Who Wants to Hire a More Diverse Faculty?

A Conjoint Analysis of Faculty and Student Preferences for Gender and Racial/Ethnic Diversity

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Abstract

What explains the scarcity of women and under-represented minorities among university faculty relative to their share of Ph.D. recipients? Among many potential explanations, we focus on the “demand” side of faculty diversity. Using fully randomized conjoint analysis, we explore patterns of support for, and resistance to, the hiring of faculty candidates from different social groups at two large public universities in the U.S. We find that faculty are strongly supportive of diversity: holding other attributes of (hypothetical) candidates constant, for example, faculty at both universities are between 11 to 21 percentage points more likely to prefer a Hispanic, black, or Native American candidate to a white one. Furthermore, preferences for diversity in faculty hiring are stronger among faculty than among students. These results suggest that the primary reason for the lack of diversity among faculty is not a lack of desire to hire them, but the accumulation of implicit and institutionalized biases, and their related consequences, at later stages in the pipeline.

Keywords: higher education; diversity; race and ethnicity; gender; hiring; conjoint analysis
1 Introduction

Since the civil rights movement of the 1950s and 1960s, major public and private institutions in the United States have attempted to promote diversity in education, in employment, and in positions of leadership. Universities introduced affirmative action in admissions and hiring; corporations created equal opportunity programs; and the federal government gave preferential treatment to women-owned or minority-owned contractors (Bowen and Bok 1998; Dobbin 2009; Skrentny 2002). As a result of these programs and initiatives, diversity values and discourse permeate across major institutions. Nevertheless, women and minorities continue to be underrepresented in positions in many areas relative to their presence in the population at large.

One area still lacking diversity is university faculty. On many college campuses and academic fields, there continues to be a gap between the diversity of the student body and diversity among faculty, particularly in tenured positions at higher ranks (Finkelstein, Conley, and Schuster 2016a). Numbers of women and under-represented minorities (URMs) on the faculty have grown, but the disparity persists. In 2013, for example, URMs and women made up only 10% and 38% of tenured faculty, respectively (Finkelstein, Conley, and Schuster 2016b, p. 9). In response to rates of growth that lagged population trends, particularly among URMs, the most prominent consortium of student groups advocating for campus diversity demanded, as its top priority, that universities increase the representation of racial/ethnic minority faculty (WeTheProtesters 2017).

What are the obstacles to greater inclusion of women and minorities in university faculty? Are gatekeepers—including deans, provosts, and hiring committees—biased against certain groups? Do women and minorities opt out of the tenure track? Do hostile climates preclude

1 We follow common practice by using the term URM to refer to historically underrepresented, domestic minority groups including African-Americans, Hispanics or Latinos, and Native Americans. The URM concept does not include Asian-Americans or non-resident aliens born abroad, even with African or Latin American origins.
their advancement?

This paper considers a small—yet fundamental and underinvestigated—piece of the larger question of the reasons for the underrepresentation of women and minorities on university faculties. Specifically, we focus on the “demand” side of faculty diversity—support for, and resistance to, hiring women, racial/ethnic minorities, and gender non-conforming individuals. Which social groups value, and oppose, diversity hiring, and how much? Are people who identify as members of groups historically underrepresented among faculty—namely, women and racial/ethnic minorities—especially supportive of diversity in hiring? Do whites and men resist hiring minorities, women, and non-binary candidates more than members of other groups?

To examine these questions, we administered survey experiments to both faculty and students at two large public universities in the U.S., the University of New Mexico and the University of Nevada, Reno. We undertook fully randomized conjoint analysis, an approach recently proposed by Hainmueller, Hopkins, and Yamamoto (2014). Conjoint analysis was used originally in marketing research to explore multidimensional preferences, but has since been developed and applied by political scientists to analyze attitudes toward politicians from different ethnic groups (Carlson 2015), views on men and women political candidates (Horiuchi, Smith, and Yamamoto 2018a; Teele, Kalla, and Rosenbluth 2017), policies (Bechtel and Scheve 2013; Horiuchi, Smith, and Yamamoto 2018b), and politicized or sensitive issues such as immigration (Hainmueller and Hopkins 2015) and discrimination (Caruso, Rahnev, and Banaji 2009). This method is particularly suitable for our study as well, since we want to reduce social desirability bias and decompose the multidimensional nature of a holistic assessment of faculty candidates.

Our study’s novelty lies not only in its methods but also in its substance. Previous studies have examined students’ views toward diversity and affirmative action (Park 2009).

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2We discuss how our research design is expected to mitigate social desirability bias in greater detail in Section 3.
Park, Denson, and Bowman, 2013; Rankin and Reason, 2005; Sax and Arredondo, 1999; Smith, 1998; Terenzini et al., 1996; Worthington et al., 2008), while examinations of faculty’s attitudes toward affirmative action are less common (Park and Denson, 2009; Williams and Ceci, 2015). To our knowledge, ours is the first study to compare faculty and student attitudes toward diversity hiring using the same instrument.

Our analysis shows that faculty are uniformly supportive of gender and racial/ethnic diversity in faculty hiring, and that these results hold across various subgroups of study participants. Holding other attributes of (hypothetical) candidates constant, for example, faculty at both universities are between 11–21% points more likely to prefer to hire a Native American, Hispanic, or black candidate to a white one. Faculty are 11% and 6% points more likely to favor a woman candidate than a man at these universities, all else equal, and at both schools faculty are 6% points more likely to favor a gender non-binary candidate than a man. These results resemble those of other experimental studies showing a slight hiring preference for women among university faculty in a national sample (Williams and Ceci, 2015).

We find that the biggest differences in hiring preferences exist between faculty and students: the former value diversity more than the latter. Indeed, the differences between students and faculty tend to be larger and more consistent than differences within students or faculty across racial/ethnic, gender, or socioeconomic class divisions.

These findings thus present some challenge to the idea that preferences for diversity are associated primarily with salient social identities, and show that obstacles to faculty diversity cannot be attributed primarily to a lack of “demand” for hiring them. Accordingly, our analysis suggests that diversity advocates should focus on changes to the campus climate and on institutional reforms rather than prioritizing a change in faculty attitudes toward hiring candidates of particular social groups.
2 Theoretical Background

Women and minorities have made inroads into higher education in recent decades. Between 1993 and 2013, numbers of women faculty more than doubled, compared to a 33% growth rate among men (Finkelstein, Conley, and Schuster 2016a, p. 67). During the same period, numbers of Asian and URM faculty grew by 171% and 143%, respectively, three times the rate of growth of white faculty (Finkelstein, Conley, and Schuster 2016a, p. 73). However, the structure of higher education changed at the same time, with public and private institutions coming to rely more and more on non-ladder faculty for their instructional needs. As a result, the majority of instructors in U.S. higher education today are contingent faculty, and women and minorities make up more than half of them. Tenured and tenure-track faculty are an increasingly scarce breed (Finkelstein, Conley, and Schuster 2016a, p. 95). Data from the National Center for Educational Statistics show that African-Americans, Hispanics, and Native Americans make up only 3.6%, 2.9%, and 0.3% of full professors working full-time in degree-granting higher educational institutions. The numbers for associate professors are 5.6%, 3.9%, and 0.4%, respectively, and for assistant professors, 6.3%, 4.3%, and 0.4%, respectively (Whittaker, Montgomery, and Acosta 2015). Women’s—particularly white women’s—presence tends to be higher. Women make up 41% of tenured faculty overall, though only 26% of STEM faculty, according to the NSF survey of doctoral recipients (tabulated in Hart 2016).

There is a great deal of interest in creating conditions for more women and URMs to rise to senior academic ranks, particularly in fields where they are underrepresented. Indeed, research shows that having a professor who belongs to the same social identity group can increase student achievement and decrease gender or racial/ethnic achievement gaps. Carrell, Page, and West (2010) capitalized on random assignment of students to professors and mandatory enrollment in introductory STEM courses at the Air Force Academy and showed that professor gender has a powerful impact on female students’ interest, participation, and
performance in STEM fields. Fairlie, Hoffmann, and Oreopoulos (2014) found that gaps in class dropout rates, class pass rates, grades earned, course selection, course retention, and course completion between white and URM students narrow substantially when students are taught by URM professors.

Understanding the causes of gender and racial/ethnic hierarchies in higher education is an important first step to solving it. There are many explanations for women and minority underrepresentation, particularly in STEM fields. In this section, we briefly summarize three categories of reasons, including bias, institutional climates, and a leaky pipeline.

2.1 Bias and discrimination

A growing range of studies show that implicit biases produce differential evaluations of the CVs, teaching performance, and tenure files of women and men (Centra and Gaubatz 2000; MacNell, Driscoll, and Hunt 2015; Moss-Racusin et al. 2012; Steinpreis, Anders, and Ritzke 1999; Rosen 2018). Across multiple disciplines, women authors get cited less than men, controlling for other relevant variables (Ghiasi, Larivi`ere, and Sugimoto 2015; Maliniak, Powers, and Walter 2013), and letters of recommendation tend to contain gender biases that put women at a disadvantage (Schmader, Whitehead, and Wysocki 2007; Trix and Psenka 2003). Other studies show that African-American scientists are 10% less likely to receive NIH grants than white applicants, holding other factors constant (Ginther et al. 2011).

In a recent Washington Post blog post that received over 1,000 comments, one professor claims that white faculty on search committees do not hire minorities because “we do not want them” (Gasman 2016). Yet biases are less likely to manifest in outright racist or sexist behavior than in “everyday acts of incivility” that disproportionately target women and minorities. People harboring implicit biases are more likely to interrupt women and minorities, ignore them, deny them credit for their contributions, exclude them from events, and engage in other acts that appear neutral enough to escape the purview of formal grievance...
procedures, such as Title IX complaints (Cortina, 2008). The accumulation of differential and uncivil treatment across multiple actors and over time manifests as a hostile institutional climate, which thwarts the advancement of URMs and women, as we describe below.

### 2.2 Institutional climates

Institutional climates are shaped by to the extent to which workers perceive they are recognized and valued, treated well, and enjoy opportunities for success. Studies across different academic contexts, however, show that women are more likely than men to report sexist and negative—more contentious, competitive, and disrespectful—workplace climates, as well as harassment, including sexual and gender harassment. These perceptions of climate are negatively related to job satisfaction, productivity, and influence over collective decisions (Settles et al., 2006, 2007; Sheridan et al., 2017; Williams, Phillips, and Hall, 2014).

Other features of academic climates may deter women and minorities from entering and slow their progress. For example, standards of productivity that emphasize obtaining large-dollar outside grants may contribute to the scarcity of women and African-Americans in basic science departments, especially in medical schools (Leboy and Madden, 2012). Online job forums may tarnish reputations just as they are being formed. Wu (2017) used large-scale text analysis and found that discourse about women economists tended to be sexist, demeaning, unprofessional, and focused on women’s appearance and personal traits, while discourse about men followed no systematic pattern. In academic departments perceived as hostile, women report having less access to professional networks, fewer mentors, fewer chances to collaborate with colleagues, and greater reluctance to express themselves, let alone report sexual harassment, for fear of retaliation (Gardner and Blackstone, 2015).
2.3 Leaky pipeline

Bias, discrimination, and hostile climates help to explain why the academic pipeline leaks. According to a 2015 study, some 36% of a sample of URM Ph.D. candidates failed to complete their degrees (Sowell, Allum, and Okahana 2015). Indeed, URMs make up a small share of Ph.D. recipients. In 2016, African-Americans comprised 7% of Ph.D. recipients (up from 6% in 2006), while Latinos made up 7% (up from 5%). Over this same period, native Americans made up less than 1% of Ph.D. recipients across all fields. Few URM Ph.D. recipients join academic professions, and then even fewer rise up the ranks.

Disproportionate service burdens—or “cultural taxation”—faced by URM faculty compared to their white colleagues is another factor that thins their numbers. Universities expect URM faculty to serve on diversity committees, act as mentors, and otherwise represent their social group on panels and at events. Their service helps the university look good, while the costs in research productivity are borne by the faculty member (Joseph and Hirshfield 2011; Shavers, Butler, and Moore 2014).

Though women make up around half of Ph.D. recipients, the gender system implies that women are more likely than men to juggle career demands and care work. Work-life conflicts contribute to women’s lower presence in tenure-track jobs and to their lower tenure rates (Box-Steffensmeier et al. 2015; Ceci and Williams 2011; Wolfinger, Mason, and Goulden 2008; Xie and Shauman 1998), as well as the differential effects of allegedly gender-neutral tenure clock stoppage policies (Antecol, Bedard, and Stearns 2016). Combined with bias and climate problems, small differences in time availability and access to resources add up to produce big disparities in women and men’s advancement.

2.4 Our focus

Implicit bias, negative institutional climates, and leaky pipelines all combine to reduce numbers of women and particularly URMs in top faculty ranks. Our analysis is not designed to adjudicate these different causes. Nor do we touch upon the structural features of the U.S. economy and society that limit the pipeline’s intake of URM men and women, even as we acknowledge the importance of these factors, which include racialized inequalities in income and wealth, access to education, housing, and health care, and unequal treatment by public institutions. Instead, we want merely to assess the extent to which discriminatory individual attitudes and preferences are part of the problem. Does bias matter for hiring, or does bias mostly affect the everyday treatment and evaluation of work colleagues? As we describe below, faculty support hiring URMs and women for faculty jobs, which suggests that bias harms their prospects later in the pipeline, by contributing to “everyday acts of incivility,” exclusion, and hostile institutional climates. Students also support diversity in faculty recruitment, but their preferences are less pronounced than those among faculty, for reasons we speculate about later.

3 Research Design

To examine whether the lack of faculty diversity is due to preferences against hiring women and URM faculty members, we undertook conjoint experiments at the University of New Mexico (UNM) and the University of Nevada, Reno (UNR). Our UNM surveys were distributed to faculty from October 11 to October 31, 2016, and to undergraduate students from December 1, 2016 to February 1, 2017. We had a total of 869 faculty respondents and 1,386 student respondents, for response rates of 24% and 8%, respectively. At UNR, undergraduate students and faculty took surveys simultaneously, from February 15 to March 4.

For the context with demographic statistics on our cases, see Supplementary Materials A. For the comparison of our samples and populations, see Supplementary Materials B.
A total of 202 faculty and 621 students completed the survey, and our response rates were 19% for faculty and 7% for students.\(^5\)

In each experiment, we presented survey respondents with two profiles of hypothetical candidates to be hired as faculty members at UNM or UNR. Each profile included several attributes relevant to the hiring decision, the order of which was randomized across study participants (but constant for each participant to reduce cognitive strain). On each attribute, one “level” (or specific characteristic) was randomly selected from a predetermined set. For example, for “Race/Ethnicity” (an attribute), the level can be “white,” “black,” “Asian,” “Hispanic,” or “Native American.” Respondents were shown a series of paired profiles and, in each case, were asked to choose which candidate they would prefer to be hired at their university.

Figure 1 shows a sample conjoint table from UNM.\(^6\) The table includes all attributes used in the UNM surveys, and one randomly selected level per attribute for each candidate. With regard to demographic diversity, our main attributes of interest were race/ethnicity and gender, but respondents also weighed the importance of teaching record, research record, where a candidate received her or his graduate degree, whether the candidate’s spouse/partner was a current or potential faculty member, the candidate’s level of community engagement, and whether the candidate is a native of New Mexico.\(^7\)

Conjoint analysis is particularly suitable for our research, because faculty recruitment

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\(^5\)The survey experiments were reviewed and approved by Internal Review Boards at the University of New Mexico (Project ID 923657-2) and the University of Nevada (Project ID 969598-1).

\(^6\)An analogous table from the UNR conjoint can be found in the Supplementary Materials, Figure C.1.

\(^7\)There were some minor differences between the UNM and UNR surveys, driven by the characteristics and particular interests of each institution. The UNM instrument included an attribute for origin (New Mexican, U.S. citizen, or non-U.S. citizen) and one for community service record (Fair, Good, or Excellent), whereas UNR’s did not. UNR’s instrument included attributes for faculty rank, and for department or program, which were not included on the UNM survey. With the exception of teaching and research record, none of these attributes are formal hiring criteria. We selected these attributes for the purposes of our research.
Which candidate do you think should be given priority in faculty recruitment? Even if you are not entirely sure, please indicate which of the two you would be most likely to choose.

<table>
<thead>
<tr>
<th></th>
<th>Candidate 1</th>
<th>Candidate 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heritage</strong></td>
<td>U.S. Citizen</td>
<td>New Mexican</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>Woman</td>
<td>Man</td>
</tr>
<tr>
<td><strong>Research Record</strong></td>
<td>Excellent</td>
<td>Excellent</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td>Black or African American</td>
<td>Hispanic or Latino</td>
</tr>
<tr>
<td><strong>Community Engagement/Service Record</strong></td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td><strong>Spouse/Partner is a Current or Potential Faculty Member</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Teaching Record</strong></td>
<td>Fair</td>
<td>Excellent</td>
</tr>
<tr>
<td><strong>Received PhD From</strong></td>
<td>University of Georgia</td>
<td>Stanford University</td>
</tr>
</tbody>
</table>

If you had to choose between them, which of these two candidates should be given priority to be hired as a new faculty member at the University of New Mexico?

Candidate 1

Candidate 2

Figure 1: Sample conjoint table evaluated by survey respondents (UNM version)

decisions are multidimensional and the conjoint survey format allows each respondent to select candidates according to her or his preferred combination of attributes. We carefully designed our research to reduce social desirability bias (e.g., Fisher [1993]), which is a problem in eliciting honest opinions on socially sensitive issues, such as discrimination and exclusion. Specifically, we avoided priming our respondents to focus on any particular set of attributes or characteristics when selecting faculty candidates. Neither our invitations to participate in these experiments nor the instruments themselves ever mentioned diversity. Nor did we prompt respondents to focus on diversity-related attributes, such as race/ethnicity or gender.
The invitations simply asked students and faculty to participate in a survey experiment on faculty recruitment, the criteria for which are important to participants for reasons that encompass far more than diversity concerns. Our respondents could focus on whichever of the attributes included in our experiments they found most salient. As mentioned earlier, we randomized the order of attributes in the profiles across respondents, so the position of the attributes (i.e., higher or lower in the table) did not affect respondents’ choices.

After indicating preferences on eight (in the UNM study) or ten (in the UNR study) paired profiles, study participants answered a series of questions about themselves. Faculty reported their gender identity, race/ethnicity, the school or department to which they belonged, and their faculty position or rank. Students reported their expected year of graduation, main area of academic study, extracurricular interests, SAT score, high school class rank, gender identity, race/ethnicity, partisanship, legacy status/college status of their parents, and family income. We use some of these variables to compare whether the preferences for faculty diversity are different between different sub-groups of study participants.

We interpret the results from our conjoint analysis by estimating the average marginal component effects, or AMCEs (Hainmueller, Hopkins, and Yamamoto, 2014). The AMCE tells us how much a respondent is more or less likely to choose a hypothetical candidate when a particular attribute-level is presented, compared to a baseline category, given all possible combinations of attribute-levels. We first show and compare the overall results at UNM and UNR. We then drill down to the within-institution comparisons across different groups of respondents by race/ethnicity and gender.

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8We used the R package cjoint developed by Strezhnev et al. (2016).

9Because of minor differences in the structures of the conjoint tables used at each institution, we are unable to pool the data from UNM and UNR. We cannot determine whether, for example, the AMCE for a black faculty candidate, relative to a white candidate, among UNM student respondents is statistically discernible from that among students at UNR.
Figure 2: Faculty preferences at UNM and UNR

4 Results

Figure 2 shows the results for faculty respondents at UNM and UNR, focusing on key attributes of candidates that were shared across the instruments used at each institution. A positive (negative) AMCE indicates that respondents are more (less) likely to prefer candidates with the given attribute-level relative to the baseline. The horizontal lines show the 95% confidence interval for each estimate. If a confidence interval intersects the vertical line on each figure, then the estimate is not discernible from zero at the 0.05 level.

The biggest factors that drive preferences in faculty recruitment reflect scholarly achieve-

\[\text{Estimate} \quad (N = 869)\]

\[\text{Estimate} \quad (N = 202)\]
ment. Teaching record and research record are the two most powerful attributes driving the likelihood that a participant in our experiment selects a given candidate for faculty appointment, a finding that holds among faculty and students and across gender, racial/ethnic identification, and the socioeconomic background of our participants. That said, diversity-related attributes consistently register as important to preferences as well.\(^{11}\) Beginning with the results among faculty, Figure 2 shows that faculty at both institutions are between 11–21% points more likely to prefer a Native American, Hispanic, or black candidate to a white one. UNM faculty are more than 10% points more likely to favor a woman candidate to a man, all else equal, and 5% points more likely to favor a gender non-binary candidate. At UNR, these preferences are slightly smaller, but are still positive and statistically significant.

Figure 3 shows that students at both universities exhibit positive preferences for faculty diversity as well, although these are not as pronounced as among faculty themselves. Specifically, students prefer a woman or a minority faculty candidate to a man or white one, but the magnitudes of these differences are less than 10% points. Their preferences for a non-binary candidate are not significantly different from their preferences for a man, other things equal. Students’ strongest preferences are for candidates with strong teaching records. In particular, at both institutions, students value excellent teaching over all other attributes, and were 40% points more likely to prefer a candidate with an excellent teaching record over a candidate with a fair teaching record, all else equal.

Next, we turn to comparisons across groups of respondents within the faculty at each institution. We focus primarily on faculty preferences here because faculty drive the recruitment process. In a nutshell, faculty preferences are the demand side of faculty composition. To simplify the presentation of our results, which are based on the estimations with all at-

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\(^{11}\)The literature on implicit bias shows that judgments of scholarly achievement are affected by gender, race, and ethnicity. Though we distinguish analytically between research record, teaching record, gender, and race/ethnicity in our survey experiments, we acknowledge that these attributes are mutually constitutive in practice.
tributes, we continue to present figures that only focus on the AMCEs for the attributes reflecting gender and racial/ethnic diversity.

Figure 4 contrasts the preferences of non-Hispanic white versus non-white faculty at UNM and UNR. The left panels show AMCEs for white respondents with respect to faculty candidates from each race/ethnicity category (against the baseline level, white) and from each gender category (against the baseline level, man). The middle panels show the corresponding AMCEs calculated for all non-white respondents. The right panels show the differences in AMCEs between white and non-white respondents. To highlight the results where group preferences differ, any estimate that is statistically significant at the 0.05 level is shown in black; otherwise, the estimates are shown in grey.

Within each institution, the differences in preferences between white and non-white fac-
Faculty, White (N = 624) | Faculty, Non−White (N = 236) | Difference

Race Ethnicity:
- White (Baseline)
- Asian
- Black
- Hispanic
- Native American

Gender:
- Man (Baseline)
- Woman
- Non−binary

Figure 4: Faculty preferences, white vs. non-white

Faculty are negligible with regard to almost every diversity-related attribute. Starting with UNM, both white and non-white faculty show strong preferences for candidates from all non-white race/ethnicity categories relative to whites, and for both women and non-binary candidates relative to men. The only statistically significant difference in preferences between the groups is on preference for Hispanic candidates (relative to the white baseline).
But even here the difference is a matter of degree, not of kind. Non-Hispanic whites are 9% more likely to select an Hispanic candidate than a white one, other things equal; non-whites are 15% more likely to select an Hispanic candidate.

The number of responses at UNR is lower than at UNM, which limits statistical leverage, but every preference estimate runs in the same direction. Faculty respondents favor candidates from all non-white racial/ethnic categories relative to the white baseline, and except for Asian candidates (who are not underrepresented among faculty relative to their state population shares), those preferences are statistically discernible from zero. Similarly, with regard to gender, both groups prefer women and non-binary candidates to men, other things equal, and the estimated preferences are statistically significant among white faculty, from whom we have more responses. In no case are the preferences of white and non-white UNR faculty statistically different from each other.

We get similar results when we break respondents out by gender. Figure 5 contrasts the preferences of men and women faculty at UNM and UNR. At each school, both men and women favor candidates from every non-white racial/ethnic group over white candidates, and favor women and non-binary candidates over men. In most cases, these preferences are statistically discernible from zero, but indistinguishable across genders. The exceptions are for women, who show measurably stronger positive preferences for women candidates (relative to men) and for black candidates (relative to whites) at both institutions, and for Native American candidates (relative to whites) at UNM. But here again, these are matters of degree, with men faculty members sharing each positive pro-diversity preference.

In the interest of space, we do not present the analogous breakdowns by race/ethnicity, and gender among student participants in our experiments, but the overall patterns are consistent with those from faculty. White and non-white students, men and women, and those

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12 There are too few responses from faculty who self-identify off the gender binary to allow for statistical analysis.

13 Figures illustrating the group breakdowns among student participants are available in the Supplementary
Figure 5: Faculty preferences, man vs. woman
from high-income and low-income families, all exhibit pro-diversity preferences overall. The preferences are generally more pronounced among traditionally underrepresented groups—that is, among non-whites, women, and low-income participants relative to whites, men, and those from wealthier families—but more often than not, the differences with respect to specific diversity-related characteristics are not statistically distinguishable.

Perhaps most importantly with regard to student preferences, we emphasize that the differences between faculty and student preferences are more pronounced than are differences across any groups within the faculty or students. Figure 6 shows the faculty/student comparisons at UNM and UNR, respectively. At both institutions, faculty members’ preferences for black, Hispanic, and Native American candidates are substantially larger than students’ (also favorable) preferences for the same groups. Among faculty, shifting a candidate from white to black, Hispanic, or Native American increases the probability that that candidate will be selected by about 11–21% points, all other attributes held equal. Among students, the analogous shifts are below 10% points. There are also significant differences between student and faculty preferences when it comes to gender. UNM faculty are more favorable toward woman and non-binary candidates than are UNM students, who favor women candidates moderately and are indifferent, on average, to non-binary candidates. At UNR, student and faculty preferences with regard to women are not statistically distinguishable, although faculty preferences are more positive on each level.

In sum, our research finds that faculty show strong preferences for racial/ethnic and gender diversity in faculty hiring. These results are shared across faculty from different demographic groups. Faculty preferences for diversity are stronger than those among students, and these differences are consistent across two large universities in different states. Differences in preferences between faculty and students in the aggregate are greater than

Materials. See Figures C.4 and C.5. The Supplementary Materials also provide more fine-grained breakdowns within both faculty and student populations, for example, between white and non-Hispanic white participants, or between whites and blacks.
Figure 6: Preferences between students and faculty respondents
differences among subgroups of faculty and students defined by race/ethnicity, gender, and class.

5 Discussion

The widespread nature of faculty support for diverse hiring suggests that preferences are not the primary reason for the underrepresentation of women and minorities. Student preferences for diversity, while positive, are less strong than those among faculty. What accounts for the difference in student and faculty hiring preferences? The two groups differ on many grounds, including age, education level, political beliefs, and generational cohort. Some faculty are old enough to remember the civil rights movement, the emergence of Second Wave feminism, protests against the Vietnam War, and other major historical events that pushed values of gender and racial/ethnic diversity into public prominence. Students, by contrast, came of age in the 9/11 era, when diversity discourse ran into the challenges posed by perceived threats of religious fundamentalism, terrorism, immigration, and globalization. Though young people in general tend to have more liberal views than older people, many students’ political views are consistent with skepticism toward diversity preferences in faculty hiring. What is more, faculty are less politically diverse than students. Recent studies confirm that conservative views are rare among faculty members (Abrams, 2016a, b; Shields and Dunn Sr., 2016).

There is another interpretation of our results that warrants further exploration. Large public research universities, many of which face significant budget constraints, tend to rely more heavily on Ph.D. students, adjunct instructors, and lecturers on contract than do

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14In addition, recent studies find that the millennial generation has a different understanding of the concepts of “diversity” and “inclusion” than baby boomers and Gen Xers. They are less inclined to think of the diversity of visible social groups and more inclined to think of ideas, unique personal identities, and experiences (Smith and Turner 2015).
private universities. This reliance on instruction by non-tenure-track faculty is often most pronounced in the largest courses, whereas more specialized courses are more likely to be taught by tenure-track faculty. As a result, there may be a disjuncture between the faculty that most students interact with on a daily basis and the tenure-track faculty that are the main targets of diversity hiring initiatives.

Across the natural sciences and engineering, as well as most of the social sciences, the presence of women and minorities tends to be greater among these teaching faculty—including contract and part-time instructors, as well as graduate students—than it is among tenure-track faculty (Bettinger and Long, 2005; Finkelstein, Conley, and Schuster, 2016a, b; Ginther and Kahn, 2012; Gray, 2015; Harper et al., 2001; Trower and Chait, 2002; West and Curtis, 2006). As a result, the “faculty” that undergraduates get to know in their classes may be more diverse than the ranks of tenure track faculty. If so, students may regard the underrepresentation of women, non-binary, and non-white faculty as less pronounced than do the faculty themselves, which could translate into the less emphatic preferences for women and minority candidates among students than among faculty that we observed in our conjoint experiments.

6 Conclusion

Our study explores the extent of favoritism toward, and biases against, women and minority candidates for faculty positions among faculty and students at two large public research universities. We find that faculty are more likely to express preferences for hypothetical candidates who are women, black, Hispanic, and Native American. By contrast, students’ preferences for faculty from historically underrepresented groups, while positive, are not as strong.

Claims that faculty simply “do not want” women and minorities in their ranks are too simplistic. Our study shows that faculty do not harbor explicit preferences against mem-
bers of certain groups; on the contrary, faculty actively prefer candidates from historically excluded groups, especially URMs. To be sure, we estimate preferences in the context of experiments, rather than in the socially embedded context of a search committee. In practice, search committee dynamics may change preferences and impede actual decisions that would produce job offers for URM candidates. For example, one large study revealed that the presence of more women on academic evaluation committees made gender stereotypes more salient and male committee members rated women candidates more harshly (Bagues, Sylos-Labini, and Zinovyeva 2017). Another study showed that faculty on search committees counted women’s marital status, but not men’s, as a reason not to hire them (Rivera 2017).

Our data do not shed light on actual search committee dynamics, nor do they allow us to draw inferences about why faculty prefer diversity. For example, we do not know whether faculty want to hire diverse candidates out of a belief that they will personally benefit from an enriched intellectual environment, or out of a desire to rectify historical exclusion and injustice. It is plausible that faculty have endorsed a “diversity bargain” (Warikoo 2016). They like diversity in principle, but not behave in ways consistent with that belief: in particular, faculty resist modifying entrenched habits and curbing the self-interested behavior that the inclusion and recognition of diverse colleagues would actually require.

What types of policies and interventions can encourage behavior modification among faculty who believe they are committed to diversity? Unfortunately, Dobbin and Kalev’s large study shows that the policies and programs most commonly adopted to promote diversity in organizations—such as mandatory diversity training, job tests, performance evaluations, and grievance procedures—tend to result in fewer women and minorities making it into lead-

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15Research on sexual harassment and misconduct training similarly finds that, by increasing the salience of gender, the curriculum can reinforce traditional gender stereotypes (Contreras et al. 2018; Tinkler 2012, 2013).
ership positions. Rather than reducing bias, they may activate or trigger it. Managers do not like being told what to do, and they rebel against the intentions of such programs. By contrast, efforts to engage leaders in activities and hold them responsible for change, are more successful (Dobbin, Schrage, and Kalev 2015; Dobbin and Kalev 2016).

Years of diversity efforts have increased expressed enthusiasm for hiring talented women and URM faculty, especially among faculty themselves. Advocates no longer need to make educating people about diversity a priority. Instead, advocates should engage faculty directly in activities that induce gradual behavior modification, promote inclusion, and improve climates, such as mentoring programs, recruitment trips, bystander intervention workshops, and task forces (Ashburn-Nardo, Morris, and Goodwin 2008; Blau et al. 2010; Dennehy and Dasgupta 2017; Dobbin, Schrage, and Kalev 2015; Dobbin and Kalev 2016). Closing the representation gap involves efforts that focus on behavior, not beliefs.
References


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A Demographics of Cases

Figure A.1: State vs. campus race/ethnicity demographics

We establish the context with demographic statistics on our cases. Figure A.1 shows the breakdown by race/ethnicity of the populations of New Mexico and Nevada (United States Census Bureau 2015), and the campus populations of students and faculty at UNM (Office of Institutional Analytics 2017) and UNR (University of Nevada, Reno 2016).

For a comparison of these demographics between the states and the entire nation, see Figure C.10 in Supplementary Materials.
The demographic compositions of New Mexico and Nevada differ. In New Mexico, the Hispanic and Native American shares of the population are much larger, whereas in Nevada, the shares of the population who are white, black, and Asian are greater. At both universities, the racial/ethnic composition of the student body bears a close resemblance to the composition of the state. Consistent with this, the points in the top two scatter plots, which illustrate the correspondence between student populations and statewide populations, are close to the 45-degree line. We observe more notable deviations from the 45-degree line in the bottom two scatter plots, which show the composition of faculty. In particular, non-Hispanic whites are over-represented among the faculty at both UNM and UNR. Relative to state population shares, Hispanics and Native Americans are substantially under-represented among faculty at UNM, and Hispanics and blacks are under-represented among faculty at UNR.

Gender distributions across states are, of course, much more uniform than racial/ethnic distributions. Nationally, women narrowly outnumber men, 51% to 49%, but in both states examined here, the splits are 50-50. At both universities, however, women outnumber men among students—56%-44% at UNM and 53%-47% at UNR—whereas men outnumber women among faculty—53%-47% at UNM and 58%-42% at UNR.

Thus, at both institutions, the under-representation of minority groups is more pronounced among faculty than among students, and women are under-represented among faculty while they are over-represented among students. It is worth noting, however, that at neither of these universities is the over-representation of whites among faculty as pronounced as it is at the national level, where 73% of faculty are white (Snyder, de Brey, and Dillow 2016). The over-representation of men among faculty is roughly equivalent to the national average of 55% (Snyder, de Brey, and Dillow 2016).

See Figure C.11 in Supplementary Materials.
## B  Sample vs. Population

Table B.1: Sample vs. Population

<table>
<thead>
<tr>
<th></th>
<th>UNM Campus %</th>
<th>UNM Sample %</th>
<th>UNR Campus %</th>
<th>UNR Sample %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Students Race</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>34</td>
<td>49</td>
<td>59</td>
<td>66</td>
</tr>
<tr>
<td>Black</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Native American</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Asian</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>Hispanic</td>
<td>47</td>
<td>30</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>8</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woman</td>
<td>56</td>
<td>61</td>
<td>53</td>
<td>62</td>
</tr>
<tr>
<td>Man</td>
<td>44</td>
<td>37</td>
<td>47</td>
<td>36</td>
</tr>
<tr>
<td>Non-Binary</td>
<td>.</td>
<td>2</td>
<td>.</td>
<td>2</td>
</tr>
<tr>
<td><strong>Faculty Race</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>56</td>
<td>73</td>
<td>74</td>
<td>77</td>
</tr>
<tr>
<td>Black</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Native American</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
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<td>6</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>Hispanic</td>
<td>28</td>
<td>3</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woman</td>
<td>47</td>
<td>56</td>
<td>42</td>
<td>44</td>
</tr>
<tr>
<td>Man</td>
<td>53</td>
<td>43</td>
<td>58</td>
<td>53</td>
</tr>
<tr>
<td>Non-Binary</td>
<td>.</td>
<td>1</td>
<td>.</td>
<td>3</td>
</tr>
</tbody>
</table>

*Note:* The percentage of non-binary in the population is unavailable for both UNM and UNR.

Table B.1 shows the demographic breakdown of survey respondents and university populations (faculty and students) at UNM and UNR by race/ethnicity and gender. Both schools provide population data that are binary with respect to sex, but the share of survey respondents self-identifying as non-binary is small (i.e., 1–3%). It shows that at both schools, among both faculty and students, women responded at a slightly higher rate than men did.

On race/ethnicity, the survey populations match the student and faculty populations.
well, with one exception: non-Hispanic whites are over-represented and Hispanics are under-represented. The imbalance is particularly pronounced at UNM, where the Hispanic population is larger. This apparent discrepancy, however, is exacerbated by a difference in how race/ethnic identity is tallied in the university’s population statistics as compared to our survey. According to UNM’s official enrollment report, individuals may self-identify as Hispanic or Not Hispanic, and also as one or more race, but “anyone who selects Hispanic is reported as Hispanic regardless of any other races selected” (Office of Institutional Analytics 2017b). By contrast, our survey instrument asked respondents about the race/ethnicity category with which they most identify. The university population statistics thus over-count Hispanics relative to our survey responses.

C  Additional Figures

Figure C.1 Sample conjoint table evaluated by survey respondents (UNR version)

Figure C.2 Preferences between students and faculty respondents, UNM

Figure C.3 Preferences between students and faculty respondents, UNR

Figure C.4 Student preferences, white vs. non-white

Figure C.5 Student preferences, man vs. woman

Figure C.6 Student preferences, white vs. Hispanic

Figure C.7 Student preferences, low-income (<50K) vs. high-income (>50K) family

Figure C.8 Student preferences, low-income (<50K) vs. high-income (>150K) family

Figure C.9 Student preferences, first-generation vs. not-first-generation

Figure C.10 National vs. state race/ethnicity demographics

Figure C.11 National vs. state vs. campus gender/sex demographics
Which candidate do you think should be given priority in faculty recruitment? Even if you are not entirely sure, please indicate which of the two you would be most likely to choose.

<table>
<thead>
<tr>
<th></th>
<th>Candidate 1</th>
<th>Candidate 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teaching Record</strong></td>
<td>Excellent</td>
<td>Fair</td>
</tr>
<tr>
<td><strong>Research Record</strong></td>
<td>Good</td>
<td>Excellent</td>
</tr>
<tr>
<td><strong>Department/Program</strong></td>
<td>Journalism</td>
<td>Biology</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>Woman</td>
<td>Woman</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td>Hispanic</td>
<td>Asian</td>
</tr>
<tr>
<td><strong>Received Ph.D. From</strong></td>
<td>University of Georgia</td>
<td>Yala University</td>
</tr>
<tr>
<td><strong>Faculty Position Being Considered For</strong></td>
<td>Tenured Professor</td>
<td>Tenure-Track Assistant Professor</td>
</tr>
<tr>
<td><strong>Spouse/Partner is a Current or Potential Faculty Member</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Received Undergraduate Degree From</strong></td>
<td>University of Nevada, Las Vegas</td>
<td>University of California, Berkeley</td>
</tr>
</tbody>
</table>

If you had to choose between them, which of those two candidates should be given priority to be hired as a new faculty member at the University of Nevada, Reno?

Figure C.1: Sample conjoint table evaluated by survey respondents (UNR version)
Figure C.2: Preferences between students and faculty respondents, UNM
Figure C.3: Preferences between students and faculty respondents, UNR
Figure C.4: Student preferences, white vs. non-white
Figure C.5: Student preferences, man vs. woman
Figure C.6: Student preferences, white vs. Hispanic
Figure C.7: Student preferences, low-income (<50K) vs. high-income (>50K) family
Figure C.8: Student preferences, low-income (<50K) vs. high-income (>150K) family
Figure C.9: Student preferences, first-generation vs. not-first-generation
Figure C.10: National vs. state race/ethnicity demographics

Figure C.11: National vs. state vs. campus gender/sex demographics