and impact on individuals' life outcomes. However, instrumental diversity rationales are commonplace in domains besides education, and research in other contexts is also starting to find instrumental rationales to cause or be associated with worse policy and organizational outcomes for racial minorities (10, 22). These findings suggest that it might behoove practitioners and policymakers across domains to evaluate how their rationales for diverse representation facilitates or impairs diversity, equity, and inclusion goals.

## Materials and Methods

Research protocols and data have been made available on the Open Science Framework platform (39). Links to our preregistrations, materials, and data, as well as detailed information about the samples, stimulus materials, measures and analytic strategies, and supplemental data analyses can be found in *SI Appendix*. All studies were approved by the Princeton University Institutional Review Board. Participants provided written (Studies 1 through 4) or verbal (Studies 5 and 6) informed consent prior to their participation.

**Studies 1 through 4.** In Studies 1 through 4, diversity rationale was manipulated within participant; participants viewed multiple diversity statements in randomized order, each representing different diversity rationales or a control condition. For example, an instrumental statement would convey that "diversity is about enriching students' intellectual experience and preparing them to excel" whereas a moral statement would say that "diversity is about justice and ensuring that people from different backgrounds have access to an excellent education" (see *SI Appendix, Table S4* for the complete statements). In Study 1, each statement was followed by a manipulation check. In Studies 2 through 4, we modified the procedure to be more robust such that, after each statement, participants were asked to list three reasons that the university they just read about values diversity. They then saw seven interpretations for why the university they read about values diversity, all consistent with reasons mentioned in the text they had just read. Participants were asked to select any items that they saw as similar to the items that they previously listed (see ref. 40).

Positivity ( $\alpha_{avg} = 0.92$ ) toward each rationale was the key dependent variable across the four experiments. As a supplement to it, Studies 1 and 2 also contained an Attendance Choice measure in which participants made a binary choice of which university they would rather attend. Each of these experiments also measured a subset of our proposed mediators: Educational Value (Studies 1 through 4;  $\alpha_{avg} = 0.92$ ), Belonging (Studies 2 through 4;  $\alpha_{avg} = 0.96$ ), and Social Identity Threat (Studies 3 and 4;  $\alpha_{avg} = 0.94$ ). Two items measuring Comprehensibility of and Agreement with the diversity statements were included as potential covariates.

**Study 5.** Individuals from a team of racially and gender diverse, young-adult research assistants approached what appeared to be families walking around a college campus during weekends specifically dedicated to visiting families of first-year students or newly admitted students selecting colleges. They asked individuals who appeared to be caregivers (e.g., parents and grandparents) to complete a questionnaire in exchange for candy. Many of the caregivers took their questionnaires alongside or in consultation with their children, so we view responses to these questions as representative of families' views in a manner that might roughly approximate how families reach collective decisions about where children will attend college.

On the first page of the questionnaire, participants read about two universities, University A and University B, which employed either an instrumental or moral diversity rationale. University A always preceded University B, and the pairings between university labels and diversity rationales were counterbalanced across participants. On the second page, participants responded to the dependent measures using a 1 (much more at School A) to 7 (much more at School B) bipolar scale. These measures assessed the amount of Belonging ( $\alpha = 0.91$ ), Social Identity Threat (single item), Happiness and Health (single item), and Value (single item) caregivers expected their children to experience at the universities, as well as Caregiver's Positivity ( $\alpha = 0.92$ ) toward the universities. The final page requested demographic information about participants and their children.

**Study 6.** Individuals from a team of racially and gender diverse, young-adult research assistants approached university personnel working at a college fair and asked them if they would take our questionnaire in exchange for \$7. They gave the questionnaire to willing participants and circled the college fair until participants signaled they were finished. This experimental manipulation and questionnaire response format were identical to those of Study 5. On the first page, participants read both universities' diversity statements before completing dependent measures regarding one race (i.e., Black or White) of prospective students. On the second page, they again saw the universities' diversity statements before completing dependent measures for the other race of prospective student. The orders of both the diversity rationales and of prospective student race were counterbalanced across participants. For each race of prospective students, participants projected students' Positivity ( $\alpha = 0.86$ ) toward the universities, as well as students' anticipated Belonging ( $\alpha = .89$ ), Social Identity Threat (single item), and Value (single item). Single items also assessed participants' own expectations regarding students' Academic Welfare and Socioemotional Wellbeing, as well as how Happy and Healthy students would be should they enroll in either university.

On a separate page, an additional set of measures gauged participants' perceptions of how prevalent instrumental rationales ( $\alpha = .61$ ), moral rationales ( $\alpha = 0.67$ ), and colorblind ideologies ( $\alpha = 0.58$ ) were in higher education on a 0 (not at all prevalent) to 10 (very prevalent) scale. Participants shared demographic information on the final page of the questionnaire.

**Study 7.** Following a specific protocol (SI Appendix), two research assistants independently visited the website of each university that was ranked on the 2017 to 2018 USNWR list of top national universities (36) to search for text explaining why the university valued diversity in undergraduate education. We excluded Historically Black Colleges and Universities due to theoretical

concerns that the dynamics of diversity in this context are unique. The research assistants then convened along with a third member of the research team to compare the text that they identified and resolve any differences. This process yielded analyzable web text from 188 universities. A separate pair of research assistants independently rated the content gathered from this process on the degree to which they conveyed moral and instrumental rationales (see SI Appendix for the coding scheme).

**Study 8.** We compiled data from several sources to model the relationship between universities' instrumental and moral rationale use and students' graduation rates.

Universities' instrumental and moral rationale use were obtained from Study 7.

We obtained the graduation rates of Asian, Black, Latinx, and White students from the National Center for Education Statistics' Integrated Postsecondary Education Data System by averaging data from the 2015 to 2016 and 2016 to 2017 school years (41), the most recent datasets available at the time of these analyses. The graduation rates indicate the percentage of students enrolled in a bachelor's degree-granting program who completed their program within 150% of normal time (i.e., 6 y). We did not include data for students who identified as Native American or Pacific Islander due to a paucity of available data.

We also gathered a set of university characteristics as potential covariates. University's rank, endowment, cost, student body size, designation as public or private (parochial universities were counted as private), and designation as secular or religiously affiliated came from the USNWR (36). The percentage of non-White students at a given university came from the College Board (42). Per our preregistration plan, only those covariates that were significantly associated with at least one diversity rationale (endowment, student body size, and religious affiliation) were used in our primary analyses.

**Data Availability.** Raw experimental and archival data and anonymized codes of university websites have been deposited in Open Science Framework ([https://osf.io/mv8g3/?view\\_only=67302e8e663246449034b75033b4defe](https://osf.io/mv8g3/?view_only=67302e8e663246449034b75033b4defe)).

**ACKNOWLEDGMENTS.** We thank Natasah Warikoo, whose book inspired this work. We gratefully acknowledge Victoria C. Plaut, Kate M. Turesky, and Elizabeth Levy Paluck and her laboratory as well as the members of the Social Stigma and Prejudice Lab at Princeton for their helpful feedback regarding the manuscript. We also thank our team of laboratory managers and research assistants for their invaluable assistance and support, especially Kofi J. Ries.

1. T. L. Dover, C. R. Kaiser, B. Major, Mixed signals: The unintended effects of diversity initiatives. *Soc. Issues Policy Rev.* **14**, 152–181 (2020).
2. L. M. Leslie, J. E. Bono, Y. S. Kim, G. R. Beaver, On melting pots and salad bowls: A meta-analysis of the effects of identity-blind and identity-conscious diversity ideologies. *J. Appl. Psychol.* **105**, 453–471 (2020).
3. V. C. Plaut, Diversity science: Why and how difference makes a difference. *Psychol. Inq.* **21**, 77–99 (2010).
4. V. C. Plaut, Diversity science and institutional design. *Policy Insights Behav. Brain Sci.* **1**, 72–80 (2014).
5. A. Rattan, N. Ambady, Diversity ideologies and intergroup relations: An examination of colorblindness and multiculturalism. *Eur. J. Soc. Psychol.* **43**, 12–21 (2013).
6. P. Frymer, J. D. Skrentny, The rise of instrumental affirmative action: Law and the new significance of race in America. *Conn. Law Rev.* **36**, 677–723 (2004).
7. S. Zirkel, Ongoing issues of racial and ethnic stigma in education 50 years after Brown v. Board. *Urban Rev.* **37**, 107–126 (2005).
8. Carter v. Gallagher. 452 F.2d 315 (8th Cir. 1971).
9. Grutter v. Bollinger, 539 U.S. 306 (2003).
10. K. Hurd, V. C. Plaut, Diversity entitlement: Does diversity-benefits ideology undermine inclusion? *Northwest. Univ. Law Rev.* **112**, 1605–1635 (2018).
11. D. A. Bell Jr., Brown v. Board of Education and the interest-convergence dilemma. *Harv. Law Rev.* **93**, 518–533 (1980).
12. D. A. Bell Jr., *Silent Covenants: Brown v. Board of Education and the Unfulfilled Hopes for Racial Reform* (Oxford University Press, New York, 2004).
13. M. S. Moses, M. J. Chang, Toward a deeper understanding of the diversity rationale. *Educ. Res.* **35**, 6–11 (2006).
14. E. Kelly, F. Dobbin, How affirmative action became diversity management: Employer response to antidiscrimination law, 1961–1996. *Am. Behav. Sci.* **41**, 960–984 (1998).
15. E. C. Berrey, Why diversity became orthodox in higher education, and how it changed the meaning of race on campus. *Crit. Sociol.* **37**, 573–596 (2011).
16. S. M. Collins, From affirmative action to diversity: Erasing inequality from organizational responsibility. *Crit. Sociol.* **37**, 517–520 (2011).
17. L. X. Zou, S. Cheryan, Two axes of subordination: A new model of racial position. *J. Pers. Soc. Psychol.* **112**, 696–717 (2017).
18. C. Loes, E. Pasarella, P. Umbach, Effects of diversity experiences on critical thinking skills: Who benefits? *J. Higher Educ.* **83**, 1–25 (2012).
19. Brief of Columbia University, Harvard University, Stanford University and the University of Pennsylvania as Amici Curiae, "Regents of the University of California v. Bakke, 438 U.S. 265" (1978) (No. 76-811), 1977 WL 188007 (June 7, 1977), p. 11–27.
20. N. K. Warikoo, *The Diversity Bargain: And Other Dilemmas of Race, Admissions, and Meritocracy at Elite Universities* (University of Chicago Press, Chicago, 2016).
21. V. C. Plaut, F. G. Garnett, L. E. Buffardi, J. Sanchez-Burks, "What about me?" Perceptions of exclusion and whites' reactions to multiculturalism. *J. Pers. Soc. Psychol.* **101**, 337–353 (2011).
22. S. Trawalter, S. Driskell, M. N. Davidson, What is good isn't always fair: On the unintended effects of framing diversity as good. *Anal. Soc. Issues Public Policy* **16**, 69–99 (2016).
23. J. D. Vorauer, K. J. Main, G. B. O'Connell, How do individuals expect to be viewed by members of lower status groups? Content and implications of meta-stereotypes. *J. Pers. Soc. Psychol.* **75**, 917–937 (1998).
24. N. A. Bowman, College diversity courses and cognitive development among students from privileged and marginalized groups. *J. Divers. High. Educ.* **2**, 182–194 (2009).
25. V. C. Plaut, K. M. Thomas, M. J. Goren, Is multiculturalism or color blindness better for minorities? *Psychol. Sci.* **20**, 444–446 (2009).
26. V. Purdie-Vaughns, C. M. Steele, P. G. Davies, R. Dittmann, J. R. Crosby, Social identity contingencies: How diversity cues signal threat or safety for African Americans in mainstream institutions. *J. Pers. Soc. Psychol.* **94**, 615–630 (2008).
27. L. J. Skitka, The psychology of moral conviction. *Soc. Personal. Psychol. Compass* **4**, 267–281 (2010).
28. R. J. Ely, D. A. Thomas, Cultural diversity at work: The effects of diversity perspectives on work group processes and outcomes. *Adm. Sci. Q.* **46**, 229–273 (2001).
29. M. S. Moses, Moral and instrumental rationales for affirmative action in five national contexts. *Educ. Res.* **39**, 211–228 (2010).
30. M. E. Tankard, E. L. Paluck, The effect of a supreme court decision regarding gay marriage on social norms and personal attitudes. *Psychol. Sci.* **28**, 1334–1344 (2017).
31. D. M. Mayer, M. Ong, S. Sonenshein, S. J. Ashford, The money or the morals? When moral language is more effective for selling social issues. *J. Appl. Psychol.* **104**, 1058–1076 (2019).

32. J. R. Frye, C. S. Morton, *Strategic Planning for Diversity in Higher Education: Insights from a Multi-Institution Research Project* (National Center for Institutional Diversity, U. of Mich, 2016).
33. R. D. Ireland, M. A. Hirc, Mission statements: Importance, challenge, and recommendations for development. *Bus. Horiz.* **35**, 34–43 (1992).
34. J. H. Davis, J. A. Ruhe, M. Lee, U. Rajadhyaksha, Mission possible: Do school mission statements work? *J. Bus. Ethics* **70**, 99–110 (2007).
35. T. B. Palmer, J. C. Short, Mission statements in U.S. colleges of business: An empirical examination of their content with linkages to configurations and performance. *Acad. Manag. Learn. Educ.* **7**, 454–470 (2008).
36. U.S. News & World Report, “Best colleges 2018 guidebook” (2018). [www.usnews.com](http://www.usnews.com). Accessed 2 March 2018.
37. R. K. Robinson, D. M. Frost, “Playing it safe” with empirical evidence: Selective use of social science in Supreme Court cases about racial justice and marriage equality. *Northwest. Univ. Law Rev.* **112**, 1565–1604 (2018).
38. J. J. Park, A. Liu, Interest convergence or divergence?: A critical race analysis of Asian Americans, meritocracy, and critical mass in the affirmative action debate. *J. Higher Educ.* **85**, 36–64 (2014).
39. J. G. Starck, S. Sinclair, J. N. Shelton, How university diversity rationales inform student preferences and outcomes data and materials. Open Science Framework. [https://osf.io/mv8g3/?view\\_only=67302e8e663246449034b75033b4defe](https://osf.io/mv8g3/?view_only=67302e8e663246449034b75033b4defe). Deposited 10 October 2020.
40. C. Wolsko, B. Park, C. M. Judd, B. Wittenbrink, Framing interethnic ideology: Effects of multicultural and color-blind perspectives on judgments of groups and individuals. *J. Pers. Soc. Psychol.* **78**, 635–654 (2000).
41. National Center For Education Statistics, Data from “Integrated Postsecondary Education Data System.” College Scorecard [Data set] (2016). <https://nces.ed.gov/ipeds/datacenter/DataFiles.aspx>. Accessed 3 July 2018.
42. The College Board (2018). [www.collegeboard.org](http://www.collegeboard.org). Accessed 30 March 2018.