



## Legal descriptions of police officers affect how citizens judge them<sup>☆</sup>

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### ABSTRACT

How does legal terminology affect our mental representations of police officers? In two experiments ( $N = 2001$ ) with jury-eligible Americans, we examined the dual influence of social stratification and legal language on how Americans form judgments of police officers. We manipulated descriptions of officers—using laymen's terms or legal terms—and assessed how those descriptions differentially affected Americans' conceptions of officers. Officers described as “objectively reasonable” (a legal term) were judged less negatively and perceived as warmer and more competent than “average” officers or just “officers.” Further, effects of legal language were moderated by race and neighborhood context, consistent with racialized experiences in a stratified nation. Specifically, the priors of Black and white Americans in metropolitan and nonmetropolitan areas differ significantly at baseline (i. e., in the control condition), but are brought in alignment—in favor of officers—when officers are described as “objectively reasonable.” We discuss the implications of these processes for both psychological theory and legal practice.

Over the past two decades, the media has publicized several high-profile court cases about police officers in the United States of America using excessive force against citizens and we have seen people come to very different judgments of the officers in these cases. Even when Americans see the same information about these cases, their responses to it varies as a function of their differential experiences in society. For instance, when asked to take the perspective of a potential juror who would have to decide whether the officer should be indicted, Black and white Americans reach different conclusions, even when presented with identical evidence. White Americans focus on, and search for, more information that favors the police officer whereas Black Americans search for more information that favors the victim. As a result, they come to opposing conclusions about whether the force used was justified, whether the officer's actions were racially motivated, and about their summary judgment of the final verdict (Jefferson, Neuner, & Pasek, 2020).

These differences in perceptions are not random; they are related to the distinct experiences that members of these groups have had throughout their history in the United States of America. In this article, we examine how those experiences might interact with features of the legal system to affect how Americans form judgments of police officers.

Specifically, our studies focus on how members of the public who are eligible for jury service in the U.S. form judgments of police officers, and how those judgments vary depending on their own background characteristics as well as the instructions given to them—instructions adapted from the actual American court system. Before diving into those details, however, we will provide some context about *why* Americans' experiences might affect their judgments of police officers, and how legal procedures might interact with those experiences to affect psychological processes.

### 1. Social stratification and its psychological consequences

The United States of America has made substantial strides toward social integration, yet still remains a segregated and stratified society (Munger & Seron, 2017). This stratification not only has economic and sociological consequences, but it also affects the minds of people living within the society (Lewis Jr., 2021; Oyserman & Lewis, 2017). When a nation is segregated—by race, class, and other social variables—as the US is, that leads its citizens to have vastly different experiences (Ray, 2019; Rothstein, 2017). Due to situated cognition processes (see Bandura, 1976, 1986), those differences in experiences inform how they

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come to view the world (Lewis Jr., 2021). These experiences shape our mental representations about how the world works and our expectations of how others will behave. In other words, to use Bayesian terminology, our experiences shape our ‘priors’ about other people.

The places where people live (Anicich, Jachimowicz, Osborne, & Phillips, 2021), and communities that surround them in those places (Bayer, Lewis Jr, & Stahl, 2020) can affect how they think about and interact with others that they may encounter. These structural dynamics affect our judgments not only of equal-status peers, but also of people across power differentials (Tropp & Dehron, 2022). We wondered whether these patterns that have been observed in previous scholarship on intergroup relations might also emerge in the context of citizen-police judgments, given how stratified the policing context is as well.

As discussed above, American society is broadly segregated, which can be observed by examining a variety of geo-spatial measures (see Wong, 2003). One of those measures is what is known as “metropolitan statistical areas”—areas that are economically and socially linked and distinguishable by population density. One thing that is interesting about policing data is that it is organized and aggregated by metropolitan statistical areas in ways that allow researchers to examine how policing occurs in different kinds of places (Ostrom, Parks, & Whitaker, 1979; Schwartz & Jahn, 2020). The general pattern found in research that has examined these differences is that metropolitan areas have historically been policed differently than non-metropolitan areas (Smith, 1986; Terrill & Reisig, 2003). Specifically, police departments within metropolitan areas often organize their efforts such that they have a greater presence in low-income and minoritized communities, which results in these neighborhoods being simultaneously over-policed when it comes to surveillance and under-policed when it comes to emergency services. Comparatively, in higher-income and predominantly white communities, officers have a diminutive presence, where they act as responsive, emergency service providers (Gordon, 2020). This strategy is distinct from the strategies adopted by police departments that are located in more rural areas, as non-metropolitan officers have fewer interactions with minoritized communities compared to metropolitan departments, and thus often concentrate their efforts to address very specific concerns, like drug-related crime (Shukla et al., 2019).

These differences in place-based strategies have psychological consequences for residents. The heightened activity of police in metropolitan areas has long contributed to their tense relationships with minoritized communities (Hinton, 2021) since police departments concentrate their efforts in minoritized communities and thus police officers interact with Black residents more often than with white residents (Gordon, 2020). These dynamics may inform how residents come to think about police officers and the legality of their actions (Herbert, 1997; Rios, 2011).

Due to these multiple forms of stratification and their psychological consequences, Americans’ attitudes and judgments are divided about a range of social issues (Mason, 2018). Policing is no exception. For example, while Americans in the aggregate have positive opinions of the police, those opinions vary substantially by social categories such as race and ethnicity (Callanan & Rosenberger, 2011; Decker, 1981; Weitzer & Tuch, 2005).

## 2. Historical context for racial differences in police perceptions

Prior research has shown that there is a “*great divide*” in the way that Black and white Americans perceive police and their misconduct (Hurwitz & Peffley, 2005; Peck, 2015). Several studies show that compared to white Americans, Black Americans hold stronger negative views of police and are more likely to believe that officers conduct inappropriate stops, use insulting language, use excessive force, and participate in corrupt activities (Weitzer & Tuch, 2004). These beliefs are rooted in fundamentally different experiences that these two racial groups have had with police officers for generations, and they are bolstered by the

systemic inequities that disadvantage Black Americans in the legal system (Alexander, 2010; Bonilla-Silva, 2014). Police officers are consistently less respectful when speaking to Black Americans (Voigt et al., 2017), Black Americans are more likely to be stopped by police (Pierson et al., 2020) and are more likely to be fatally shot by police than white Americans (Edwards, Lee, & Esposito, 2019; Knox & Mummolo, 2020; Schimmack & Carlsson, 2020). The realities of these inequities are exacerbated when considering that these ills are concentrated amongst these groups in specific areas. These divided experiences with police result in individuals garnering personal and vicarious information about officers which richly informs their judgments.

Additionally, the racial gap in police-related fear, where Black Americans show greater fear and less trust in police officers than white Americans (Pickett, Graham, & Cullen, 2022), further illustrates that these two groups are experiencing policing differently. For most white Americans, the police are seen as vital to their safety; for Black Americans, these same officers are perceived as threats themselves (Pickett et al., 2022). This underscores the importance of simultaneously considering the broader constellation of structural, cultural, and identity factors that combine to shape people’s prior perceptions of how the world works (Lewis Jr., Kougiyas, Takahashi, & Earl, 2021; Oyserman & Lewis, 2017). Race, social class, media exposure, personal experience with the police, and neighborhood context can all contribute to peoples’ prior beliefs and expectations about police officers’ behaviors, and the legal system more broadly (Spruill & Lewis, under review). In other words, multiple dimensions of social stratification can seep into the mind and affect how people come to judge police officers.

## 3. The instructions people are given can also affect their judgments

We outline this landscape to explain why Americans might have varying priors and reach different judgments about police officers. Prior experiences are not the only things that matter, however. In American courtroom proceedings in which jurors are asked to make judgments of officers, the requests for those judgments come with instructions. In police use of force cases, for instance, juries are often asked to “decide whether the officer’s actions were objectively reasonable in light of the totality of the facts and circumstances confronting the officer and without regard to the officer’s own subjective state of mind, intentions, or motivations” (District Court of Minnesota, 2021). Actual jurors in these cases are asked to think about the behavior in question and then decide whether an “objectively reasonable” officer would have used that amount of force if they were in the same situation.

This “objective reasonableness standard” – as it’s called in the legal system – was established in the *Graham vs. Connor* Supreme Court case which was the landmark police misconduct case that continues to influence legal proceedings about these cases today. If an objectively reasonable officer would have performed the same behavior in that situation, then everything is fine in the eyes of the law; however, if the behavior is outside the realm of possibilities for an objectively reasonable officer, then there is a problem.

This legal standard has been in place for decades, but there is little empirical evidence about how the language used in the standard affects lay people’s judgments of police officers, particularly lay people who make up American juries. Given the paucity of evidence about topic, and the topic’s importance both theoretically and practically, that lead us to ask the following question: what comes to mind when people are instructed to think of an objectively reasonable officer? If people from different backgrounds hold different priors of police given how social stratification affects psychological processes, would their mental representations of objectively reasonable officers also differ? Or, does this legal language move people from their prior beliefs to a similar conception of what a police officer is once they are described as being “objectively reasonable”?

We are asking these questions to assess the possibility that this legal

standard could potentially affect jurors' judgments. Judges ask jurors to consider a reasonable officer, but real people are not consistently reasonable. As Steven P. Croley (1995) noted, "even conscientious individuals sometimes look *while* crossing the street...". In other words, our behaviors often occur without specific rhyme or reason (see Nisbett & Wilson, 1977). As judges ask jurors to think about a reasonable person, that might inadvertently lead them to think about some idealized person, an idealized officer who behaves more reasonably than is realistic. Given this possibility, we employ layman's terms to test if a comparable descriptor that utilizes neutral language - average - could be applied as an alternative to the objectively reasonable standard. Throughout these studies, we assess Americans' baseline prior beliefs regarding police officers and test whether their mental representations of officers are altered when Americans see language from the legal system's reasonableness standard.

Here we focus on the legal language in jury instruction to understand how it could impact the judgments that actual jurors come to. As the American public has become more aware of how rare police indictments are, several scholars have assessed key factors that contribute to this pattern, such as the union protections in place for officers (Fisk & Richardson, 2017; Place, 2018), the charges that prosecutors decide to apply to the case (Stinson, 2017) and the lack of transparency of the grand jury (Futrell, 2018). The current research takes a novel approach through experimental jurisprudence to assess the influence of the legal descriptors used in actual jury instructions, a factor that may directly impact how juries deliberate about these cases and could affect their downstream conclusions.

#### 4. Current studies

Across two experiments we investigated whether Americans from different backgrounds hold different priors regarding police officers. We experimentally tested whether using the language from the reasonableness standard affected Americans' baseline conceptions of police officers. We hypothesized that Americans' priors would differ along racial lines, with white Americans holding more favorable beliefs regarding officers than other racial-ethnic groups. We also hypothesized that applying the legal language of reasonableness to police officers would result in more positive conceptions of officers for Americans regardless of their racial-ethnic background. We tested this second hypothesis by experimentally manipulating descriptions of officers, describing them either with the legal terminology, "objectively reasonable" or with layman's term, "average," to examine whether the current use of this legalese may unintentionally result in more positive conceptions of officers in these cases. As average is a more commonly used term than "objectively reasonable", this alternative descriptor may provide participants with a frame of reference that is closer to their baseline conceptions of officers. Thus, we expected that participants in the "objectively reasonable" condition would have more positive conceptions of officers than those in the average condition and that participants in the average condition's conceptions of police officers would be similar to baseline views.

Given that these expected racial differences are situated within a stratified society, we also examined in supplemental analyses how participants' neighborhood context may further account for the differential priors these groups hold about police officers by examining variation in judgments by metropolitan statistical areas. We examined how Black and white Americans in metropolitan and non-metropolitan areas perceive officers, as place-based policing tactics in the environments that people are situated within may very meaningfully inform their baseline conceptions of police. Together, these studies address how legal framing in jury instructions can impact what lay Americans call to mind and how our stratified experiences within society may inform the priors we hold about others.

## 5. Study one

### 5.1. Method

*Open-science practices.* The data for the study and the data-analysis code (in R) can be found on the study's OSF page (<https://osf.io/g2d54/>).

*Participants.* We recruited 1004 jury-eligible online participants (557 women, 444 men, 1 transgender woman, 2 non-binary individuals; *mean* age = 39.23 years, *standard deviation* = 11.77) using the Cloud Research Platform (Litman, Robinson, & Abberbock, 2017), to take part in an online study for monetary compensation. We specifically recruited jury-eligible participants because we are interested in potential jurors' conceptions of police officers in the presence and absence of the objectively reasonable descriptor. Of those, 968 participants (553 women, 431 men, 1 transgender woman, 2 non-binary individuals; *mean* age = 39.38 years, *standard deviation* = 11.79) consented to include their data, agreed to focus and complete the task to the best of their ability, indicated that they were eligible for jury duty in the US,<sup>1</sup> and were thus included in the analyses. Of our 968 participants, 71% self-identified as white, 16% self-identified as Black, 7% self-identified as Asian, 2% self-identified as Latinx, 3% self-identified as multiracial and only 3 participants self-identified as American Indian or an Alaskan Native. Lastly, 49% of these participants identified as Democrat, 28% identified as Republican, 19% identified as Independent. We did not have strong a priori expectations about effect sizes and thus aimed to have at least 250 participants in each condition to be sufficiently powered *within* each condition to detect stable correlations in social and personality research (Schönbrodt & Perugini, 2013), as well as detect modest *between* condition differences. A sensitivity analysis using G\*Power (Version 3.1.9.6; Faul, Erdfelder, Buchner, & Lang, 2009) suggested that our sample size provided 90% power to detect a small-sized effect ( $f = 0.10$ ).

Participants were told that they would be providing their thoughts about law enforcement officers and answering demographic questions about themselves. Each participant was randomly assigned to one of three conditions: the pure control condition, the average officer condition, or the objectively reasonable officer condition.

*Open-Ended Prompt.* First, each participant received a prompt that asked an open-ended question. As we were interested in capturing participants' lay conceptualizations of police officers; the prompt simply instructed them to describe the actions and/or conduct that come to mind when imagining a police officer (pure control condition), an average police officer (average officer condition) or an objectively reasonable officer (reasonable condition). They were provided with an open essay box to freely describe the officer without a word or time limit.

*Person-Perception Trait Ratings.* Next, each participant received a list of the 27-person perception traits that were used in the development of the Stereotype Content Model (Fiske, Xu, Cuddy, & Glick, 1999). From this full list we assessed how participants rated the officer along the dimensions of competence and warmth using the nine terms that capture these dimensions: *competence* - competent, confident, intelligent, competitive, independent, and *warmth* - warm, tolerant, sincere, good-natured (Fiske, Cuddy, Glick, & Xu, 2002). These terms were combined to create an aggregate competence variable ( $\alpha = 0.62$ ) and an aggregate warmth variable ( $\alpha = 0.89$ ).

<sup>1</sup> To be eligible for jury-duty in the United States, individuals must meet these five criteria: be a United States citizen; be at least 18 years of age; be proficient in English; cannot be subject to felony charges punishable by imprisonment for more than one year; and have never been convicted of a felony. Participants were labeled as jury eligible if they met all five of these criteria.

## 5.2. Results

**Linguistic Analysis of Open-Ended Responses.** We used LIWC2015's linguistic software (Pennebaker, Boyd, Jordan, & Blackburn, 2015) to assess the percentage of positive and negative terms in the participants' open-ended responses. First, we conducted an ANOVA on the percentage of positive terms in the participants' descriptions of the officer as a function of officer condition and we observed a nonsignificant effect of condition,  $F(2, 965) = 1.22, p = .30, \eta^2_p = 0.003$ . Participants described officers as equally positive regardless of whether they were described as objectively reasonable, average, or just an officer (see Fig. 1). Officer descriptors did matter, however, with respect to *negative* language,  $F(2, 965) = 4.81, p = .01, \eta^2_p = 0.010$ . Participants in the objectively reasonable officer condition described the officer using significantly fewer negative terms than participants in the pure control condition,  $t(965) = 3.08, p < .01, d = 0.20$ , but non-significantly different from the average condition,  $t(965) = 1.86, p = .15, d = 0.12$ . Further, we also observed that there was no significant difference between the average and blank conditions,  $t(965) = -1.24, p = .43, d = 0.08$  (see Fig. 2).

Taking these two patterns into account, we then assessed if these results are moderated by race, given that racial group membership is a

key variable that may impact how Americans perceive police. Given that 71% of our sample self-identified as white, we compared our white and non-white participants, since our sample size of non-white people did not allow for more granular analyses. Given the possibility of significant heterogeneity within the non-white racial group, we report the disaggregated results for each racial group in the supplementary materials. We conducted an ANOVA on the percentage of positive terms in the participants' descriptions of the officer as a function of officer condition and participant race and we observed a nonsignificant effect of condition,  $F(2, 962) = 1.22, p = .30, \eta^2_p = 0.005$ , a nonsignificant effect of participant race  $F(1, 962) = 1.28, p = .26, \eta^2_p = 0.000$ , and a nonsignificant interaction between condition and race  $F(2, 962) = 1.55, p = .21, \eta^2_p = 0.003$ . However, an exploration of the simple effects suggests that non-white participants in the objectively reasonable officer condition described the officer significantly more positively than white participants in the objectively reasonable condition,  $t(962) = 2.08, p = .04, d = 0.13$  (see Fig. 3). As the interaction was not significant, we encourage you to interpret the simple effects with caution.

With respect to negative terms, we observed a significant main effect of condition,  $F(2, 962) = 4.81, p < .01, \eta^2_p = 0.008$ , a nonsignificant effect of participant race  $F(1, 962) = 0.19, p = .66, \eta^2_p = 0.002$ , and a

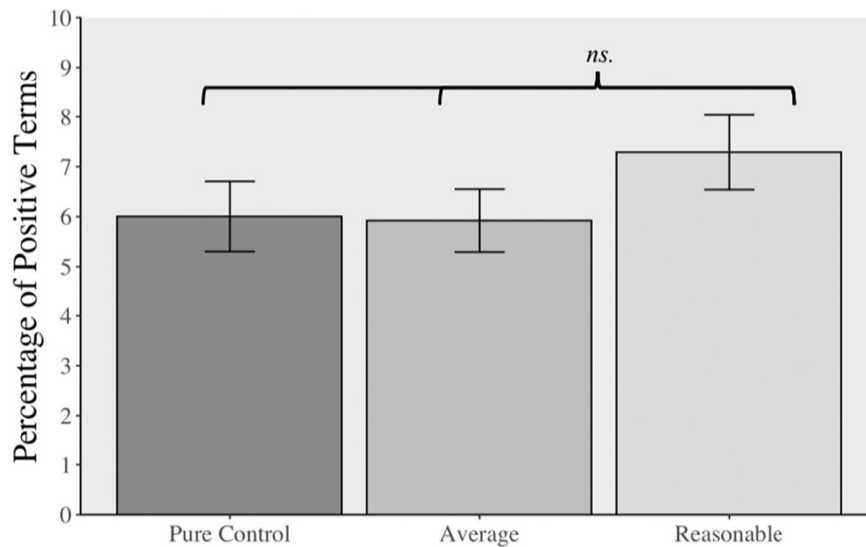


Fig. 1. Bar plot of the percentage of positive terms used in participants' officer descriptions by condition. Error bars show standard error around the group mean.

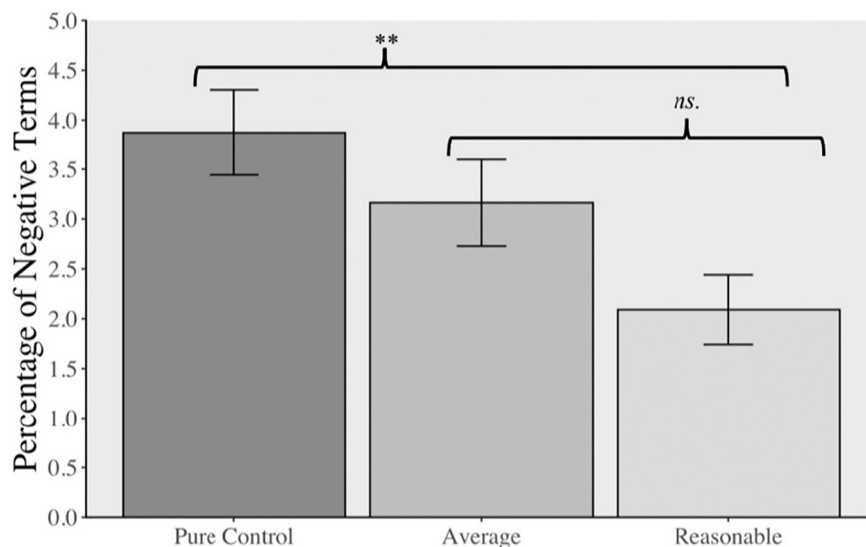


Fig. 2. Bar plot of the percentage of negative terms used in participants' officer descriptions by condition. Error bars show standard error around the group mean.

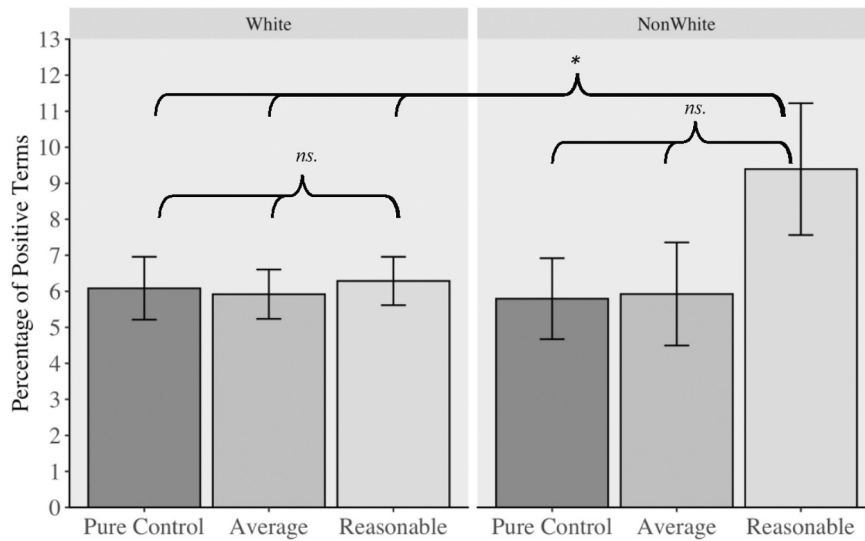


Fig. 3. Bar plot of the percentage of positive terms used in participants' officer descriptions by condition and participant race. Error bars show standard error around the group mean.

nonsignificant interaction between condition and race  $F(2, 962) = 1.28, p = .28, \eta^2_p = 0.003$ . Simple effects analysis revealed that non-white participants in the objectively reasonable officer condition described the officer equally as negatively as non-white participants in the average condition,  $t(962) = 2.36, p = .05, d = 0.15$ , and the pure control condition,  $t(962) = 2.30, p = .06, d = 0.15$ . White participants in the objectively reasonable officer condition described the officer equivalently as negative as white participants in the control condition,  $t(962) = 2.15, p = .08, d = 0.14$ , and the average condition,  $t(962) = 0.72, p = .75, d = 0.05$  (see Fig. 4).

**Person-Perception Trait Ratings Analysis.** To assess the participants' ratings of the officer along the dimensions of competence and warmth, we analyzed the two dimensions separately, consistent with previous research on these variables. First, we conducted an ANOVA on the competence ratings as a function of officer condition and we observed a significant main effect of condition,  $F(2, 965) = 60.97, p < .001, \eta^2_p = 0.112$ . Participants in the objectively reasonable officer condition rated the officer as significantly more competent than participants in the pure control condition,  $t(965) = -9.79, p < .001, d = -0.63$ , and average

condition,  $t(965) = -9.35, p < .001, d = -0.60$  (see Fig. 5). Similarly for warmth we observed a significant main effect of condition,  $F(2, 965) = 100.40, p < .001, \eta^2_p = 0.172$  such that participants in the objectively reasonable officer condition rated the officer as significantly warmer than participants in the pure control condition,  $t(965) = -12.79, p < .001, d = -0.63$  and average condition,  $t(965) = -11.71, p < .001, d = -0.75$  (see Fig. 6). Further, these effects were not moderated by race, such that the same overall pattern was observed within each racial group.

5.3. Discussion

In Study 1, we observed that the application of the objectively reasonable descriptor shifts Americans' judgments to be more favorable toward officers as suggested by the treatment effects (i.e., the objectively reasonable officer being judged more favorably than the average or pure control officer). Further, we observed suggestive evidence that these effects might differ by race for the percentage of positive terms the participants used to describe the officer. The communities that generally

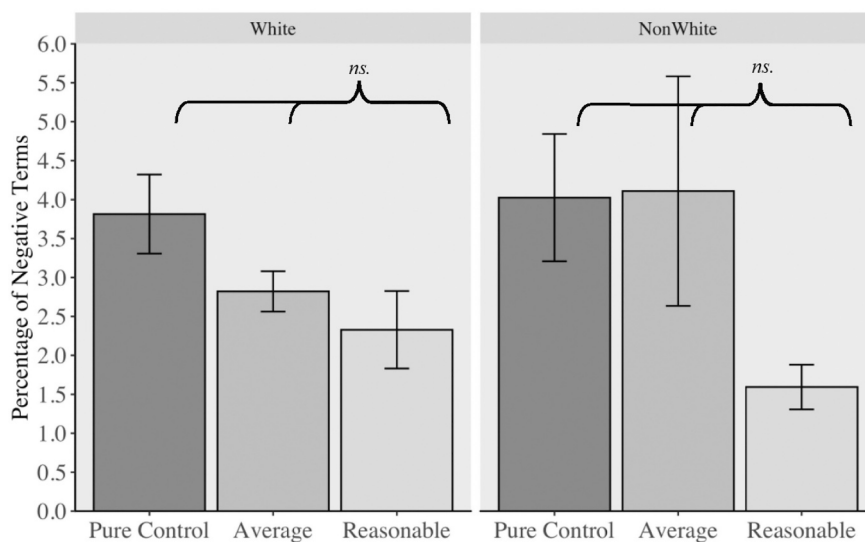


Fig. 4. Bar plot of the percentage of negative terms used in participants' officer descriptions by condition and participant race. Error bars show standard error around the group mean.

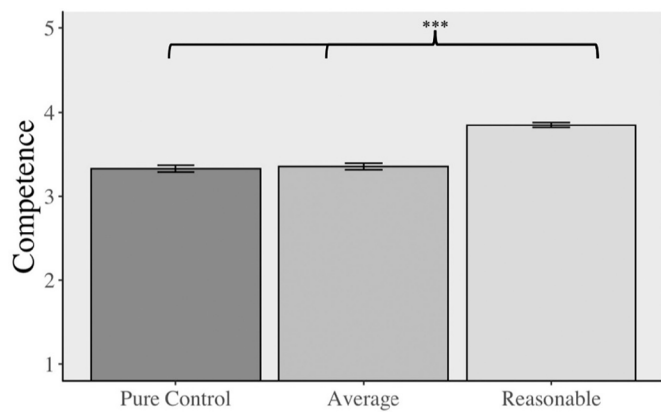


Fig. 5. Bar plot of the participants' ratings of officer competence by condition. Error bars show standard error around the group mean.

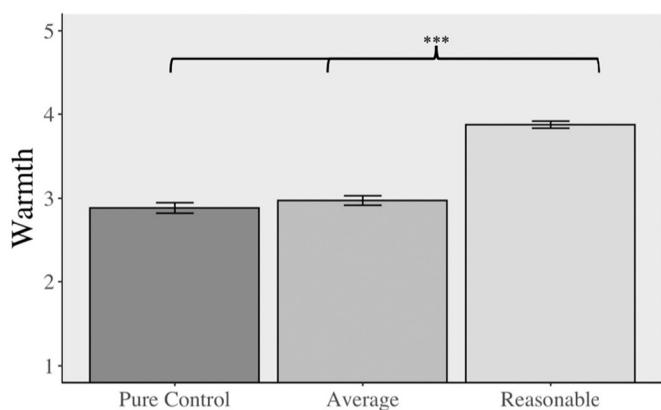


Fig. 6. Bar plot of the participants' ratings of officer warmth by condition. Error bars show standard error around the group mean.

have more tepid views of American police, seem to be particularly sensitive to the application of the objectively reasonable descriptor. We reasoned that this effect could be due to these communities do not commonly think of police in this light and thus show greater positive conceptions of officers when they are framed in this legal terminology.

To assess the replicability and generalizability of these findings, we conducted a high-powered, preregistered replication with comparable samples of Black and white Americans. In Study 2 we had three main goals. We aimed to directly examine: (1) whether Black and white Americans' priors regarding police officers differ at baseline, (2) if all participants' judgments of the officer shift to be more favorable toward the officer when language from the objectively reasonable standard is used, and (3) if results were moderated by race such that Black Americans show a significantly larger shift in their judgments of the officer than white Americans when using language from the objectively reasonable standard (interactive effect).

## 6. Study 2

### 6.1. Method

**Open-science practices.** We preregistered the study's experimental design and hypotheses on the Open Science Framework (<https://osf.io/g2d54/>). The data for the replication study and the data-analysis code (in R) can also be found on the study's OSF page (<https://osf.io/g2d54/>).

**Participants.** We recruited 997 online participants (543 women, 448 men, 3 transgender men, 4 non-binary individuals, 2 individuals who chose not to disclose; mean age = 39.11 years, standard deviation =

13.54) using the Cloud Research Platform (Litman et al., 2017). Of those, 917 participants (512 women, 396 men, 3 transgender men, 3 non-binary individuals, 1 individual who chose not to disclose; mean age = 39.39 years, standard deviation = 13.61) consented to include their data, agreed to focus and complete the task to the best of their ability, indicated that they were eligible for jury duty in the United States of America, and were thus included in the analyses. We used a quota sampling approach to recruit equal-sized samples of Black and white Americans, and of our 917 participants, 454 participants self-identified as Black and 463 participants self-identified as white. Further about 63% of these participants identified as Democrat, 23% identified as Republican, 10% identified as Independent. A sensitivity power analysis using G\*Power (Version 3.1.9.6; Faul et al., 2009) suggested that this sample size provided 90% power to detect a small-sized effect ( $f = 0.11$ ).

The materials and procedure used in Study 2 were identical to Study 1. We only changed our number of conditions, such that each participant was randomly assigned to one of two conditions: the average officer condition, or the objectively reasonable officer condition. We dropped the pure control condition in study two since it did not differ from the average officer condition in study one.

### 6.2. Results

**Linguistic Analysis of Open-Ended Responses.** As in Study 1, we utilized LIWC2015's linguistic software (Pennebaker et al., 2015) to assess the percentage of positive and negative terms in the participants' open-ended responses. We conducted an ANOVA on the percentage of positive terms in the participants' descriptions of the officer as a function of officer condition and we observed a significant main effect of condition,  $F(1, 915) = 7.65, p = .006, \eta^2_p = 0.010$ , such that participants in the objectively reasonable officer condition described the officer significantly more positively than participants in the average condition (see Fig. 7). For the percentage of negative terms in our participants' open-ended responses, we observed a significant main effect of condition,  $F(1, 915) = 5.96, p = .015, \eta^2_p = 0.010$ , such that participants in the objectively reasonable officer condition described the officer significantly less negatively than participants in the average condition (see Fig. 8).

As in Study 1, we then assessed if these results are moderated by race. We conducted an ANOVA on the percentage of positive terms in the participants' descriptions of the officer as a function of officer condition and participant race and we observed a significant effect of condition,  $F(1, 913) = 7.67, p = .006, \eta^2_p = 0.013$ , and a nonsignificant effect of participant race  $F(1, 913) = 0.63, p = .43, \eta^2_p = 0.001$ . We also observed a significant interaction between condition and race,  $F(1, 913) = 4.43, p = .04, \eta^2_p = 0.005$ , such that there was a significant difference in the

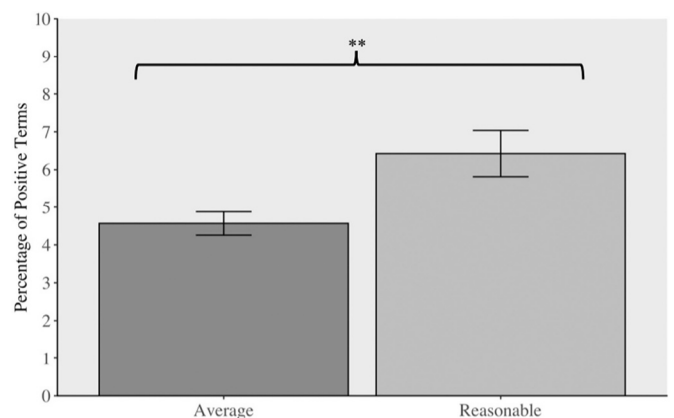
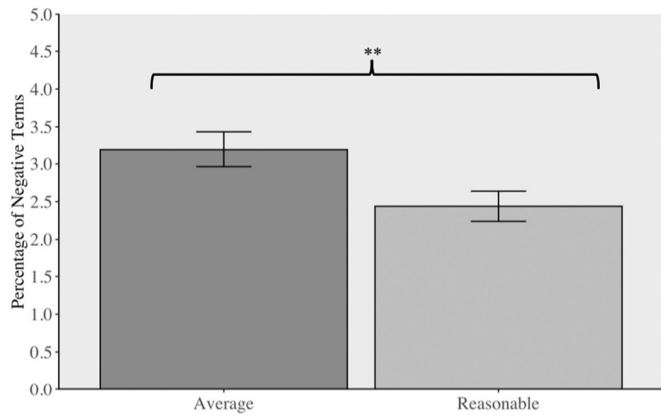


Fig. 7. Bar plot of the percentage of positive terms used in participants' officer descriptions by condition. Error bars show standard error around the group mean.



**Fig. 8.** Bar plot of the percentage of negative terms used in participants' officer descriptions by condition. Error bars show standard error around the group mean.

percentage of positive terms used by Black participants between the conditions but not for white participants. When we looked at the simple effects, we observed that Black participants in the objectively reasonable officer condition described the officer significantly more positively than white participants in the objectively reasonable condition,  $t(913) = 2.07, p = .04, d = 0.14$ , in line with the same pattern of results we observed for non-white participants in Study 1 (see Fig. 9).

For the percentage of negative terms, we observed a significant main effect of condition,  $F(1, 913) = 5.99, p = .015, \eta^2_p = 0.007$ , a significant effect of participant race,  $F(1, 913) = 5.07, p = .025, \eta^2_p = 0.006$ , and a nonsignificant interaction between condition and race,  $F(1, 913) = 1.16, p = .28, \eta^2_p = 0.001$ . Simple effects analysis revealed that Black participants in the objectively reasonable officer condition described the officer as negatively as white participants in the objectively reasonable condition,  $t(913) = 0.79, p = .43, d = 0.05$ . However, Black participants in the average officer condition described the officer significantly more negatively than white participants in the average condition,  $t(913) = 2.37, p = .018, d = 0.16$ . Lastly, we also observed a significant difference in the percentage of negative terms used by Black participants between the conditions,  $t(913) = 2.47, p = .014, d = 0.16$ , but not for white participants,  $t(913) = 0.97, p = .33, d = 0.02$  (see Fig. 10).

*Person-Perception Trait Ratings Analysis.* To assess the participants' ratings of the officer along the dimensions of competence and warmth,

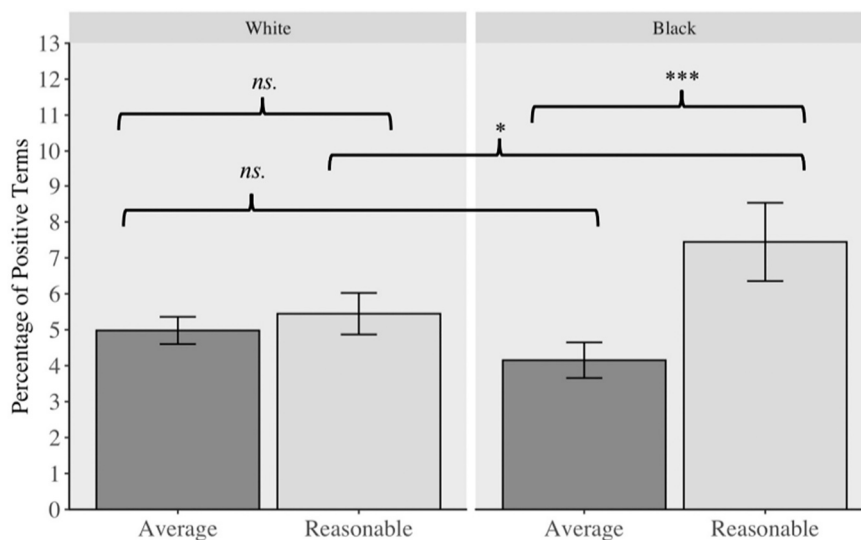
we analyzed the two dimensions separately, as in Study 1. We conducted an ANOVA on the competence ratings as a function of officer condition and we replicated the significant main effect of condition that we observed in Study 1,  $F(1, 915) = 368.30, p < .001, \eta^2_p = 0.287$ , such that participants in the objectively reasonable officer condition described the officer significantly more competent than participants in the average condition (see Fig. 11). For warmth we also replicated the previous pattern and observed a significant main effect of condition,  $F(1, 915) = 387.80, p < .001, \eta^2_p = 0.298$ , such that participants in the objectively reasonable officer condition rated the officer as significantly warmer than participants in the average condition (see Fig. 12).

Unlike Study 1, here we do see that the observed effects were moderated by race. We conducted an ANOVA on the competence ratings as a function of officer condition and participant race and we observed a significant effect of condition,  $F(1, 913) = 7.67, p = .006, \eta^2_p = 0.124$ , such that participants in the objectively reasonable officer condition rated the officer as significantly more competent than participants in the average condition across participant race,  $t(913) = -19.41, p < .001, d = -1.28$ . We also observed a significant effect of participant race,  $F(1, 913) = 9.96, p = .002, \eta^2_p = 0.023$ , such that white participants rated the officers as significantly more competent than Black participants did across conditions,  $t(913) = 3.03, p = .003, d = 0.20$ . Further, we observed a significant interaction between condition and race,  $F(1, 913) = 11.90, p < .001, \eta^2_p = 0.013$ , such that Black participants in the average officer condition rated the officer significantly less competent than white participants in the average officer condition (see Fig. 13).

Lastly, we observed a very similar pattern with warmth. We conducted an ANOVA on the warmth ratings as a function of officer condition and participant race and we observed a significant effect of condition,  $F(1, 913) = 390.61, p < .001, \eta^2_p = 0.143$ , such that participants in the objectively reasonable officer condition rated the officer as significantly warmer than participants in the average condition across race,  $t(913) = -19.77, p < .001, d = -1.31$ . We observed a nonsignificant effect of participant race,  $F(1, 913) = 2.85, p = .092, \eta^2_p = 0.009$ , but, we did observe a significant interaction between condition and race,  $F(1, 913) = 5.77, p = .017, \eta^2_p = 0.006$ , such that Black participants in the average officer condition rated the officer significantly less warm than white participants in the average officer condition (see Fig. 14).

6.3. Discussion

In Study 2 we observed that Black and white Americans start with different priors about officers. Given the differing personal and vicarious



**Fig. 9.** Bar plot of the percentage of positive terms used in participants' officer descriptions by condition and participant race. Error bars show standard error around the group mean.

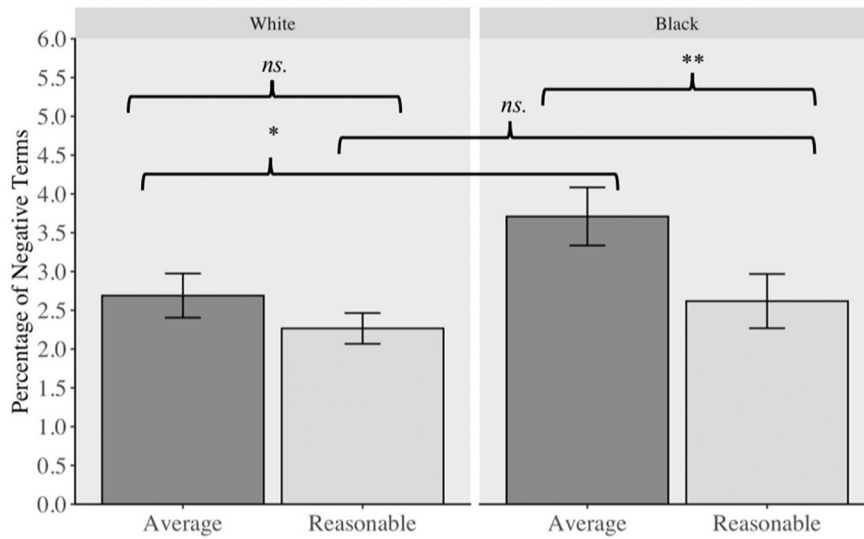


Fig. 10. Bar plot of the percentage of negative terms used in participants' officer descriptions by condition and participant race. Error bars show standard error around the group mean.

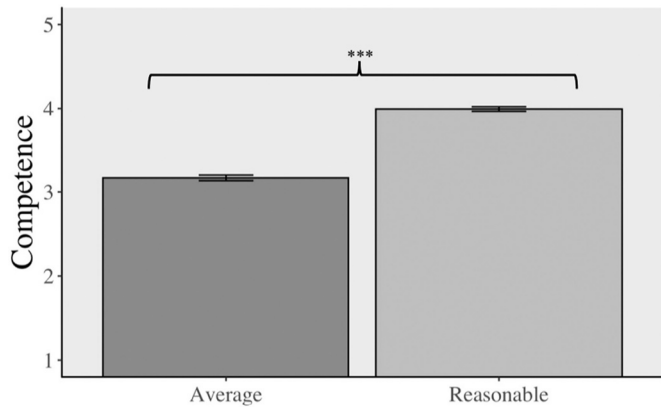


Fig. 11. Bar plot of the participants' ratings of officer competence by condition. Error bars show standard error around the group mean.

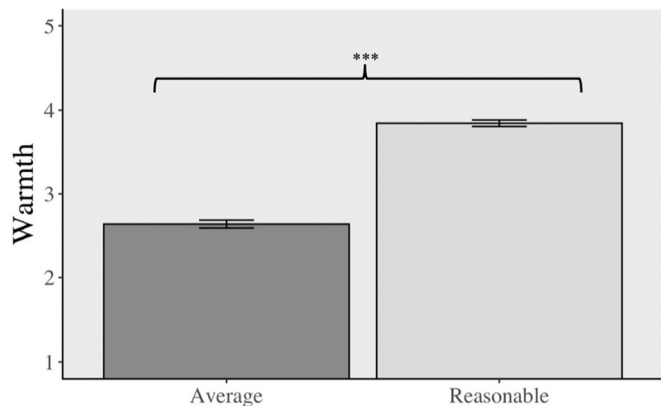


Fig. 12. Bar plot of the participants' ratings of officer warmth by condition. Error bars show standard error around the group mean.

experiences these two groups generally experience with police due to the stratified nature of American society, this work offers empirical evidence that these group members' prior beliefs about officers also meaningfully differ. Further, when language from the legal system's reasonableness standard is applied, that descriptor shifts both Black and white Americans' ratings of the officer to be more favorable. Moreover, this shift is more pronounced for Black participants than white participants. This suggests that although the two groups may begin with different positions, applying the legal language from the objectively reasonable standard might change impressions in ways that align judgments across racial groups.

Another way of thinking about this pattern of findings is that Black Americans are demonstrating greater responsiveness to the new information they are being given (the objectively reasonable descriptor) and demonstrate greater updating of their conceptions of officers to align with the benchmark that the objectively reasonable standard has set. However, for white Americans, we see little to no updating, particularly in their free-response descriptions of the officers, as they stick with their priors regardless of the descriptions used. The average and reasonable descriptors were not initially interpreted differently by white participants. It is possible that for white Americans, the objectively reasonable label itself did not lead them to spontaneously update their priors, but upon further reflection when asked to rate the officer, an idealized conception of police officers then came to mind.

The studies presented thus far are consistent with previous findings that a "great divide" exists between Black and white Americans' perceptions of police officers. However, this divide does not occur in a vacuum, it is situated within a stratified social system that helps inform our impressions of law enforcement. To assess the impact of that system of stratification on participants' judgments in our experiments we linked the experimental data with publicly available data about the contexts our participants were embedded in. Because so much data about American social contexts are organized by zip code, in our lab we always collect zip code as one of our standard demographic variables. In both Study 1 and 2, we collected participants' zip codes which allowed us to match each zip code to their corresponding metropolitan statistical area. This allowed us to conduct supplemental analyses to assess whether the location participants were situated within meaningfully influenced their



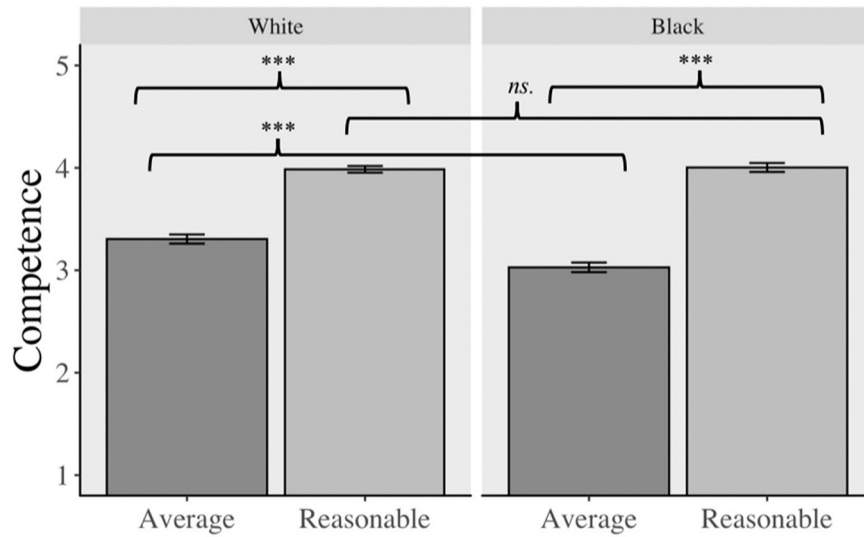


Fig. 13. Bar plot of the participants' ratings of officer competence by condition and participant race. Error bars show standard error around the group mean.

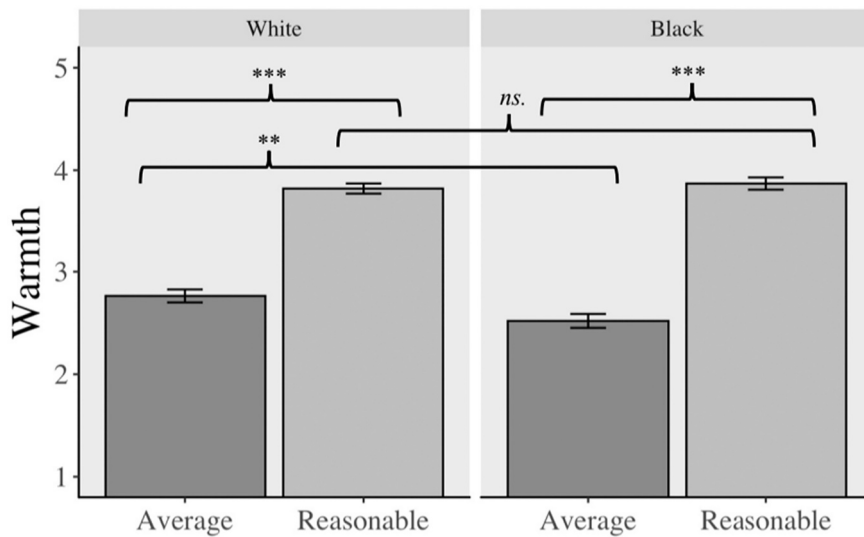


Fig. 14. Bar plot of the participants' ratings of officer warmth by condition and participant race. Error bars show standard error around the group mean.

Table 1

Table of the compiled data by participants' race.

	Black Americans	White Americans	Totals
Study 1	49 participants	241 participants	290
Study 2	237 participants	238 participants	475

perceptions of police officers. These analyses allow us to look beyond the experimental effects to see whether the broader 'power of the situation' affects Black and white Americans' judgments of police officers.

**7. Judgments in context: a pooled analysis examining effects of social stratification**

**7.1. Method**

*Open-science practices.* This analysis was exploratory in nature and as such, we did not preregister the study's design or hypotheses. However, the data for this study and the data-analysis code (in R) can be found on the study's OSF page (<https://osf.io/g2d54/>).

*Participants.* We compiled data from the two independent samples (Study 1 and Study 2) for this analysis as the studies' procedures were identical, but only the demographics differed. In order to compare participants from metropolitan and non-metropolitan areas, we included Black and white participants that were in the average officer condition, as that condition appeared in both studies. We focused solely on the average officer condition in order to examine how perceptions of the participants vary in the absence of the language from the objectively reasonable standard.

The pooled dataset provided us with 765 participants (394 women, 369 men, 1 transgender man, 1 non-binary individual; mean age = 39.08 years, standard deviation = 12.29; see Table 1 for Race breakdown). Of those 765 participants, 754 of them provided their zip code data which we used to match them to metropolitan statistical areas. These participants were labeled as either residing in metropolitan or non-metropolitan areas (394 white participants were in metropolitan areas, 253 Black participants were in metropolitan areas, 81 white participants were in non-metropolitan areas, 26 Black participants were in non-metropolitan areas).

## 7.2. Results

**Linguistic Analysis of Open-Ended Responses.** As in the previous studies, we utilized LIWC2015's linguistic software (Pennebaker et al., 2015) to assess the percentage of positive and negative terms in the participants' open-ended responses. We conducted an ANOVA on the percentage of positive terms in the participants' descriptions of the officer as a function of metropolitan area and participant race and we observed a nonsignificant effect of area,  $F(1, 750) = 0.148, p = .70, \eta^2_p = 0.000$ , a nonsignificant effect of participant race  $F(1, 750) = 3.09, p = .08, \eta^2_p = 0.004$ , and a nonsignificant interaction between area and race  $F(1, 750) = 0.38, p = .54, \eta^2_p = 0.001$  (see Fig. 15).

For the percentage of negative terms, we observed a nonsignificant effect of area,  $F(1, 750) = 0.08, p = .77, \eta^2_p = 0.000$ . However, we did observe a significant effect of participant race,  $F(1, 750) = 5.24, p = .022, \eta^2_p = 0.007$ , such that Black participants described the officer more negatively than white participants did. Further, we observed a nonsignificant interaction between area and race,  $F(1, 750) = 0.26, p = .61, \eta^2_p = 0.000$ . Simple effects analysis revealed that Black participants in metropolitan areas described the officer as negatively as Black participants in non-metropolitan areas,  $t(750) = 0.46, p = .65, d = 0.03$ , and white participants in metropolitan areas also described the officer as negatively as white participants in non-metropolitan areas,  $t(750) = -0.23, p = .82, d = 0.02$ . However, Black participants in metropolitan areas described the officer significantly more negatively than white participants in metropolitan areas,  $t(750) = 2.33, p = .02, d = 0.17$  (see Fig. 16).

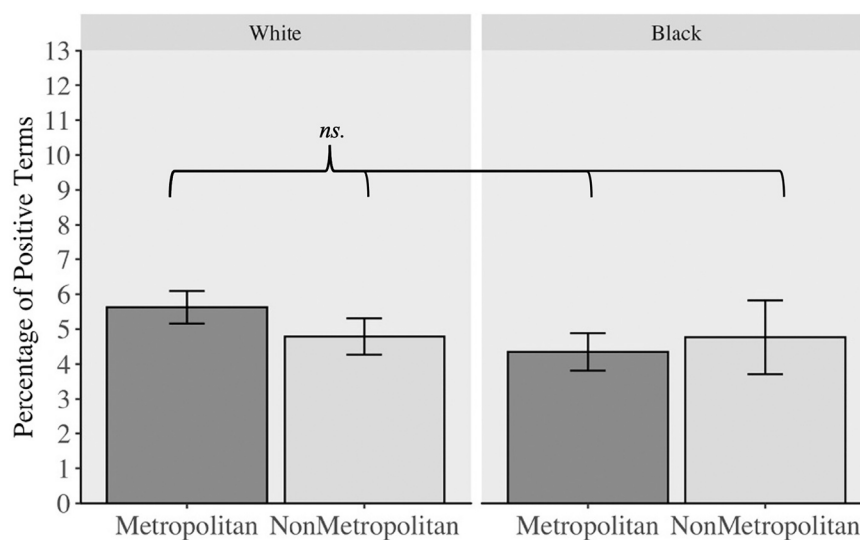
**Person-Perception Trait Ratings Analysis.** To assess the participants' ratings of the officer along the dimensions of competence and warmth, we analyzed the two dimensions separately again. We conducted an ANOVA on the competence ratings as a function of metropolitan area and participant race and we observed a significant main effect of area,  $F(1, 750) = 13.41, p < .001, \eta^2_p = 0.004$ , such that participants in non-metropolitan areas rated the officer as significantly more competent than participants in metropolitan areas (see Fig. 17). Further, we observed a significant main effect of participant race,  $F(1, 750) = 21.38, p < .001, \eta^2_p = 0.026$ , such that white participants rated the officer as significantly more competent than did Black participants. However, we observed a nonsignificant interaction between area and race  $F(1, 750) = 0.06, p = .81, \eta^2_p = 0.000$ . Simple effects analysis revealed that Black participants in metropolitan areas described the officer equally as competent as Black participants non-metropolitan areas,  $t(750) = 1.81, p = .07, d = 0.13$ , and significantly less competent than did white

participants in metropolitan areas,  $t(750) = -4.44, p < .001, d = -0.32$ . Lastly, we also observed a significant difference in white participants competence ratings by area,  $t(750) = -2.58, p = .010, d = -0.19$ , such that white participants in metropolitan areas rated the officer as significantly less competent than did white participants in non-metropolitan areas (see Fig. 17).

For warmth we also observed a significant main effect of area,  $F(1, 750) = 10.83, p = .001, \eta^2_p = 0.005$ , such that participants in non-metropolitan areas rated the officer as significantly warmer than participants in metropolitan areas. Further, we observed a significant main effect of participant race as well,  $F(1, 750) = 8.35, p = .004, \eta^2_p = 0.011$ , such that white participants rated the officer as significantly warmer than did Black participants. As with competence, for warmth we observed a nonsignificant interaction between area and race,  $F(1, 750) = 0.32, p = .57, \eta^2_p = 0.000$ . Simple effects analysis revealed that Black participants in metropolitan and non-metropolitan areas as equally warm,  $t(750) = -1.99, p = .05, d = -0.15$ , and significantly less warm than did white participants in metropolitan areas,  $t(750) = -2.91, p = .004, d = -0.21$ . Lastly, we also observed a significant difference in white participants warmth ratings by area,  $t(750) = -2.26, p = .024, d = -0.17$ , such that white participants in metropolitan areas rated the officer as significantly less competent than did white participants in nonmetropolitan areas (see Fig. 18).

## 7.3. Discussion

These supplemental analyses expanded upon the findings from Studies 1 and 2 by showing that the environments that Americans are situated within further differentiate their priors about police officers. As metropolitan and non-metropolitan areas are policed differently, the experiences that people have in these spaces vary meaningfully in ways that inform their priors. Whereas the previous studies showed that Black and white Americans' baseline views of officers' warmth and competence diverge, the current analyses demonstrates that those differences are more nuanced; they vary as functions of the space that one inhabits such that people from metropolitan areas have less favorable views of officers than those in non-metropolitan areas. Black Americans in metropolitan areas specifically viewed officers less favorably than did the three other groups. These findings support the notion that structural, cultural, and identity factors all combine to shape people's prior perceptions of how the world works and must all be examined in order to give our differing perceptions context.



**Fig. 15.** Bar plot of the percentage of positive terms used in participants' officer descriptions by metropolitan area and participant race. Error bars show standard error around the group mean.

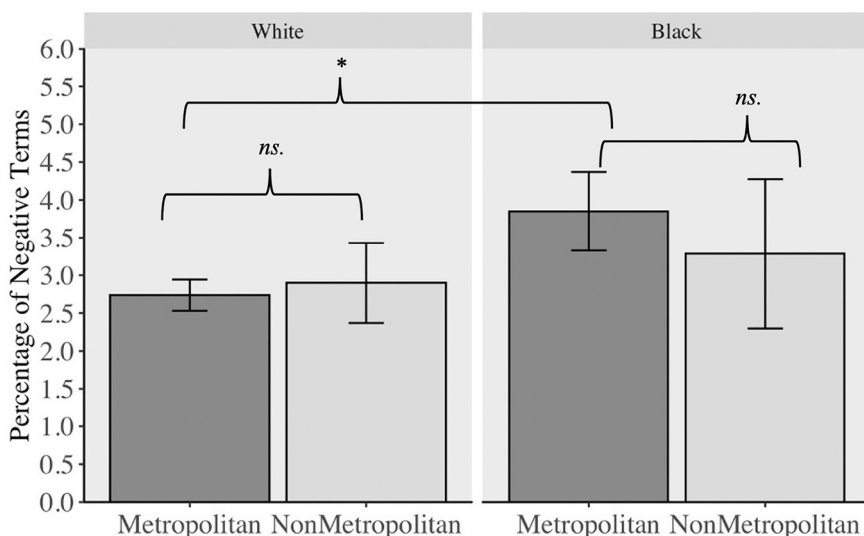


Fig. 16. Bar plot of the percentage of negative terms used in participants' officer descriptions by metropolitan area and participant race. Error bars show standard error around the group mean.

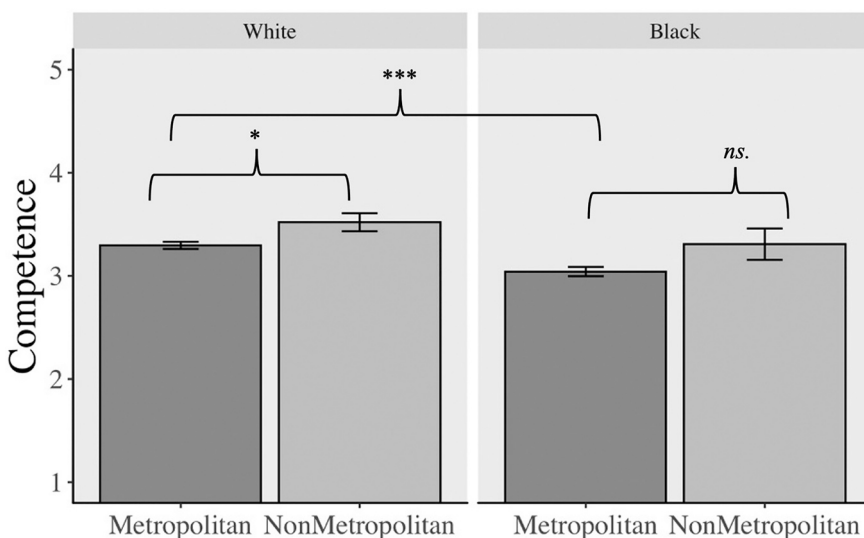


Fig. 17. Bar plot of the participants' ratings of officer competence by metropolitan area and participant race. Error bars show standard error around the group mean.

8. General discussion

Social stratification in the U.S. shapes how Americans come to perceive the world and our judgments of the others around us (Lewis Jr., 2021; Oyserman & Lewis, 2017). The two studies and pooled analysis presented in this article illustrate how this pattern affects our conceptions of police officers. Across these studies we see that Americans from different racial backgrounds hold different prior beliefs of officers, with white Americans holding more favorable views of police officers than Black Americans, and that these differences are further nuanced when you consider the environments that people are embedded within. These findings are in line with previous work that shows that white Americans have more positive interactions with police officers than Black Americans (Cheurprakobkit, 2000) and thus more positive views of their conduct (Weitzer & Tuch, 2004), but it critically contextualizes these results to highlight the role that social stratification plays in shaping these beliefs.

Further, this research shows that it is not just Americans' prior experiences with and beliefs about police officers that shape their

judgments; the language that social institutions—like our courts—use to describe officers can also shift people's mental representation of those officers. What we found is that when officers are described as “objectively reasonable” –language that is used in jury instructions– that led participants to write about them more positively, less negatively, and to judge them as warmer and more competent. Further, participants from minoritized communities, appear to be particularly sensitive to the objectively reasonable standard, such that they show greater deviation from their original priors regarding officers as compared to white participants. This distinction is important for considering which jurors' decisions may be most impacted by the use of this legal language.

This work has important implications for psychological theory as it examines how the divides in our social lives can impact how we view the world. The present research offers a concrete example by which our stratified lives, through racial and geo-spatial stratification, define how we view others in the world around us. Although the current studies focused on this process in the domain of policing, the findings are consistent with a growing body of research documenting that geography, race, ethnicity, and other dimensions of stratification color the

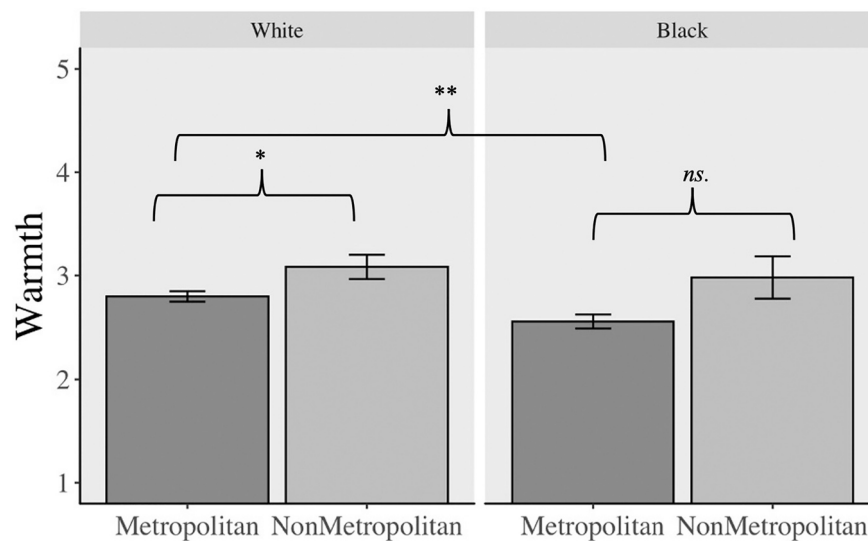


Fig. 18. Bar plot of the participants' ratings of officer warmth by metropolitan area and participant race. Error bars show standard error around the group mean.

ways that Americans make meaning of the world around them (Lewis Jr. et al., 2021; Song et al., 2020).

It is important to acknowledge the key limitations of these studies before extrapolating what these findings may mean for legal practice. As our work focuses on understanding Americans' prior beliefs regarding police officers and the psychological consequences of legal language on Americans' conceptions of police officers, these results do not speak to the application of the objectively reasonable standard in a courtroom decision-making context. The act of calling a mental representation of an officer to mind is categorically different from using that representation to judge an officer's behavior. Further (field) research still needs to be conducted to estimate the possible effects and boundaries of the objectively reasonable standard in jury rooms (see Ledgerwood, Pickett, Navarro, Remedios, & Lewis Jr., 2022).

Second, another limitation for interpreting this work is that we only recruited jury-eligible Americans to take part in this research. Although this decision was important to cleanly test our core research question, it does prompt caution when before applying these results to the entire United States population. In the U.S., people must meet five criteria to be considered eligible to participate in jury duty: be a United States citizen; be at least 18 years of age; be proficient in English; cannot be subject to felony charges punishable by imprisonment for more than one year and have never been convicted of a felony. Substantial portions of the American population do not meet these criteria and thus their perspectives are missing from this work.

Lastly, we acknowledge that the size of the sample in our pooled analysis conditions varied, with there being far fewer participants that self-identified as Black and were from non-metropolitan areas than there were participants that identified as white and were from metropolitan areas. These unequally sized comparisons are not ideal and future iterations of this research should employ targeted sampling strategies to ensure that comparable numbers of participants are obtained for each condition.

## 9. Conclusion

Our results highlight potential gaps between what the law intends in its use of the objective reasonableness standard by demonstrating that what comes to mind for laypeople when police are described as objectively reasonable is not a neutral exemplar, but rather a positive ideal. Future empirical research that examines how the invocation of the reasonable standard in jury instructions impacts resultant decisions will be necessary to determine the magnitude of the effect of this standard on

decision-making. As stratification persists in the United States (and elsewhere), it will be imperative for us to understand the psychological consequences of these structural forces.

## Author note

M.S. and N.L. conceptualized and designed the studies. M.S. collected and analyzed the data under the supervision of N.L. M.S. wrote the first draft of the manuscript; N.L. provided critical revisions. Correspondence concerning this manuscript should be addressed to Mikaela Spruill, [ms3525@cornell.edu](mailto:ms3525@cornell.edu) or Neil Lewis, Jr., [nlewisjr@cornell.edu](mailto:nlewisjr@cornell.edu).

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jesp.2022.104306>.

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