Beliefs about minority representation in policing and support for diversification

Kyle Peyton[a,1] (ID), Chagai M. Weiss[b] (ID), and Paige E. Vaughn[c] (ID)

Diversification of police forces is widely promoted as a reform for reducing racial disparities in police–civilian interactions and increasing police legitimacy. Despite these potential benefits, nearly every municipal police department in the United States remains predominately White and male. Here, we investigate whether the scale and persistence of minority underrepresentation in policing might partly be explained by a lack of support for diversification among voters and current police officers. Across two studies ($N = 2,661$) sampling the US adult population and residents from a city with one of the least representative police forces in the country, individuals significantly overestimate officer diversity at both the local and national levels. We find that correcting these biased beliefs with accurate information reduces trust in police and increases support for hiring new officers from underrepresented groups. In the municipal sample, these corrections also cause an increase in residents' willingness to vote for reforms to diversify their majority White police department. Additional paired decision-making experiments ($N = 1,663$) conducted on these residents and current police officers demonstrate that both prefer hiring new officers from currently underrepresented groups, independent of civil service exam performance and other hiring criteria. Overall, these results suggest that attitudes among voters and police officers are unlikely to pose a major barrier to diversity reforms.

policing | diversity | representation | bureaucracy

Repeated instances of police violence against unarmed civilians in the United States have drawn widespread attention to long-standing concerns about racially biased policing, and renewed interest in various reforms aimed at improving police–community relations (1–4). In addition to community policing (2, 5), body-worn cameras (6, 7), and officer training initiatives (8, 9), police department diversification has been widely promoted as a policy tool for improving police–community relations and promoting just and equitable policing (3, 10). Prior research suggests that diversification is associated with numerous benefits, including greater trust and cooperation (11, 12), increased crime reporting (13), and improved treatment of minority communities (3).

Despite the potential benefits of diversity in policing, most municipal police departments in the United States remain predominately White and male.* For example, pooling across 474 large departments—those employing at least 100 officers—official statistics from the US Department of Justice (14) show that approximately 62% of officers are White, compared with 44% of civilians in the communities they police (Fig. 1). The difference between the share of non-White residents and non-White officers exceeds 20 percentage points in 60% of these departments. Recent analyses for the largest 97 departments—representing more than a third of all local police in the United States—reach similar conclusions: 56% of officers are White, compared to 36% of the civilians in their jurisdictions (18).

The scale and persistence of minority underrepresentation in US policing suggests the need for reforms that explicitly target the recruitment and hiring processes. There are, however, at least two potential political challenges. First, public opinion—or policy makers' beliefs about public opinion—can shape the direction of potential police reforms and constrain the scope of policy change (4, 19). Second, even reforms that enjoy broad public support, such as community policing and body-worn cameras, can face implementation challenges without adequate "buy-in" from front-line officers (20, 21). A lack

Significance

Diversification of police forces is often proposed as a policy to promote more just and equitable policing in the United States. Yet, little is known about attitudes toward police diversification among officers or the general public. We find that the general public significantly overestimates minority representation in policing, and that information interventions correcting these biased beliefs can reduce trust in the police and increase support for diversity reforms. Additional paired decision-making experiments demonstrate that both current officers and the residents they police prefer hiring new officers from underrepresented groups, independent of other relevant hiring criteria. These findings suggest that contemporary attitudes among voters and officers are not a major barrier to police diversification.

Author affiliations: [a]Institute for Humanities and Social Sciences, Australian Catholic University, Fitzroy VIC 3065, Australia; [b]Stanford King Center on Global Development, Stanford University, Stanford, CA 94305; and [c]Department of Sociology and Criminology, Spring Hill College, Mobile, AL 36608

[1]To whom correspondence may be addressed. Email: kyle.peyton@acu.edu.au.

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*Following related research on public institutions (e.g., refs. 3 and 16), we use "diversity" and "minority representation" interchangeably. In the present context, "diversity" refers to the representation of non-White and female officers, rather than a descriptor of heterogeneity in the police population (17). Similarly, "minority" refers to the union of all non-White and nonmale officers (i.e., the complement of the "majority" set) rather than a specific group in the non-police population. In most police departments, White males are overrepresented relative to their share in the non-police population and constitute the numerical majority within the organization. This group does not constitute a numerical majority in the non-police population.
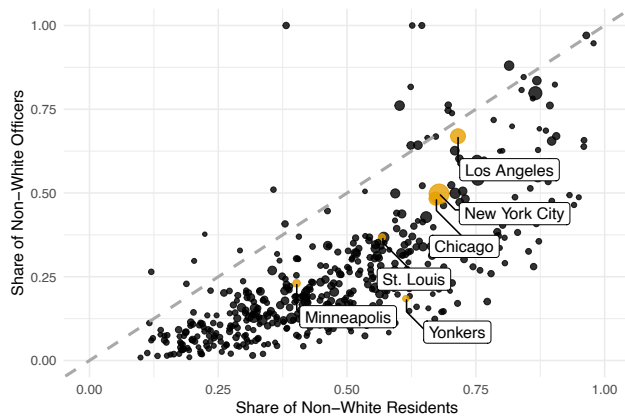
Fig. 1. The share of non-White officers (vertical axis) compared with the share of non-White residents (horizontal axis) in 474 local agencies that employ at least 100 officers. Each point on the graph represents a jurisdiction/department, with a size proportional to the size of the resident population. Points below the gray line denote police departments that underrepresent the communities they serve (approximately 95% of departments). Officer demographics come from the most recent Law Enforcement Management and Administrative Statistics (LEMAS) survey (2016), which sampled all local agencies that employed at least 100 officers (14). Estimates of the demographic proportions for the resident population in each jurisdiction come from the US Census. Together, these data cover 242,240 officers from jurisdictions with a total civilian population of more than 112 million (15).

of support for diversity reforms—either among voters or police officers—can therefore undermine the likelihood of policy change regardless of potential benefits. To date, little is known about attitudes toward diversification among police or the general public.

Here, we investigate beliefs about minority representation in policing and attitudes toward diversification using a series of surveys and experiments fielded across three different samples: a national sample of US adults, a municipal sample of Yonkers, NY residents, and a police sample of sworn officers from the Yonkers Police Department (YPD). These paired samples of police and residents provide a unique opportunity to study attitudes toward diversification in a jurisdiction with one of the least representative police forces in the country (Fig. 1). We use these data to shed light on three important questions. First, is the general public aware of the lack of diversity in US policing? Second, does the provision of accurate information about minority underrepresentation affect public support for police diversification? Third, are the hiring preferences of current police officers, and community residents, affected by the race/ethnicity and gender of potential police recruits?

Beliefs About Minority Representation in Policing

Prior research demonstrates that beliefs about progress toward equity and inclusion in the United States are overly optimistic, especially in the domain of racial economic inequality (22–24). For example, recent data suggest that most (>60%) US adults underestimate Black–White wealth inequality by at least 20 percentage points (23). Similar patterns also hold for beliefs about residential segregation and economic mobility (25, 26). Given this prior work, and the fact that policing data are both notoriously scattered and infrequently publicized (18, 27), we anticipated that most individuals would have inaccurate beliefs about minority representation in US policing. While some official statistics on police department demographics are available, we are

unaware of any prior work on public perceptions. It was therefore unclear whether beliefs about minority representation would be overly optimistic, or too pessimistic.

We elicited public perceptions of police force diversity in a national survey of US adults fielded in July 2021 (N = 2,017), and in the second wave of a municipal panel survey of Yonkers, NY residents fielded in October 2021 (N = 644). Respondents in the national (municipal) samples were asked to provide their best guess of the share of police officers in the United States (Yonkers, NY) from each of the four race/ethnicity (Black, White, Hispanic/Latino, and Asian) and two gender (male or female) groups for which official statistics on officer demographics were available. Given that individuals tend to overestimate the size of minority groups (28, 29), we followed prior work (4, 30) and provided respondents with the shares of each group in the non-police population as a benchmark (e.g., "19% of Yonkers residents are Black"). Each officer group was presented in randomized order, and responses were required to add to 100% across the four race/ethnicity measures as well as the binary gender measure.[†] See *SI Appendix*, S1 for details on survey design, recruitment procedures, sample characteristics, and question wordings.

Results. Fig. 2 shows the differences between each respondent's estimate for a given group and the actual share among police officers in the United States (*Left*) and Yonkers, NY (*Right*). Positive (negative) values denote over- (under-)estimation of the true share. This provides clear descriptive evidence that beliefs about minority representation in policing are overly optimistic, regardless of whether individuals were making inferences about US police in aggregate (national sample), or their local police department (municipal sample).

On average, respondents over- (under-)estimated the share of female (male) officers by 22 percentage points ($\widehat{se} = 0.37$, $t = 59$, $P < 0.01$) in the national sample, and 12 percentage points ($\widehat{se} = 0.54$, $t = 22$, $P < 0.01$) in the municipal sample. Likewise, respondents over- (under-)estimated the share of non-White (White) officers by 14 percentage points ($\widehat{se} = 0.47$, $t = 29$, $P < 0.01$) in the national sample and 19 percentage points ($\widehat{se} = 0.70$, $t = 26$, $P < 0.01$) in the municipal sample. In both samples, the majority of respondents over- (under-)estimated the share of female (male) officers as well as the share of non-White (White) officers by at least 10 percentage points. In *SI Appendix, section S2.1*, we report estimated average differences for each group shown in Fig. 2 as well as the proportion of respondents that over- (under-)estimated the share of each group by a given amount.

In *SI Appendix, section S2.1.8*, we investigate whether certain groups of respondents (e.g., Whites, Republicans) are more likely to hold incorrect beliefs or have more extreme beliefs. We find some evidence that misperceptions are correlated with respondents' background characteristics, but these associations are weak and inconsistent across measures. We find stronger evidence that beliefs about minority representation are correlated across domains; for example, respondents' mispercep-

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[†]Although these groups are not exhaustive or mutually exclusive (e.g., officers may identify with more than one race/ethnicity), responses were forced to sum to 100% across these categories to simplify the estimation task and facilitate comparisons with available police statistics. US police officer demographics were taken from the most recent LEMAS survey (14), which reports race/ethnicity proportions for "White," "Black," "Hispanic," and "other" (Asian, Native Hawaiian, other Pacific Islander, American Indian, Alaska Native, or two or more races). We elicited beliefs about "Asian or other" officers as Asian officers comprise the majority of the "other" category in LEMAS. Officer demographics for Yonkers, NY were provided by the YPD. We elicited beliefs about the share of "Asian" officers as there were no officers from another race/ethnicity category (Native Hawaiian, etc.) employed at YPD.
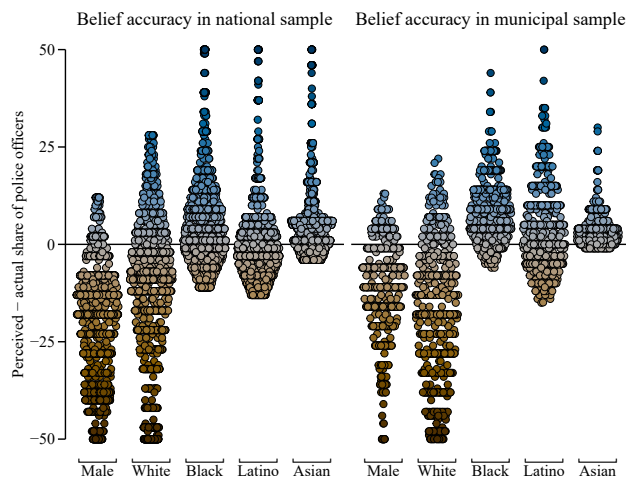
Fig. 2. Differences between perceived and actual shares of police officers in the national (*Left*) and municipal (*Right*) samples. Each point on the graph represents the difference between an individual's best guess about the percentage of police officers in the United States (Yonkers, NY) that belong to each group and the percentage from official statistics. Positive (negative) values denote over- (under-)estimation. Points are jittered to avoid overplotting and shaded so that darker blue (brown) colors denote greater levels of over- (under-)estimation.

tions about gender diversity are a better predictor of their misperceptions about racial diversity than their background characteristics.[‡]

Effects of Information Interventions on Attitudes and Behavior

Biased beliefs have important implications for politics and policy: aggregate preferences (and policy outcomes) in an uninformed electorate can be radically different from one in which individuals are adequately informed (31, 32). A key implication for the present research is that overly optimistic beliefs about police diversity may constrain public support for policy change, which could partly explain the scale and persistence of minority underrepresentation in policing. Here, we examine the causal link between belief accuracy and support for diversification using randomized experiments that provide accurate information about minority representation in policing.

An important advantage of information provision experiments in general is that they can be used to test for causal links between belief accuracy and other outcomes without deception (33). A growing body of empirical research also supports their efficacy: across a variety of contexts, individuals typically update their beliefs in the direction of the evidence they receive (34–38). The belief changes induced by information provision experiments do not, however, always have downstream effects on relevant attitudes and behaviors (36, 37). Given the absence of similar work on minority representation in policing, it was unclear whether information interventions would change beliefs or have any downstream effects on support for diversification.

Related research on representative bureaucracy suggests that, under some circumstance, minority representation can influence public trust and willingness to cooperate with police and other "street-level bureaucrats." But this work, which draws primarily

on cross-sectional surveys and vignette experiments about hypothetical agencies, has reached mixed conclusions (12, 39–41). Moreover, changing individuals' trust in government does not necessarily lead to downstream effects on policy preferences (42), and members of majority groups (e.g., White voters) are often opposed to policies that seek to increase minority representation (43–45).

To measure the effects of providing information about police officer diversity on attitudes and behaviors, we embedded information provision experiments in our national survey of the US adult population and our follow-up survey of Yonkers residents (see *SI Appendix*, section S1.3 for design details; *SI Appendix*, S3 for preregistration). After eliciting respondents' beliefs about police officer diversity (Fig. 2), they were randomly assigned to receive accurate information about police officer diversity alongside the estimates they previously provided (treatment group). Those that were instead assigned to a no-information condition did not receive this information (control group).

Respondents in the national sample (N = 2, 017) were assigned to two additional conditions, one that included a description of findings from a recent study demonstrating the positive effects of police diversification (3); and another that provided this description alongside the accurate information about officer diversity. We did not detect any differences between the treatment effects for the information-only condition and the treatment effects for either of these additional conditions (*SI Appendix*, section S2.1.5). In anticipation of the smaller sample size in the municipal sample (N = 644), we did not include these additional treatment arms.

Here, we focus on the effects that correcting misperceptions about minority representation in policing—via the provision of accurate information—have on four attitudinal outcomes and two behavioral outcomes. Our primary attitudinal outcomes of interest (measured in both experiments) capture stated support for implementing affirmative action programs to increase recruitment and hiring of police officers from minority groups, and preferences for tie-breaking hires in favor of minority applicants. In the municipal sample, we also included measures of trust and confidence in the police (two-item index, $\alpha = 0.83$), and willingness to cooperate with police (four-item index, $\alpha = 0.73$). These indices were constructed using items that regularly appear in surveys of civilian attitudes toward police (1, 2, 46, 47).

Support for affirmative action was measured using a four-item index of support for programs targeting each minority group: "Female officers," "Black officers," "Hispanic/Latino officers," and "Asian officers" (each presented in random order, using a 7-point scale with a neutral midpoint; $\alpha = 0.98$ in the municipal sample, $\alpha = 0.96$ in the national sample). Support for tie-breaking hires was also measured using a four-item index of respondents' preferred option for deciding between "two equally qualified applicants for police officer" (each decision presented in random order; $\alpha = 0.89$ in the municipal sample, $\alpha = 0.81$ in the national sample). For each comparison, respondents chose between hiring the minority applicant (e.g., the "Black applicant"), coded 1; the nonminority applicant (e.g., the "White applicant") coded −1; or a third option of "Random selection (e.g., let a coin flip decide)", coded 0.

Finally, we included two behavioral outcomes in the municipal survey. The first, inspired by recent information experiments on racial discrimination (36), provided individuals with an opportunity to donate real money to a local nonprofit that works to support Black individuals in law enforcement. For this outcome, all respondents were entered into a $50 raffle

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[‡]For example, the R^2 from a linear regression of respondents' belief accuracy for the White officer share on their partisanship, race/ethnicity, education, and sex is less than 0.04 in both samples. By comparison, the R^2 from a linear regression of respondents' belief accuracy for the White officer share on belief accuracy for the male officer share is greater than 0.10 in both samples.

(with a 1 in 20 chance of winning) and decided whether to keep this money versus make a real donation to the Black officers' organization. We also provided individuals with an opportunity to cast a vote in favor of one of four police reforms: civilian oversight, diversification, community policing, or body-worn cameras. Each of these reforms was being actively discussed between YPD leadership and Yonkers residents at various community meetings that took place while the municipal surveys were in the field. A detailed description of each reform was provided to respondents during the survey, and they were instructed that the votes would be tallied and presented to the mayor and police commissioner in an aggregate anonymized form. *SI Appendix*, section S1.3.1 provides additional details about outcome measurement, including question wordings and response categories for each survey item.

Results. Fig. 3 shows the average effects on each of the six outcome measures previously described. Effects were estimated using linear regression of the outcome on treatment assignment, with standard errors (and 95% confidence intervals) based on HC2 robust standard errors. To facilitate comparisons, all estimates are standardized using Glass's Δ, which scales outcomes by the SD in the control group.

First, we find that the effect on support for affirmative action programs was statistically indistinguishable from zero in both the national ($\delta = 0.00$, $\widehat{se} = 0.06$, $t = 0.05$, $P = 0.96$) and municipal samples ($\delta = 0.03$, $\widehat{se} = 0.08$, $t = 0.42$, $P = 0.68$). However, we do find significant positive effects on preferences for tie-breaking hires in favor of minority group applicants competing with "equally qualified" majority group applicants (national sample: $\delta = 0.17$, $\widehat{se} = 0.06$, $t = 2.61$, $P = 0.01$; municipal sample: $\delta = 0.26$, $\widehat{se} = 0.08$, $t = 3.13$, $P < 0.01$). For context, these effect sizes are larger than the average

differences between untreated White and non-White respondents (0.09 in the national sample; 0.13 in the municipal sample).

These results suggest that generic support for affirmative action may be more resistant to change than preferences for specific policy implementations (e.g., tie-breaking in favor of underrepresented groups). One possible explanation for this apparent disconnect is that public support for a given policy is often shaped by perceptions of that policy's substantive implications (4, 48). Prior work finds that Americans do not have a coherent understanding of what "affirmation action" actually means and that beliefs in prevailing myths (e.g., that it is a quota system) are strongly correlated with opposition (49). Related work in political psychology has also found that those who oppose affirmative action in the abstract do not necessarily oppose specific applications, including tie-breaking (50, 51).

SI Appendix, section S2.1.1 provides supplementary analyses that estimate effects on each index component (e.g., support for programs targeting "Black officers"). These estimates are not statistically distinguishable from one another, suggesting that the precision gains from dimension reduction are worth the potential drawback of using summary indices that abstract away from variation in attitudes toward each group.

Turning to the additional outcomes measured in the municipal sample, we find that the effect on donations to the Black officers' association was not statistically distinguishable from zero ($\delta = -0.03$, $\widehat{se} = 0.08$, $t = 0.39$, $P = 0.69$). Here, roughly 57% of treated respondents agreed to donate some amount (average donation: $17.70) versus 58% in the control group (average donation: $18.40). A recent study on racial discrimination in the labor market found similar results: information interventions improved belief accuracy but did not increase donations to a civil rights group (36).

The intervention here did, however, cause a significant increase in residents' willingness to vote in favor of diversifying their local police department ($\delta = 0.22$, $\widehat{se} = 0.09$, $t = 2.53$, $P = 0.01$). For context, this effect size translates to a difference of about 8 percentage points on a binary scale: 13% of respondents in the control group voted for diversification compared to 21% in the treatment group. One possible explanation for these effects is that individuals view police diversification as a local policy issue that should be addressed by municipal government (i.e., the mayor and police commissioner), rather than a nonprofit.

Finally, we find that providing information about the (lack of) diversity at YPD caused a significant decrease in trust in the police ($\delta = -0.14$, $\widehat{se} = 0.05$, $t = 2.84$, $P < 0.01$). For context, this effect size was approximately 8 percentage points when measured on the same (single item) scale used in Gallup's national survey of confidence in institutions, which found a 5 percentage points decrease in trust following the murder of George Floyd in May 2020 (47). Despite this significant negative effect on Yonkers residents' trust in YPD, the effect on their willingness to cooperate with police officers was not statistically distinguishable from zero ($\delta = 0.03$, $\widehat{se} = 0.06$, $t = 0.46$, $P = 0.65$).

SI Appendix, section S2.1.2 compares the estimates reported here with covariate-adjusted estimates. We find limited precision gains from regression adjustment in this application. We also report supplementary analyses for effect heterogeneity as a function of pretreatment covariates (including partisanship, race/ethnicity, and belief accuracy) in *SI Appendix*, section S2.1.3. These analyses do not reliably identify subgroups for which stronger (or weaker) causal effects are obvious.

SI Appendix, section S2.1.4-S2.1.6 includes supplementary analyses that explore potential alternative mechanisms which
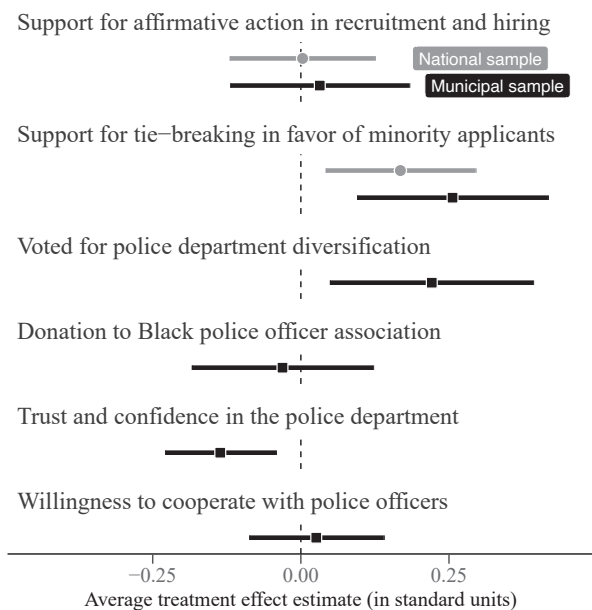

Fig. 3. Estimated treatment effects of accurate information about minority representation in policing on attitudes and behaviors in the national (gray) and municipal (black) samples. Treatment effects were estimated using linear regression of the outcome on treatment assignment, with standard errors (and 95% confidence intervals) based on HC2 robust standard errors. To facilitate comparisons, all estimates are standardized using Glass's Δ, which scales outcomes by the standard deviation in the control group.

might explain the results from the information provision experiments. Overall, we find compelling evidence that information provision increased support for diversification (and reduced trust) via belief updating, rather than by causing individuals to attach more importance to the issue of minority representation in policing. For example, we find that exposure to high-quality research on the benefits of police diversification did not lead to attitude change unless also paired with the information interventions described here.

Effects of Race and Gender on Hiring Preferences of Local Residents and Police

The results from the previous section demonstrate that correcting unfounded optimism about minority representation in policing can increase public support for tie-breaking hires in favor of minority applicants as well as local residents' willingness to vote for police department diversification. Our interpretation is that factual information affected these outcomes by reducing gaps between perceptions and reality. This suggests that public support for diversification is not necessarily constrained by underlying preferences for White (male) over non-White (female) officers.

However, the information experiments do not directly identify how a minority applicant's race/ethnicity (or gender) might affect the likelihood they would be hired by a police department. To measure how the hiring preferences of police officers and civilians are affected by the race/ethnicity and gender of potential police recruits, we embedded a police recruitment conjoint experiment in the first wave of a municipal panel survey of Yonkers residents in May 2021 ($N = 1,413$ respondents × 5 pairings × 2 applicants per pair = 14,130). This experiment was subsequently replicated on a sample of Yonkers police officers in June 2021 ($N = 250$ respondents × 5 pairings × 2 applicants per pair = 2,500).

Conjoint experiments have been widely used to study the role that direct discrimination plays in contexts involving multidimensional choices (52–56), and they offer several advantages in the present context. First, the randomization of multiple attributes allows us to estimate the marginal effects of the applicant race/ethnicity and gender, alongside other factors that are heavily weighted in police recruitment policies, such as civil service exam scores and residency requirements. They also better reflect the multidimensional nature of the decision-making task, and prior research has found strong correspondence between hypothetical choices in conjoint experiments and real-world behavior (57).§ A unique advantage in the present context is that we can examine whether the preferences of YPD officers differ systematically from Yonkers residents.

To our knowledge, this is the first attempt at directly estimating how the race/ethnicity and gender of applicants affect the hiring preferences of police officers and community residents. In both samples, respondents made choices between potential recruits to the YPD that varied independently across their age, race/ethnicity, sex, civil service exam performance, education, prior occupation, length of municipal residency, and their motivation for applying to become a police officer. Attribute levels were chosen based on a combination of interviews with YPD officers, historical data on officer applicants, and prior survey work on police officers' motivations and background

§Conjoint designs are also less susceptible to social desirability biases because they randomize sensitive features (e.g., race) alongside other relevant attributes (54). Here, we also followed best practices to mitigate these potential threats by conducting anonymous online surveys and providing additional assurances of anonymity and data privacy to participants at the beginning of the survey.

characteristics (58, 59).¶ In practice, applicants' civil service exam scores and residency receive disproportionate weight in the recruitment and hiring process.‖ We provide a detailed description of this experimental design in *SI Appendix*, section S1.4. (see *SI Appendix*, section S1.2 for recruitment procedures and sample characteristics; *SI Appendix*, S4 for preregistration).

Results. We estimate the average marginal component effects (AMCEs) of randomly assigned attributes on the probability of selecting an applicant (binary outcome) using linear regression, with robust standard errors clustered at the respondent level to correct for within-respondent clustering. Here, we focus on the effects of applicant race/ethnicity, sex, civil service exam performance, and length of residency (see *SI Appendix*, section S2.2 for estimated AMCEs and marginal means of all randomized attributes). Fig. 4 shows the estimated effects that each of these characteristics has on the probability of selecting an applicant for hiring in the resident and police officer samples.

As expected, higher performance on the civil service exam and longer residency have large effects on the probability that a given applicant is selected in both samples. For example, the effect of scoring in the Top 1% on the civil service exam (relative to the Top 25%) is 0.15 ($\widehat{se} = 0.01$, $t = 11.28$, $P < 0.01$) in the civilian sample and 0.28 in the police sample ($\widehat{se} = 0.03$, $t = 8.94$, $P < 0.01$). The effect of being a long-term community resident (i.e., more than 10 y) is 0.22 ($\widehat{se} = 0.01$, $t = 16.34$, $P < 0.01$) in the civilian sample and 0.29 ($\widehat{se} = 0.03$, $t = 8.83$, $P < 0.01$) in the police sample. The large between-sample differences at the top of the exam score distribution suggest that officers assign more weight to high-scoring applicants than community residents. None of the estimated AMCEs for length of residency were statistically distinguishable between samples.

Independent of these other relevant characteristics, both YPD officers and community residents clearly prefer non-White over White police recruits. On average, White applicants were selected for hiring with probability 0.42 in the civilian sample and 0.45 in the police sample.** An application from a Black (relative to White) individual causes an increase in the probability of selection by 0.16 (i.e., 16 percentage points) in the civilian sample ($\widehat{se} = 0.01$, $t = 13.14$, $P < 0.01$) and 0.13 in the police sample ($\widehat{se} = 0.03$, $t = 4.40$, $P < 0.01$). Despite large demographic differences between samples (police: 82% White, 85% male; civilian: 45% White, 41% male), none of the estimated AMCEs for race/ethnicity were statistically distinguishable.††

When considering prospective applicants' gender, however, female applicants do not appear to have a systematic advantage over males. The estimated AMCE for female, relative to male,

¶To avoid implausible cases (e.g., school teachers with GEDs), we employed restricted randomization on the education and occupation attributes such that potential applicants that were previously school teachers or social workers always had education levels of at least a Bachelor's degree or higher. All estimates are adjusted to account for this conditional independence, which is a common feature in conjoint experiments that seek to avoid generating implausible profiles (60).

‖Municipal police departments require all applicants to complete a civil service exam, and those who pass are then rank-ordered by their test score on an "eligibility list." This is typically the first formal stage of the hiring process, and only those on the list are eligible to proceed to subsequent stages (physical fitness tests, background investigations, oral interviews, etc.). For example, if there are 100 applicants on the eligibility list and 30 openings, then, all else equal, the 30 with the highest exam scores will be selected. Many departments also mandate or incentivize local residency, for example, that potential applicants live within a certain distance of the city for a period of at least 3 mo immediately preceding the exam (YPD's policy).

**Given that respondents must always choose between two potential recipients, the expected value is 0.50 under the null hypothesis of indifference.

††*SI Appendix*, section S2.2.3 explores heterogeneity by covariates (e.g., race/ethnicity and partisanship) among Yonkers residents. Although non-White respondents (as well as females and Democrats) were significantly more supportive of minority applicants, we did not identify any subgroups that disfavored minority applicants.
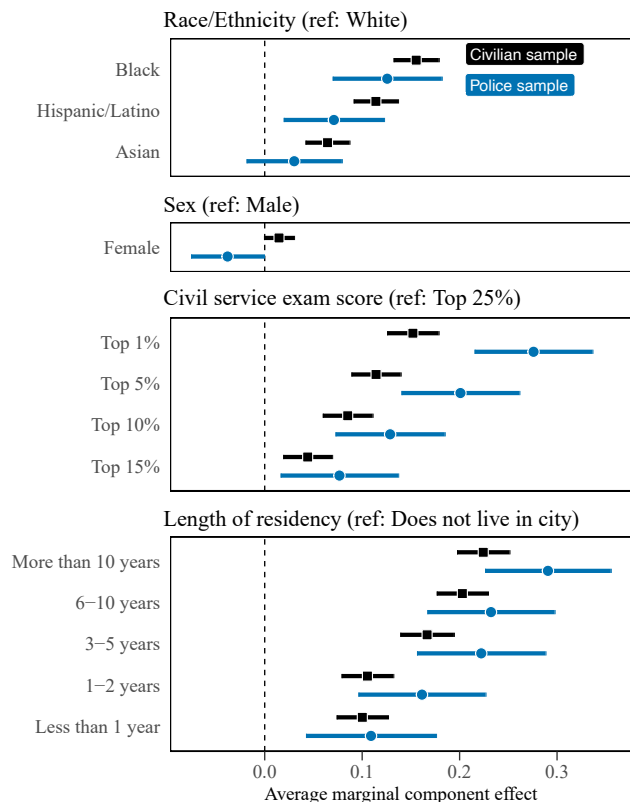
Fig. 4. Average marginal component effects (AMCEs) of randomly assigned characteristics of police officer applicants on the probability of selecting an applicant for hiring. Point estimates and 95% confidence intervals estimated via OLS regression with robust standard errors clustered at the respondent level to correct for within-respondent clustering. Estimates are adjusted to account for randomization constraints on the education and occupation attributes. Civilian sample (black): municipal survey of Yonkers residents fielded in May 2021 (*N* = 1,413 respondents x 5 pairings x 2 applicants per pair = 14,130 observations). Police sample (blue): survey of Yonkers police officers fielded in June 2021 (*N* = 250 respondents x 5 pairings x 2 applicants per pair = 2,500 observations).

applicants corresponds to an increase in the probability of hiring of just 0.01 (i.e., about 1 percentage point) in the civilian sample ($\hat{se}$ = 0.01, t = 1.86, P = 0.06), and a small decrease of 0.04 (i.e., about 4 percentage points) in the police sample ($\hat{se}$ = 0.02, t = 2.00, P = 0.05). This suggests that female applicants, on average, may be slightly disadvantaged relative to male applicants.

We explore causal interactions among race/ethnicity, sex, and exam performance in *SI Appendix*, section S2.2.2. We find that bias against female (v. male) applicants appears unique to White females in the police sample, whereas there is no evidence of bias against non-White females in either sample (*SI Appendix*, Fig. S40). We also estimate causal interactions between exam scores and race/ethnicity (*SI Appendix*, Figs. S41–S45) as well as exam scores and sex (*SI Appendix*, Figs. S46–S47). These results suggest that non-White applicants are preferred at every level of exam performance. Moreover, non-White applicants with lower test scores are, all else equal, preferred to White applicants with higher scores. We find minimal differences between samples.

To illustrate the substantive implications of these results, we can estimate predicted probabilities for different types of applicants that vary only on race/ethnicity and gender. For example, consider a 27-y-old Black male applicant with a high school education, who has lived in Yonkers for 10+ y, previously worked as a security guard, scored within the top 25% on the exam, and listed "helping people" as their primary

motivation. This applicant would be selected with probability 0.70 ($\hat{se}$ = 0.03) in the civilian sample and 0.70 ($\hat{se}$ = 0.06) in the police sample.

On the other hand, an otherwise similar White male applicant would be selected with probability 0.56 ($\hat{se}$ = 0.07) among police and 0.54 ($\hat{se}$ = 0.03) among residents. White female applicants fare similarly, with selection probabilities of 0.52 ($\hat{se}$ = 0.07) among police and 0.56 ($\hat{se}$ = 0.03) among residents. A Black female applicant with the same characteristics would be selected with probability 0.66 ($\hat{se}$ = 0.06) by police and 0.72 ($\hat{se}$ = 0.02) by residents. Overall, these results demonstrate a remarkable degree of similarity between police and public preferences for minority hires.

Discussion

Despite long-standing normative concerns about minority underrepresentation in policing, and a growing body of empirical evidence documenting the potential benefits of diversification (3, 11–13), most US police departments remain dominated by White men. The scale and persistence of minority underrepresentation suggests the need for reforms that increase hiring and recruitment from underrepresented groups; yet little is known about support for diversification among police or the general public. The results reported here shed light on support for police diversification across multiple samples.

Consistent with recent work on beliefs about racial inequality (22–24), we find clear evidence that Americans significantly overestimate the scale of minority underrepresentation in policing. We also find that correcting these biased beliefs can have downstream effects on political attitudes and behaviors. While reducing the gap between perceptions and reality decreased trust in the police, it also caused an increase in support for hiring decisions that favor minority applicants, as well as local residents' willingness to vote for diversification over other police reforms. Extending fundamental insights about the political implications of biased beliefs (31, 32), this suggests that public support for diversity reforms can be increased by reducing unfounded optimism about minority representation in policing.

These results are particularly noteworthy given that belief updating does not necessarily lead to attitude change in other contexts (34–38). The observation that preferences for specific hiring policies favoring minority applicants were less resistant to change than generic support for affirmative action also underscores the utility of direct questioning (4, 48, 50, 51). More broadly, the finding that accurate information about the (lack of) minority representation in policing decreased public trust—but also increased support for policy change—suggests limits to normative perspectives that emphasize the value of trust in the police as an end in itself.

Overall, these information experiments demonstrate that exposure to accurate information about minority underrepresentation can increase public support for diversification by reducing unfounded optimism about officer diversity. Our interpretation is that demand for increased minority representation already exists, and information exposure increases support by correcting biased beliefs. Consistent with this interpretation, our paired experiments in Yonkers, NY demonstrate that—even in the absence of any corrective information—both current officers and community residents prefer hiring new officers from underrepresented groups, independent of civil service exam performance and other criteria.

These paired experiments provide unique insights about preferences among both officers and residents in a jurisdiction with one of the least representative police forces in the country. For example, 78% of YPD officers are White compared to 34% of the resident population: a difference (∼44 percentage points) that is more extreme than 92% of jurisdictions where official statistics are available. Police–community relations in Yonkers have also suffered from a long history of conflict and distrust, including, for example, a 2007 investigation by the US Department of Justice into allegations of discriminatory policing that took nearly a decade to resolve.[‡‡]

Although it would be premature to conclude that officers and residents across thousands of other local law enforcement jurisdictions have similar preferences, there are few places where representational disparities might suggest a sharper divide between police and the public. Taken together, these findings suggest that neither the attitudes or preferences of officers nor the general public pose a major barrier to police diversification. Of course, a lack of demand for minority representation is not the only potential barrier to hiring and recruitment of officers from underrepresented groups.

A variety of other potential barriers can operate independently of the preferences of voters and police officers. These include factors affecting the diversity of the applicant pool, such as the effectiveness of local recruitment strategies, group-based differences in preferences over job characteristics, and distrust of police (61). Screening mechanisms affecting the selection process, such as civil service exams and background checks, can also have a disparate impact on applicants from underrepresented groups. For example, the significant increases in Black and female officers observed after the 1964 Civil Rights Act are partly attributable to discrimination lawsuits that challenged police exams and led courts to impose temporary hiring quotas across the United States (62, 63). Civil service laws can be a major obstacle to contemporary diversification efforts, even if police departments draw from diverse applicant pools and prioritize hiring from underrepresented groups.

In short, the scale and persistence of minority underrepresentation in US policing is not reducible to monocausal explanation. The results reported here nevertheless challenge the notion that contemporary attitudes among voters and officers pose a major barrier to diversification efforts. This suggests that we should update our beliefs about the importance of demand-side explanations arising from attitudes among voters and officers. We hope that this encourages more research on the structural barriers to police diversification and provokes further discussion among researchers, policy makers, and law enforcement professionals.

Materials and Methods

The results reported here are based on a series of surveys and experiments fielded across three different samples: a national sample of US adults, a municipal sample of Yonkers, NY residents, and a police sample of sworn officers from the YPD. We provide descriptions of all surveys and experiments in the main text. Additional information is available in the *SI Appendix*. *SI Appendix*, S1 provides detailed descriptions of survey design, recruitment procedures, sample characteristics, experimental designs, and outcome measurement. All supplementary analyses referenced in the main text are provided in *SI Appendix*, S2, and preregistrations are provided in *SI Appendix*, S3–S4. The studies conducted in Yonkers, NY were embedded in a panel survey initiative started by Yale Law School in 2020, which was reviewed by the Human Subjects Committee at Yale University (IRB Protocol ID 2000028778) and determined to be exempt under federal regulation 45 CFR 46.104(d)(2)(iii). Consent to participate in panel surveys was obtained from participating police officers and community residents during the baseline survey wave. The study conducted on the national sample was embedded in a cooperative survey funded by the Center for the Study of American Politics and the Institution for Social and Policy Studies at Yale University (IRB Protocol ID 1312013102).

Data, Materials, and Software Availability. All replication data and code are available from the Harvard Dataverse Network: https://doi.org/10.7910/DVN/VU1JI1.

[‡‡]see: https://www.justice.gov/opa/file/910316/download, and https://www.yonkersny.gov/Home/Components/News/News/5284/3232.

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