Centering Race in Procedural Justice Theory: Structural Racism and the Under- and Over-Policing of Black Communities

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Abstract

Objectives: We assess the factors that legitimated the police in the United States at an important moment of history, just after the police killing of George Floyd in 2020. We present one way of incorporating perceptions of systemic racism into a procedural justice theory account of police legitimacy.

Hypotheses: (1) Perceptions of police procedural justice, distributive justice and bounded authority are important to the legitimation of the police. (2) Perceptions of the under- and over-policing of Black communities also matter to the delegitimation of the institution, especially for people who identify with the Black Lives Matter movement.

Method: A cross-sectional quota sample survey of 1,500 US residents was conducted in June 2020. Data were analysed using confirmatory factor analysis, structural equation modelling, and latent moderated structural equation modelling.

Results: People who viewed the police as legitimate also tended to believe that police generally treat people with respect and dignity, make decisions in unbiased ways, fairly allocate their finite resources across groups in society, and respect the limits of their rightful authority. Moreover, people who believed that Black communities were under-policed and over-policed also tended to question the legitimacy of the police , especially if they identified with the Black Lives Matter movement. These results held among Black and White study participants alike.

Conclusions: At least at that moment, systemic racism in policing may have delegitimated the institution in a way that transcends the factors that procedural justice theory focuses on, such as procedural justice. This was especially so for those who identified with a social movement that was extremely high-profile in 2020.

Key words: Procedural justice; structural racism; police; legitimacy; Black Lives Matter.

Public Significance Statement

Just after the murder of George Floyd, at the height of the Black Lives Matter movement, racialized policing seems to have delegitimated the police among White and Black people alike. Calls for reform often revolve around making policing more respectful and less biased in terms of one-to-one encounters with the public, especially in underserved communities of color. Our findings suggest that racially directed under- and over-policing should also be at the heart of debates around how to transform policing policy and practice and improve the popular legitimacy of the police.

Introduction

Having long played a role in telegraphing the second-class citizenship of communities of color (Weaver & Lerman, 2010), police agencies in the United States (US) are receiving fresh scrutiny amid a wave of deadly police violence against Black people. The intensity and unprecedented scale of protests against aggressive and unfair policing since the killing of George Floyd (Buchanan et al., 2020) have revived questions about excesses of the police, their popular legitimacy, and need to reform (Evans et al., 2020; Horton, 2020). Now more than ever we need to understand how racialized policing—including both the aggressive policing of Black communities and the lack of police protection in such communities—damages the legitimacy of the institution in the eyes of the public.

The US President's Task Force on 21st Century Policing was convened just after civil unrest in Ferguson, Missouri and elsewhere over the police killing of Michael Brown. Declaring that the first pillar of good policing was trust and legitimacy, the Task Force's report (2015, p. 1) argued that:

> "Building trust and nurturing legitimacy on both sides of the police/citizen divide is the foundational principle underlying the nature of relations between law enforcement agencies and the communities they serve… Law enforcement culture should embrace a guardian—rather than a warrior—mindset to build trust and legitimacy both within agencies and with the public."

The report referenced procedural justice theory (PJT, see: Sunshine & Tyler, 2003; Tyler, 2006a; Tyler et al., 2015a), which holds that respectful, accountable and unbiased policing practices are key to winning trust and maintaining legitimacy. At the heart of PJT is the idea that fair and unbiased ways policing creates legitimacy, which then reduces the need for intrusive, aggressive, and minimally effective policing (Tyler, 2003, 2011). Driven by PJT, scholars have presented an impressive amount of evidence that respectful, accountable, undiscriminating and unbiased police behavior predicts legitimacy, cooperation and compliance (Bolger & Walters, 2019; Jackson, 2018; Walters & Bolger, 2019).

Yet the theory has not empirically engaged with people's perceptions of systemic racism in the US in a concertedly direct way. A distinguishing feature of racialized policing is the under-protection and over-regulation of Black communities (Bell, 2017; Prowse et al., 2020). Work on racialized policing suggests that people's perceptions of the under- and over-policing of Black communities could be important to the legitimation (or delegitimation) of the police, in addition to issues of inclusion and fair process (procedural justice), equality across social groups (distributive justice), and respect for people's agency (bounded authority). In addition to testing this idea, we also assess whether perceptions of the under- and over-policing of Black communities are especially important to legitimacy perceptions among people who identify with the Black Lives Matter (BLM) movement.

We draw on data from a cross-sectional quota sample survey of 1,500 US residents conducted just after the police killing of George Floyd in 2020—a time of mass unrest in response to racially targeted police violence and murders. We operationalize perceptions of systemic racism in everyday policing through the lens of perceptions of under- and over-policing of Black communities. First, we test whether under- and over-policing perceptions predict variation in legitimacy, controlling for procedural justice, distributive justice and bounded authority. Second, we examine the extent to which procedural justice, distributive justice and bounded authority predict under- and over-policing perceptions. Third, we test whether under- and over-policing perceptions are more strongly associated with lower perceptions of legitimacy among those who identify with BLM. To measure identification with BLM, we ask research participants whether they feel solidarity for the cause and a sense of similarity with people in the movement. We assess whether people who identify with BLM are more responsive to the potentially delegitimatising signals of neglect and stigmatization that under- and over-policing sends to Black communities, compared to people who do not identify with BLM. We also examine whether this is the case for both Black *and* White research participants.

Overall, we present one way of centering race—specifically perceptions of racial bias in policing—in PJT. In the following sections, we consider racialized policing in the US through the lens of over-policing and under-policing. After reviewing PJT, we develop the hypotheses, summarize the study's method and results, and consider the core contribution in the concluding section. We finish with

the argument that our approach to extending a PJT account of US police legitimacy may make the framework more relevant to scholars interested in race in policing, as well as policy makers and police practitioners seeking reform.

Over-policing Black communities: Structural racism and police contact in race-class subjugated communities

Most scholarship on racism and police conduct in poor communities of color focuses on its excesses. Studies have shown how marginalized communities are subject to excess contact and excess physical aggression from police, and that they bear a heavier share of each of the downstream consequences with which police contact is associated. This is in terms not only of psychological effects (Del Toro et al., 2019) but also justice system outcomes, from arrest through conviction, imprisonment, and post-release surveillance.

At the individual level, being Black is associated with an elevated likelihood of police-initiated contact, even after controlling for individual involvement in criminalized activity and conviction history (Baumgartner et al., 2017; Taniguchi et al., 2017; Unnever et al., 2017). Black youth who are not engaged in criminalized behavior are more likely to be stopped by police than White youth are (Harris et al., 2017). Such targeting seems to be driven in part by racist judgments on the part of police, e.g. police tend to overestimate the age of Black male youth by four years and to perceive Black boys as less innocent than White boys (Goff et al., 2014). Police activity at the neighborhood level also reflects a similar pattern, with residents of predominantly Black neighborhoods facing heightened risk of police-initiated contact, even after controlling for local crime rate (Beckett et al., 2006; Fagan et al., 2010; Kirk, 2008). Police judgments of a neighborhood's dangerousness may be distorted by racism, e.g. officers' perceptions of neighborhood-level crime risk factors appear to be related to the proportion of minority residents (Stein & Griffith, 2017).

Excessive police contact in targeted communities is associated with a range of negative outcomes. Men and boys of color in poor urban communities experience corrosive effects in domains as disparate as educational achievement (Legewie & Fagan, 2019) and mental health (Bennett, 2020; Hatzenbuehler et al., 2015). Widespread, racially targeted field interrogation and arrest also convey powerful relational messages (Meares, 2017; Meares & Justice, 2014; Weaver & Lerman, 2010). The demeaning procedures of arrest and detainment communicate a view of people and communities of color as socially marginal and worthy of suspicion (Ward et al., 2014). The physically invasive experience of everyday physical aggression signals to those targeted that the police (and the government they represent) regard them as dangerous and untrustworthy (Delgado, 2008; Gau & Brunson, 2015). Police "tend to view young adults as suspects in need of control rather than potential victims in need of protection" (Graham & Karn, 2013, p. 2).

The developmental timing of excess police contact—which is focused heavily on adolescents and young adults (Hagan et al., 2005)—may also exacerbate its role in perpetuating structural racism. As Weaver and Geller (2019, pp. 201, 212) argue, policing is "a childhood intervention" that "converts existing disadvantage into political marginalization". Scholars have long suggested that such contacts might have a profoundly marginalizing effect (Sherman, 1993; Sherman and Rogan 1995; Wilson & Boland, 1978). Indeed, youth who experience more police contact report greater legal cynicism (Hofer et al., 2020) are more likely to perceive the legal system as unjust (Hagan et al., 2005) and are more likely to agree with statements like, "The government cares very little about people like me" (Weaver & Geller, 2019).

"Distorted responsiveness" and the over-policing, under-policing paradox

While excesses of policing are evident in communities of color, research with such communities also highlights serious deficiencies of law enforcement. Qualitative research in many U.S. cities—including Oakland, Philadelphia, Cleveland, Chicago, Milwaukee, Baltimore, and Los Angeles—suggests that structural racism in policing is experienced by communities of color not simply as a matter of police excesses nor police deficits, but as a damaging complex of the two (Prowse et al., 2020; Rios, 2011; Rios et al., 2020). The well-documented over-regulation to which such communities are subject overlaps with an acute sense of police absence when it comes to protecting residents from harm. As one

participant in the Portals project told another participant, looking to police for help is "just like callin' a phone with nobody on the other end" (Prowse et al., 2020, p. 1436). An 18-year-old girl from Philadelphia interviewed by Carr et al. (2007, pp. 458-459) summarizes it this way: "I see cops so often in my neighbourhood, but when I see something bad going on, I look around and say, 'Where are the cops?'". Individuals arrested in Cleveland describe feeling neglected by law enforcement "precisely when they are most in need of police response" (Rios et al., 2020, p. 9).

Ethnographer Victor Rios describes this racialized complex of law enforcement over-attention and neglect as an over-policing, under-policing paradox. He showed how Black and Latino boys in California witnessed and were subjected to high-contact, zero-tolerance policing targeted at relatively trivial forms of behavior, alongside a negligent lack of police responsiveness to harm. The state was both deeply and invasively present in their lives for purposes of surveillance and punishment, yet also absent from the task of protecting their safety. Drawing on data from the Portals study, Prowse and colleagues dubbed this phenomenon "distorted responsiveness": law enforcement in poor communities of color is "everywhere when surveilling people's everyday activity and nowhere if called upon to respond to serious harm" (Prowse et al., 2020, p. 1423). Rather than understanding, acknowledging and addressing people's concerns (communicating reassurance), the police attack and punish (communicating threat) (Fratello et al., 2013; Stoudt et al., 2011).

Procedural justice theory and police legitimacy

How can people's perceptions of structural racism in policing incorporated into procedural justice theory (PJT). We build on the idea that structural racism is enacted towards and experienced by Black communities partly in terms of deficiency *and* excess—in the neglectful and absent lack of protection and responsiveness *as well as* stigmatizing and aggressive over-regulation. We argue that *perceptions* of the under- and over-policing of Black communities capture key elements of *perceptions* of racialized policing—and that this is the case for Black and White research participants alike. We assess the utility of adding these perceptions to PJT.

As a popular framework for understanding system-citizen authority relations, PJT (Tyler, 2006a, 2006b) has garnered substantial attention in policy debates over heavy-handed police tactics and abusive police-community relations. It stipulates—and empirical applications support the idea—that if legitimacy is achieved, laws can be upheld without the traditional reliance on force and threat (Tyler & Jackson, 2013). To believe that the institution is a legitimate holder of power is to accept its role as a regulator of behavior (Trinkner, 2019). When people see the institutions that enact and enforce the law as legitimate, they are more likely to abide by legal regulations and cooperate with police (Tyler, 2011). Conversely, when people view the police and law as illegitimate, they are less likely to comply and cooperate.

Tests of PJT also focus on the sources of legitimacy. If legitimacy is the belief that police have the right to power and authority to govern, legitimation refers to the ways in which people come to the judgment that the institution is legitimate (Jackson & Bradford, 2019; Trinkner, 2019). Central to PJT is the idea that people judge the legitimacy of the police most keenly on the extent to which officers demonstrate procedural justice in day-to-day interactions with citizens. Procedural justice means treating people with respect and dignity, making neutral and trustworthy decisions, and allowing civilians voice and agency in the process of law enforcement (Murphy et al., 2016; Tyler & Fagan, 2008).

Procedural justice is important for two reasons. On the one hand, procedural justice is a powerful societal norm about the appropriate use of power (Sunshine & Tyler, 2003; Jackson, 2018). On the other hand, fair interpersonal treatment and fair decision-making convey inclusion and status within the group that the police represent, while disrespectful treatment and biased and discriminatory decision-making signals exclusion and denigration (Tyler, 2003; 2006a). Procedural justice signals to people that they are part of the 'prototypical' group that police represent (Tyler, 1997) and that power is used on behalf of the group they belong to. Group membership then means that they are more likely to (a) believe that the institution has the moral right to power and (b) feel a moral obligation to comply with officers and accept their right to dictate appropriate behavior (Bradford & Jackson, 2022; Trinkner, 2019).

PJT's predictions regarding the legitimacy and legitimation of police have been well-supported in research with race-class subjugated communities (Hofer et al., 2020; Madon et al., 2017; Quinn et al., 2019). For example, Tyler et al. (2014) found that young Black men in the five Boroughs of New York City who said they had experienced procedurally unjust, demeaning, stigmatising and aggressive stop-and-frisk practices also tended to believe that the police lacked legitimacy. Of particular concern are police-civilian interactions that communicate distrust, disrespect, intrusion, and suspicion—a manner of treatment sometimes adopted by police when dealing with adolescents and young adults of color who are the target of a disproportionate proportion of street stops (Tyler et al., 2014, 2015b) and traffic stops (Baumgartner et al., 2017). Such a style of policing creates the sense that policing is being done *to* people, not *for* them, thereby reducing legitimacy, cooperation and compliance.

PJT suggests that such interactions not only shape the extent to which people are willing to cooperate with or support local police agencies, they also inform how they conceptualize the state and their place within it (see also Lerman & Weaver 2014). Police behavior carries important identity relevant information: police officers, through the way they treat those they encounter, communicate messages concerning inclusion, status and value within the social category or categories the police are thought to represent—categories that are usually conceptualised and operationalized in terms of national, community or citizenship identities (Bradford, 2014; Kyprianides et al., 2021). Fairness promotes a sense of inclusion and value, while unfairness communicates denigration and exclusion (Blader & Tyler, 2009; Tyler & Blader, 2003).

Building on this point, Meares & Justice (2014) argue that interactions with police represent a "hidden curriculum" in civics, teaching individuals about their government while simultaneously communicating to some the subordinated position that government accords them (Meares, 2017, pp. 1525–1526; cf. Wacquant, 2009). When this curriculum is communicated in interactions with the legal system that are "inconsistent with procedural justice", this sends the message that they "…are a class of problem people to be excluded, monitored, and surveilled, treated harshly and punished arbitrarily" (Meares & Justice, 2014: p. 167).

Extending a PJT account of police legitimacy to include perceptions of racialized policing

While PJT is relevant to debates about systemic racism in policing, tests of the theory rarely address race in a direct way. In particular, tests of PJT typically ask *color-blind* questions about police activity. For instance, respondents are asked whether police in their neighborhood or city generally treat people with respect and dignity; they are not asked whether people treat Black people with respect and dignity. If, in these studies, Black communities say they are policed in procedurally unjust ways (e.g. Tyler et al., 2014), researchers can infer that this indicates experience of racialized policing. But without directly asking about racial bias, we as a community of scholars cannot test whether different racial groups (a) think racism is a problem in everyday policing policy and practice and (b) question the legitimacy of the police as a result.

By way of contribution, we conducted a national quota convenience sample survey of US residents (designed to represent the nation according to age, gender and race) just after the police killing of George Floyd in 2020. We asked research participants whether they thought that the police under- and over-police Black communities. We reason that under- and over-policing may *exemplify* systemic racism in people's minds—it signals racialized neglect and lack of care, as well as domination and the arbitrary use of power over members of a group that has suffered from centuries of structural racism.

We test four sets of hypotheses. The first set relates to the roles that procedural justice, distributive justice and bounded authority play in the legitimation of the police. The first hypothesis is that procedural justice is positively associated with legitimacy perceptions (Hypothesis 1a, see Bradford et al., 2014; Gau, 2011, 2014). Procedural justice may be important to legitimacy because fair interpersonal treatment and decision-making are important societal expectation about the appropriate use of power; procedural injustice signals exclusion and a lack of status and value within society. The second hypothesis is that distributive justice is positively associated with legitimacy perceptions (Hypothesis 1b, see Huq et al., 2017; Jackson et al., 2022b). Distributive justice may be important to legitimacy because allocating scare resources across aggregate social groups is an important societal

expectation about the appropriate use of power; distributive injustice signals the favoring of some social groups over other social groups (e.g. "the rich get better policing than the poor").

The third hypothesis is that bounded authority is positively associated with legitimacy perceptions (Hypothesis 1c, see Trinkner et al., 2018; Williamson et al., 2022). Bounded authority may be important to legitimacy because respecting the limits of their rightful authority is an important societal expectation about the appropriate use of power; over-stepping the limits of their authority signals a lack of respect for people's agency and self-determination (Huq et al., 2017).

The second set of hypotheses relates to the potential importance of under- and over-policing of Black communities to legitimacy, in addition to the above factors. On the one hand, under-protecting Black communities may violate an important societal expectation about the appropriate use of power; under-policing may delegitimate because of the racially targeted messages of neglect and under-protection being sent (Hypothesis 2a). On the other hand, over-policing may also be negatively associated with legitimacy perceptions. Over-regulating Black communities may violate an important societal norm about the appropriate use of power, sending racially targeted messages of stigmatisation, suspicion and oppression (Hypothesis 2b).

The third set of hypotheses refer to the relationship between traditional PJT elements of police fairness (procedural justice, distributive justice, and bounded authority) and under- and over-policing of Black communities. Just after the police killing of George Floyd, systemic racism and the BLM movement was extremely high on the public agenda. In such a context, when many people were talking about the issue, people may have used their prior perceptions of police fairness (procedural justice, distributive justice and bounded authority) as heuristics through which to draw inferences about the extent to which racialized policing of Black communities was a problem. We assess whether procedural justice is negatively associated with under-policing (Hypothesis 3a) and over-policing (Hypothesis 3b) perceptions; whether distributive justice is negatively associated with under-policing (Hypothesis 3c) and over-policing (Hypothesis 3d) perceptions; and whether bounded authority is negatively associated with under-policing (hypothesis 3e) and over-policing (hypothesis 3f) perceptions.

The fourth set of hypotheses relates to identification with BLM. People who identify with BLM may tend to see racism as a bigger problem in policing, compared to those people who do not identify with BLM. They may also tend to draw stronger delegitimising signals from racialized policing. On the one hand, when a person identifies with the BLM cause and supporters (for an exploration of identification with BLM just after the police killing of George Floyd, see Jackson et al., 2022a), they may also see the police as less legitimate (Hypothesis 4a), irrespective of the roles that under- and over-policing perceptions play in predicting legitimacy perceptions. Moreover, under-policing (Hypothesis 4b) and over-policing (Hypothesis 4c) may be more strongly correlated with legitimacy perceptions among people who identify with BLM, compared to people who do not identify with BLM, because of the relational nature of legitimacy. Racialized policing matters more to people who identify with BLM because people attach greater relational content to the matter.

Finally, we test whether the findings are similar for Black *and* White research participants alike. There are reasons to suggest that perceptions of the under- and over-policing of Black communities will be related to legitimacy perceptions among White communities as well a Black communities. BLM is, fundamentally, a movement for racial justice (Khan-Cullors & Bandele 2018; McKesson 2019) that has a wider scope than merely the relationships between police and Black and other minority communities. A concern with criminal justice and policing lies at its heart, in terms of its genesis after the death of Trayvon Martin in 2012, the proximate cause of the 2020 demonstrations, the murder of George Floyd by Minneapolis police officer Derek Chauvin (and the many 'officer-involved' deaths of Black Americans in between), and the more explicit and certainly most well-known policy arguments that have emerged from the movement, which revolve around fundamental reform to, defunding, and perhaps even abolition of the police. We test whether the norms and values encoded in the (perceived) mistreatment of Black communities by police will have a different association with legitimacy depending on the position of the perceiver—in this case, by their strength of association with BLM. In addition, we test whether it is identification with the movement, not race per se, that may be the important factor.

Method

Sampling procedure

We interviewed 1,500 research participants via the online platform Prolific Academic (Prolific.co) using a non-probability convenience quota sample stratified to resemble the national population based on age, gender and race. Prolific maintain a large online panel of participants and in drawing a sample like the current one from their online panel, Prolific (2019) takes the intended sample size and screens participant eligibility using three self-reported metrics: age, gender and race. For US samples they calculate the age by gender by racial group proportions using the 2015 population group estimates from the US Census Bureau. Participants are then screened and entered into the survey to fill each stratification level. Studies are advertised on their platform, where users can decide whether they want to participate.

The current study was published on Prolific on June 15th, 2020, 3 weeks after George Floyd was killed. Study participants were paid the equivalent of $8.42 per hour (on average). Research participants were asked for informed consent and the study was deemed appropriate by the University's IRB. We needed reasonable statistical power, particular in terms of having enough Black research participants to do the study. So we asked Prolific for the largest sample possible (they do not allow researchers to request more than 1,500 participants).

Reflecting the US Census Bureau 2015 estimates, the final sample had 51% who said they were female and 49% who said they were male. Age ranged from 18 to 84, with a mean of 45 years old and a standard deviation of 16. In terms of race, 76% said they were White (n=1,112), 13% said they were Black (n=194), 6% said they were Asian (n=92), 3% said they were Mixed (n=37) and 2% said they were Other (n=29). According to Prolific's records, 92% were defined as US (presumably the remaining 8% were immigrants with a non-US passport), around 90% were born in the US, and English was the first language of 94% of the sample. We retain the full sample, e.g. we do not drop the 8% who were presumably immigrants, because we wanted to retain the national quota.

Data quality

There is some evidence that Prolific Academic participants are more engaged and attentive and less dishonest than participants in Amazon Mechanical Turk (MTurk) and may therefore produce higher quality data (Adams et al., 2020; Peer et al., 2017). For example, Peer et al. (2021) found that Prolific produced better quality data than the online data platforms Mturk, CloudResearch, Qualtrics and Dynata. Moreover, Prolific state that they regularly use tools to monitor the use of things like bots to answer their surveys.

Our survey took an average of 22 minutes to complete (we dropped 16 cases with extreme outliers, presumably because they started the survey, walked away from their computer, and returned a few hours later). The minimum time for survey completion was 5 minutes. To ensure quality of data, we used attention checks (Arechar & Rand, 2021; Aronow et al., 2019, 2020). We dropped 35 people from the final analytical sample (n=1,465) because they failed at least one of the four attention checks we included in the survey.

Measures

Table 1 provides the wording of all the survey items, as well as the descriptive statistics and Cronbach's Alphas for the various scales. We fielded standard measures of people's perceptions of procedural justice, distributive justice and bounded authority. We picked these three dimensions because (a) procedural justice and bounded authority have been shown to be the most important predictors of legitimacy (Huq et al., 2017; Williamson et al., 2022) and (b) distributive justice seems generally relevant to under- and over-policing of Black communities.

INSERT TABLE 1 ABOUT HERE

We assume that people judge the legitimacy of the police as an institution against the societal norms that dictate what is appropriate conduct and that the content of legitimation (i.e. the bases on which legitimacy is justified or contested) is an empirical question (Jackson, 2018; Jackson & Bradford,

2019; Trinkner, 2019). It is therefore important to distinguish between potential sources of legitimacy (how officers are perceived to act) and overarching legitimacy judgements (whether the institution that these officers represent is deemed to have the right to power and authority to govern). We measured legitimacy as normative alignment and duty to obey: the first element represents the belief that the police is a moral, just and appropriate institution (the right to power, see Jackson & Bradford, 2019, for discussion); and the second element represents the recognition that police have the right to dictate appropriate behavior (the authority to govern, see Posch et al., 2021, for discussion).

We also fielded new scales of under- and over-policing. Some of the items were customised from the existing literature, drawing on indicators of distributive justice (Sunshine & Tyler, 2003; Bradford & Jackson, 2018), bounded authority (Trinkner et al., 2018), and Tyler et al.'s (2015b) study into the police treating people as an object of suspicion.

All scales had high average inter-correlations (see the Cronbach's Alphas in Table 1). For a test of the measurement properties of the various measures and scales, please see the supplementary materials. Please also note that there is a possibility of response bias—specifically a potential bias towards positively correlated measures and constructs, given that the same method was used throughout the study, and most of the measures were positively worded.

Statistical modelling

We used confirmatory factor analysis (CFA), structural equation modelling, and latent moderated SEM to do the analysis.

Results

How do perceptions of under- and over-policing of Black communities relate to people's perceptions of structural racism?

We fielded a single indicator of structural racism in policing (Table 1 provides the univariate statistics for this variable). We find that perceptions of under- and over-policing of Black communities are strongly and positively correlated with perceptions of structural racism in policing, at least as applied to Black communities (under-policing r=.75 and over-policing r=.82). For White respondents the correlations are r=.76 and r=.83 respectively, and for Black respondents the correlations are r=.60 and r=.74 respectively. We infer from these strong associations that perceptions of the under- and over-policing are a reasonable way of operationalizing perceptions of structural racism in policing.

How do people judge the legitimacy of the police?

On what bases do people judge the legitimacy of the police? We are especially interested in testing whether perceptions of systemic racism play a role in police legitimacy, above and beyond the traditional PJT factors. To test hypotheses 1a to 2b, we use SEM (see Figure 1 for the results). We assess whether perceptions of procedural justice, distributive justice, bounded authority, and the under- and over-policing of Black communities each predict legitimacy (controlling for the other factors). We include gender, age and race (White, Black and 'Other') as controls for all constructs. Unsurprisingly, given the good fit statistics for M1 in the CFA (see Table 1 in the supplementary materials), the approximate fit statistics are good (RMSEA=.054, RMSEA 90% CI=.052, .056; CFI=.989; and TLI=.988). The bivariate correlations with the constructs on the left-hand side of Figure 1 are generally consistent with those in the correlation matrix found in Table 2 of the supplementary materials (any differences are accounted for by the fact that this fitted model also controls for age, gender and race).

INSERT FIGURE 1 ABOUT HERE

The findings support hypotheses 1a (that procedural justice is positively associated with legitimacy), 1b (that distributive justice is positively associated with legitimacy), 1c (that bounded authority is positively associated with legitimacy), 2a (that under-policing of Black communities is negatively associated with legitimacy), and 2b (that over-policing of black communities is negatively associated with legitimacy). Each of the five types of police perceptions explains unique variance in

legitimacy (with the one exception being that bounded authority does not predict duty to obey). The direction of the partial associations are as expected.

Legitimacy is defined along two connected lines: normative alignment (the perceived right to power) and duty to obey (the perceived right to govern). On the one hand, we find that just over four-fifths (84%) of the variation in normative alignment is explained by the five types of police perceptions. Procedural justice is the strongest predictor (B=.42, p<.001). The next strongest predictor is distributive justice (B=.23, p<.001). This indicates the importance to police legitimation of general perceptions of fair interpersonal treatment, fair decision-making, and the just allocation of finite police resources across society. Also important are bounded authority (B=.12, p<.01), under-policing (B=-.10, p<.01) and over-policing (B=-.13, p<.001) perceptions. Believing that the police generally respect the limits of their rightful authority is associated with higher levels of legitimacy, and believing that the police specific under- and over-policing Black communities is associated with lower levels of legitimacy.

On the other hand, just less than one-half (45%) of the variation in duty to obey the police is explained by the five types of police perceptions. The pattern is generally similar to that of normative alignment. However, bounded authority is not a significant factor and distributive justice is the most important predictor (B=.28, p<.001). Procedural justice also plays a role (B=.21, p=.001). This suggests that people tend to feel a moral duty to obey police when they believe that officers deploy resources in an equitable way, provide the same level of security and service to everybody, treat people with respect, and make fair and impartial decisions. Again, under-policing (B=-.15, p<.01) and over-policing (B=-.16, p<.01) are negatively associated with legitimacy, controlling for the other factors.

Thus far, we have treated procedural justice, distributive justice, bounded authority, under-policing and over-policing as (a) correlated with each other and (b) predictors of legitimacy (normative alignment and duty to obey). We have found that people who view the police as legitimate also tend to believe that officers respect principles of due process when interacting with citizens, allocate their resources fairly across society, do not over-step the boundaries of the rightful authority, do not under-police Black communities, and do not over-police Black communities.

How do systemic racism perceptions relate to general police perceptions?

Yet, it is important to also consider how perceptions of under- and over-policing of Black communities relate to more general perceptions of procedural and distributive justice and bounded authority. It was possible that people used their more general perceptions of the fairness of police as a heuristic through which to form an opinion on a topic that was receiving considerable attention just after the police killing of George Floyd: racialized policing. For example, people who thought that different social groups receive unequal levels of protection, service and types of enforcement (i.e. distributive justice) may have been more likely to believe that Black communities are being under- and over-policed.

The third set of hypotheses (3a-3f) relate to this issue. Figure 2 tests a model that positions under- and over-policing as a mediational layer *between* procedural justice, distributive justice and bounded authority on the left-hand side, and legitimacy on the right-hand side. We focus here on the predictors of under- and over-policing (the coefficients for legitimacy in Figure 2 are, of course, exactly the same coefficients for legitimacy in Figure 1).

The findings support the hypotheses related to perceptions of under- and over-policing being negatively associated with distributive justice (3c & 3d) and bounded authority (3e and 3f) but not the hypotheses related to perceptions of under- and over-policing being negatively associated with procedural justice (3a & 3b). It seems like distributive justice was the strongest lens through which people made sense of under- and over-policing. This makes sense: distributive justice is about the fair (or unfair) allocation of the 'goods' and 'bads' of policing and social control across aggregate groups, with racial groups being key. However, bounded authority is also important. People who thought that the police overstep the limits of their rightful authority also tended to think that police aggressively intrude in the lives of members of the Black—they tended to think that the police treat members of Black communities like objects of suspicion rather than potential victims of crime to protect.

What role does identification with the Black Lives Matter social movement play? Do key findings pertain to Black and White research participants

Figure 3 summarizes the findings from the same SEM model from Figure 1, but this time with BLM identification also included as a potential predictor of legitimacy. We fitted this model on only White and Black research participants, in preparation for examining whether systemic racism might be a more important source of legitimation among people who identified with BLM (and a three-way interaction that also includes race, comparing White and Black respondents).

Note that BLM identification is a weak predictor of normative alignment. It is also not a statistically significant predictor of duty to obey. Our findings thus do not support hypothesis 4a (that BLM identification is negatively associated with legitimacy perceptions). This is not surprising, since under- and over-policing are also included in the model—plausibly it is through under- and over-policing that the effect of BLM identification on legitimacy works.

INSERT FIGURE 3 ABOUT HERE

To examine whether the findings in Figure 3 differ for White and Black research participants, we tested a series of models with statistical interaction effects. Results are summarized in Table 2. The sources of legitimation are generally similar for White and Black participants. We find only one statistically significant interaction effect: bounded authority is a stronger predictor of duty to obey for Black participants than it is for White participants. Of note is not only the lack of statistical significance, but also the relatively small partial regression coefficients for the interaction terms, which makes us reasonably confident that the findings are not because of low statistical power among the close to 200 Black research participants.

INSERT TABLE 2 ABOUT HERE

The final set of hypotheses relate to the idea that the under- and over-policing of Black communities may be more important to legitimacy perceptions among people who identify with BLM. The intuition here is that if people care about the cause and identify with supporters of the cause, they are more sensitive to the signals of neglect and oppression that under– and over-policing sends. We test statistical interactions between BLM identification and under- and over-policing (predicting legitimacy). Recall that latent variables have a mean of zero. We find that for those who identify with BLM, over-policing and under-policing have more strongly associated with normative alignment and duty to obey, compared to those who do not identify with BLM (Table 3). This provides support for hypotheses 4b and 4c.

INSERT TABLE 3 ABOUT HERE

Finally, we do not find that the interaction between BLM and under- and over-policing varies between White and Black research participants. The three-way interactions in the third and fourth models of Table 3 have small coefficients for the interaction terms and are not statistically significant.

Discussion

The task of understanding police legitimacy in the context of structural racism has never been more relevant to public policy. Yet, empirical applications of procedural justice theory (PJT) in the US have not addressed the relevance of people's perceptions of structural racism to their more overarching beliefs about the fairness of everyday policing and legitimacy of the institution itself. By way of contribution, we collected survey data from a convenience quota sample of US residents, designed to be resemble the national population in terms of age, gender, and race. The goal was to test an expanded procedural justice framework for police legitimacy.

Our approach integrated perceptions of racism into the PJT framework. We approached perceptions of structural racism through the lens of perceptions of under- and over-policing in Black communities; that is, the sense that police do not provide an appropriate level of protection while at the same time exert too much social control. Capturing under- and over-policing is valuable because it appears central to how structural racism works and is experienced. Further, such measures applied to a

quota sample from the general population capture the potentially delegitimating signals that police behavior may send not just to Black communities but to White communities too.

Our findings make an important contribution to the literature. Perceptions of the under- and over-policing of Black communities were strongly correlated with perceived structural racism. Perceptions of under- and over-policing seemed rooted in concerns about distributive injustice most keenly, but also in general concerns about officers overstepping the limits of their rightful authority. Perceptions of procedural justice, distributive justice, bounded authority and perceptions of under- and over-policing were *all* predictors of legitimacy. Moreover, perceptions of under- and over-policing of Black communities were more strongly associated with lower levels of legitimacy when people identify strongly with the Black Lives Matter (BLM) movement. Finally, we demonstrated that key findings held for Black and White respondents alike.

While affirming the established roles that procedural justice and bounded authority play in legitimacy, this study points to the possibility that perceptions of the under- and over-policing of Black communities are important factors in the delegitimation of police, at least at this moment in history, just after the police killing of George Floyd. Further, perceptions of over- and under-policing were strongly correlated with perceived structural racism in policing, which accords with qualitative work that has suggested how racism in policing is experienced in race-class subjugated communities—not as a purely procedural concern nor simply a matter of excessive police contact, but in the paradox of over-regulation and under-protection (or "distorted responsiveness") that has significant negative consequences on individuals and communities (Prowse et al., 2020, p. 1435; Rios, 2011, pp. 64–65). Perceptions of over- and under-policing appeared to represent a sense of systemically racist policing that delegitimated among White *and* Black research participants, especially if they identified with BLM.

This suggests, particular among those who identified with BLM, two related things. First, under- and over-policing Black communities may violate important social norms about the proper use of power: police *should* (in the eyes of citizens) treat Black communities the same as other racial communities; they *should not* enact and exacerbate systemic racism in society. Second, the relational signals that racialized policing sends may lead people (especially those who identify with a social movement that highlights racism as a serious problem) to question whether the police are a just, moral and appropriate institution that has the authority to govern and enforce the law.

It is important, however, to acknowledge the context of the study. The year was 2020. When these data were collected, there was surging public and scholarly awareness regarding structural racism (e.g., Evans et al., 2020; Horton, 2020) and declining support for police (Fine et al., 2020). A broad array of policing reforms were under consideration in jurisdictions across the US. These ranged from incremental changes (such as innovations in police training or closer internal monitoring of officer behavior) to more fundamental shifts (such as reallocating funding and responsibility to other agencies or abolishing policing altogether) (Prasad Philbrick & Yar, 2020). Our study was conducted three weeks after the police killing of George Floyd, at a time of mass unrest over racially targeted police violence. Feelings and inter-group tensions were running especially high at this time. Parker et al. (2020) reported that around two-thirds of Americans supported BLM in June 2020, which was more than the levels of support found in 2016 and 2017 polls. But there are indications that this effect was relatively short-lived. Chudy & Jefferson (2021) found that support for BLM was just under 50% (see also Jones, 2021). As such, the strength of our findings may be partly a function of the timing of the study. Whether and how findings may differ at other times and in other contexts is an important direction for future research.

Limitations

This study's main limitations relate to its sampling strategy and cross-sectional, non-experimental design. The quota-based sampling approach, while designed to resemble the general population of the US according to gender, age and race, does not allow the probability of inclusion in the sample to be estimated. Moreover, the cross-sectional, non-experimental structure of the data to which we fitted our models does not support causal inference, nor does it permit us to establish the ordering suggested in our hypothesized pathways.

We should also note a potential limitation of our approach to measuring identification with BLM. Our measures asked about identifying with the movement/cause, feeling a sense of solidarity

with the movement/cause, and feeling a sense of similarity to people in the movement/cause. It is possible that answers to these questions reflected more of a sense of what they thought about race and policing, rather than any real sense of group identification. This is an issue to be explored in future work.

Implications

Nevertheless, the results of this work have several implications for theory, research, and policy on policing and structural racism in the US. Future scholarship on policing and structural racism could retain the core of the PJT model, while also exploring additional approaches to conceptualizing and capturing underlying structural racism. For example, future studies could test expanded measures of procedural justice that incorporate explicit attention to race and racism. Measures of procedural justice might address whether police behave respectfully toward civilians of color; measures of distributive justice might address whether police forces allocate resources equitably when responding to calls for service from White and non-White communities; and measures of bounded authority might address whether police behave intrusively, invasively, or abusively in communities of color. Such an investigation could help to determine whether perceptions of certain aspects or outcomes of structural racism (e.g., over-policing) operate as distinct predictors of police legitimacy net of the statistical effect of 'standard' PJT constructs, or whether these constructs could be re-operationalized to reflect the forms of structural racism that underlie them. Future research could also use multi-wave longitudinal methods to prospectively examine how perceptions of procedural justice, distributive justice, bounded authority, and the over- and under-policing of Black communities change in the coming months and years, and how those changes are related to trajectories of police legitimacy and public willingness to cooperate.

As jurisdictions proceed with what is likely to be a wide variety of reform, overhaul, de-funding and abolition initiatives, an expanded PJT framework may offer a useful tool for assessing the extent to which particular policy changes help to effect that reorientation. In a country with a three-century history of deploying police to enforce and perpetuate racial subjugation, changes in policing policy and practice cannot be limited to race-neutral efforts to improve police behavior or reduce police violence against civilians, nor to attempts to improve the quality of individual interactions and individuals' experiences. There is a pressing need to take account of the location of policed communities and individuals within more broadly oppressive power relations, and the group-level processes that inform and in turn are shaped by the experience of being policed. Findings from the current study thus have implications not merely for the kinds of incremental or "color-blind" reforms with which PJT has often been associated but for a radical transformation of the longstanding relationship between law enforcement and White supremacy in the US (and arguably beyond). The concepts of procedural justice, distributive justice, and bounded authority may be central to considering how to interrupt a longstanding allegiance between police and a White-dominated power structure, and position Black Americans as full subjects of state protection rather than objects of state control.

At the same time, jurisdictions seeking new approaches to public safety cannot rely on a race-conscious but procedurally empty focus. Saying that policing needs to be done differently is meaningless without also being able to say *how* it should be done differently. This study suggests that efforts to salvage the legitimacy of law enforcement and the democratic integrity of the state it represents must address the "paradox" at the heart of American policing: a paradigm that focuses on enforcing laws against, and neglects enforcing laws on behalf of, people and communities of color.

Conclusion

The current paper serves as proof of concept for an expanded PJT account of police legitimacy in the US that may be useful in future work on law enforcement approaches and police legitimacy in the context of structural racism. It suggests that, in the context of social inequalities and structural racism, legitimating norms may revolve not only around fair process, distribution and agency, but also racially directed questions of control, stigmatization, and the lack protection for Black communities. If the law is enforced in ways that signal arbitrariness, exclusion and a lack of protection to those being policed, then people may start to question whether power is being exercised not on their behalf, but on them and

over them. Crucially, this may extend to just to those being policed, but also others in society who are concerned about systemic racism in policing.

References

Adams, T. L., Li, Y., & Liu, H. (2020). A replication of beyond the Turk: Alternative platforms for crowdsourcing behavioral research–sometimes preferable to student groups. *AIS Transactions on Replication Research, 6*(15), 1-22. https://doi.org/10.17705/1atrr.00058.

Arechar, A. A., & Rand, D. G. (2021). Turking in the time of COVID. *Behavior Research Methods, 53*(6), 2591-2595, doi: 10.3758/s13428-021-01588-4.

Aronow, P. M, Baron, J., & Pinson, L. (2019). A note on dropping experimental subjects who fail a manipulation check. *Political Analysis 27*(4), 572–589, https://doi.org/10.1017/pan.2019.5.

Aronow, P. M., Kalla, J., Orr, L., & Ternovski, J.. (2020). Evidence of rising rates of inattentiveness on Lucid in 2020. SocArXiv, https://doi.org/10.31235/osf.io/8sbe4.

Baumgartner, F. R., Epp, D. A., Shoub, K., & Love, B. (2017). Targeting young men of color for search and arrest during traffic stops: Evidence from North Carolina, 2002–2013. *Politics, Groups, and Identities, 5*(1), 107–131, https://doi.org/10.1080/21565503.2016.1160413.

Beckett, K., Nyrop, K., & Pfingst, L. (2006). Race, drugs, and policing: Understanding disparities in drug delivery arrests. *Criminology, 44*, 105–137, https://doi.org/10.1111/j.1745-9125.2006.00044.x.

Bell, M. C. (2017). Police reform and the dismantling of legal estrangement. *The Yale Law Journal*, 2054-2150. https://www.yalelawjournal.org/essay/police-reform-and-the-dismantling-of-legal-estrangement

Bennett, M. D. (2020). So much trouble on my mind: African American males coping with mental health issues and racism. *Urban Social Work, 4*(2), 152–172, doi: 10.1891/USW-D-19-00005.

Blader, S. L., & Tyler, T. R. (2009). Testing and extending the group engagement model: Linkages between social identity, procedural justice, economic outcomes, and extrarole behaivor. *Journal of Applied Psychology, 94*(2), 445-464. https://doi.org/10.1037/a0013935.

Bolger, P. C., & Walters, G. D. (2019). The relationship between police procedural justice, police legitimacy, and people's willingness to cooperate with law enforcement: A meta-analysis. *Journal of Criminal Justice*, *60*, 93-99. https://doi.org/10.1016/j.jcrimjus.2019.01.001.

Bradford, B. (2014). Policing and social identity: Procedural justice, inclusion and cooperation between police and public. *Policing and Society, 24*(1), 22-43. https://doi.org/10.1080/10439463.2012.724068.

Bradford, B., & Jackson, J. (2018). Police legitimacy among immigrants in Europe: Institutional frames and group position. *European Journal of Criminology*, *15*(5), 567-588, https://doi.org/10.1177/1477370817749496.

Bradford, B., & Jackson, J. (2022, in press). Legitimacy, relational norms and reciprocity. In R. Hollander-Blumoff (Ed.) *Research Handbook in Law and Psychology.* Elgar Press.

Bradford, B., Murphy, K., & Jackson, J. (2014). Officers as mirrors: Policing, procedural justice and the (re)production of social identity. *British Journal of Criminology*, *54*(4), 527-500, doi: 10.1093/bjc/azu021.

Buchanan, L., Bui, Q., & Patel, J. K. (2020). Black Lives Matter may be the largest movement in US history. The New York Times, 3.

Carr, P. J., Napolitano, L., & Keating, J. (2007). We never call the cops and here is why: A qualitative examination of legal cynicism in three Philadelphia neighborhoods. *Criminology, 45*(2), 445-480, https://doi.org/10.1111/j.1745-9125.2007.00084.x.

Chudy, J., & Jefferson, H. (2021, May 22). Support for Black Lives Matter surged last year. Did it last? The New York Times. https://www.nytimes.com/2021/05/22/opinion/blm-movement-protests-support.html

Del Toro, J., Lloyd, T., Buchanan, K. S., Robins, S. J., Bencharit, L. Z., Smiedt, M. G., . . . Goff, P. A. (2019). The criminogenic and psychological effects of police stops on adolescent black and Latino

boys. *Proceedings of the National Academy of Sciences, 116*(17), 8261-8269, https://doi.org/10.1073/pnas.1808976116.

Delgado, R. (2008). Liberal McCarthyism and the origins of critical race theory. *Iowa L. Rev*., 94, 1505.

Evans, M. K., Rosenbaum, L., Malina, D., Morrissey, S., & Rubin, E. J. (2020). Diagnosing and treating structural racism. *The New England Journal of Medicine, 383*(3), 274–276, doi: 10.1056/NEJMe2021693.

Fagan, J. (2010). The contradictions of juvenile crime & punishment. *Daedalus, 139*(3), 43-61, doi: 10.1162/daed_a_00022.

Fagan, J., Geller, A., Davies, G., & West, V. (2010). Street stops and broken windows revisited. In Race, Ethnicity, and Policing, eds Rice SK, White MD (pp. 309–348). New York Univ Press.

Fine, A. D., Donley, S., Cavanagh, C., & Cauffman, E. (2020). Youth perceptions of law enforcement and worry about crime from 1976 to 2016. *Criminal Justice and Behavior, 47*(5), 564-581, https://doi.org/10.1177/009385482090375.

Gau, J. M., & Brunson, R. K. (2015). Procedural injustice, lost legitimacy, and self-help: Young males' adaptations to perceived unfairness in urban policing tactics. *Journal of Contemporary Criminal Justice, 31(*2), 132–15, doi: 10.1177/1043986214568841.

Gau, J. M. (2011). The convergent and discriminant validity of procedural justice and police legitimacy: An empirical test of core theoretical propositions. *Journal of Criminal Justice*, *39*(6), 489-498. https://doi.org/10.1016/j.jcrimjus.2011.09.004.

Gau, J. M. (2014). Procedural justice and police legitimacy: A test of measurement and structure. *American Journal of Criminal Justice*, *39*(2), 187-205. https://doi.org/10.1007/s12103-013-9220-8.

Goff, P. A., Jackson, M. C., Di Leone, B. A. L., Culotta, C. M., & DiTomasso, N. A. (2014). The essence of innocence: Consequences of dehumanizing Black children. *Journal of Personality and Social Psychology, 106*(4), 526, doi: 10.1037/a0035663.

Graham, J., & Karn, J. (2013). Policing Young Adults. UK: The police foundation.

Hagan, J., Shedd, C., & Payne, M. R. (2005). Race, ethnicity, and youth perceptions of criminal injustice. *American Sociological Review, 70*(3), 381–407, https://doi.org/10.1177/000312240507000302.

Hatzenbuehler, M. L., Keyes, K., Hamilton, A., Uddin, M., & Galea, S. (2015). The collateral damage of mass incarceration: Risk of psychiatric morbidity among nonincarcerated residents of high-incarceration neighborhoods. *American Journal of Public Health, 105*(1), 138-143.

Hofer, M. S., Womack, S. R., & Wilson, M. N. (2020). An examination of the influence of procedurally just strategies on legal cynicism among urban youth experiencing police contact. *Journal of Community Psychology, 48*(1), 104–123, doi: 10.2105/AJPH.2014.302184.

Horton, R. (2020). Medicine and medical science: Black lives must matter more. *The Lancet (British Edition), 395*(10240), 1813–1813, doi: 10.1016/S0140-6736(20)31353-2.

Huq, A. Z., Jackson, J., & Trinkner, R. (2017). Legitimating practices: Revisiting the predicates of police legitimacy. *British Journal of Criminology, 57*(5), 1101-1122. https://doi.org/10.1093/bjc/azw037.

Jackson, J. (2018). Norms, normativity, and the legitimacy of justice institutions: International perspectives. *Annual Review of Law and Social Science, 14*(1), 145–165. https://doi.org/10.1146/annurev-lawsocsci-110316-113734.

Jackson, J., & Bradford, B. (2019). Blurring the distinction between empirical and normative legitimacy? A methodological commentary on 'Police legitimacy and citizen cooperation in China'. *Asian Journal of Criminology, 14*(4), 265-289. https://doi.org/10.1007/s11417-019-09289-w.

Jackson, J., Bradford, B., Giacomantonio, C., & Mugford, R. (2022a). Developing core national indicators of public attitudes towards the police in Canada. *Policing & Society*, https://doi.org/10.1080/10439463.2022.2102757.

Jackson, J., Fine, A., Bradford, B., & Trinkner, R. (2022b). Social identity and support for defunding the police in the aftermath of George Floyd. *Group Processes & Intergroup Relations*, doi.org/10.1177/13684302221128230.

Jones, J. M. (2021, July 14). In U.S., Black confidence in police recovers from 2020 low. https://news.gallup.com/poll/352304/black-confidence-police-recovers-2020-low.aspx

Justice, B., & Meares, T. L. (2014). How the criminal justice system educates citizens. *The ANNALS of the American Academy of Political and Social Science, 651*(1), 159-177, https://doi.org/10.1177/0002716213502929.

Khan-Cullors, P., & Bandele, A. When They Call You a Terrorist: A Black Lives Matter Memoir. New York: St. Martin's Press, 2018.

Kirk, D. S. (2008). The neighborhood context of racial and ethnic disparities in arrest. *Demography, 45*, 55–77, doi: 10.1353/dem.2008.0011.

Kyprianides, A., Bradford, B., Jackson, J., Yesberg, J., Stott, C., & Radburn, M. (2021). Identity, legitimacy and cooperation with the police: Comparing general-population and street-population samples in London. *Psychology, Public Policy & Law*, *27*(4), 492–508, http://dx.doi.org/10.1037/law0000312.

Legewie, J., & Fagan, J. (2019). Aggressive policing and the educational performance of minority youth. *American Sociological Review, 84*(2), 220–247, https://doi.org/10.1177/0003122419826020.

Lerman, A. E., & Weaver, V. (2014). Staying out of sight? Concentrated policing and local political action. *The ANNALS of the American Academy of Political and Social Science, 651*(1), 202-219, doi:10.1177/0002716213503085.

Madon, N. S., Murphy, K., & Sargeant, E. (2017). Promoting police legitimacy among disengaged minority groups: Does procedural justice matter more? *Criminology & Criminal Justice, 17*(5), 624–642, https://doi.org/10.1177/1748895817692849.

McKesson, D. (2019). On the Other Side of Freedom: Race and Justice in a Divided America. Simon and Schuster.

Meares, T. (2017). Policing and procedural justice: Shaping citizens' identities to increase democratic participation. *Northwestern University Law Review, 111*(6), 1525.

Murphy, K., Bradford, B., & Jackson, J. (2016). Motivating compliance behavior among offenders: procedural justice or deterrence? *Criminal Justice and Behavior, 43*(1), 102-118, https://doi.org/10.1177/0093854815611166.

Peer, E., Brandimarte, L., Samat, S., & Acquisti, A. (2017). Beyond the Turk: Alternative platforms for crowdsourcing behavioral research. *Journal of Experimental Social Psychology, 70*, 153-163. https://doi.org/10.1016/j.jesp.2017.01.006.

Peer, E., David, R., Andrew, G., Zak, E., & Ekaterina, D. (2021). Data quality of platforms and panels for online behavioral research. *Behavior Research Methods,* 1-20. Advance online: https://doi.org/10.3758/s13428-021-01694-3.

Posch, K., Jackson, J., Bradford, B., & MacQueen, S. (2021). "Truly free consent"? Clarifying the nature of police legitimacy using causal mediation analysis. *Journal of Experimental Criminology*, *17*(4), 563-595, https://doi.org/10.1007/s11292-020-09426-x.

Prasad Philbrick, I., & Yar, S. (2020, August 3). New York Times. https://www.nytimes.com/2020/08/03/briefing/coronavirus-vaccine-tropical-storm-isaias-tiktok-your-monday-briefing.html

President's Task Force on 21st Century Policing. (2015). Final Report of the President's Task Force on 21st Century Policing. Washington, DC: Office of Community Oriented Policing Services.

Prolific (2019). https://researcher-help.prolific.co/hc/en-gb/articles/360019238413-Representative-Samples-FAQ

Prowse, G., Weaver, V. M., & Meares, T. L. (2020). The state from below: Distorted responsiveness in policed communities. *Urban Affairs Review, 56(*5), 1423-1471, https://doi.org/10.1177/1078087419844831.

Quinn, C. R., Hope, E. C., & Cryer-Coupet, Q. R. (2019). Neighborhood cohesion and procedural justice in policing among Black adults: The moderating role of cultural race-related stress. *Journal of Community Psychology, 48*(1), 124–141, https://doi.org/10.1002/jcop.22251.

Rios, V. M. (2011). Punished: Policing the Lives of Black and Latino Boys. NYU Press.

Rios, V. M., Prieto, G., & Ibarra, J. M. (2020). Mano suave–mano dura: Legitimacy, policing and Latino stop-and-frisk. *American Sociological Review, 85*(1), 58–75. https://doi.org/10.1177/0003122419897348.

Sherman, L. W. (1993). Defiance, deterrence, and irrelevance: A theory of the criminal sanction. *Journal of Research in Crime and Delinquency, 30*(4), 445-473, https://doi.org/10.1177/0022427893030004006.

Sherman, L. W., & Rogan, D. P. (1995). Effects of gun seizures on gun violence: "Hot spots" patrol in Kansas city. *Justice Quarterly, 12*(4), 673–693, https://doi.org/10.1080/07418829500096241.

Stein, R. E., & Griffith, C. (2017). Resident and police perceptions of the neighborhood: Implications for community policing. *Criminal Justice Policy Review, 28*(2), 139–154, https://doi.org/10.1177/0887403415570630.

Stoudt, B. G., Fine, M., & Fox, M. (2011). Growing up policed in the age of aggressive policing policies. *NYL Sch. L. Rev., 56*, 1331.

Sunshine, J., & Tyler, T. R. (2003). The role of procedural justice and legitimacy in shaping public support for policing. *Law & Society Review, 37*(3), 513–548, https://doi.org/10.1111/1540-5893.3703002.

Taniguchi, T. A., Hendrix, J. A., Levin-Rector, A., Aagaard, B. P., Strom, K. J., & Zimmer, S. A. (2017). Extending the veil of darkness approach: An examination of racial disproportionality in traffic stops in Durham, North Carolina. *Police Quarterly, 20*(4), 420–448, https://doi.org/10.1177/1098611117721665.

Trinkner, R. (2019). Clarifying the contours of the police legitimacy measurement debate: A response to Cao and Graham. *Asian Journal of Criminology, 14*(4), 309–335, https://doi.org/10.1007/s11417-019-09300-4.

Trinkner, R., Jackson, J., & Tyler, T. R. (2018). Bounded authority: Expanding "appropriate" police behavior beyond procedural justice. *Law and Human Behavior,* 42(3), 280-293. https://doi.org/10.1037/lhb0000285.

Tyler, T. R. (1997). The psychology of legitimacy: A relational perspective on voluntary deference to authorities. *Personality and Social Psychology Review, 1(*4), 323-345. https://doi.org/10.1207/s15327957pspr0104_4.

Tyler, T. R. (2003). Procedural justice, legitimacy, and the effective rule of law. *Crime and Justice, 30*, 283-357, doi:10.1086/652233.

Tyler, T. R. (2011). Trust and legitimacy: Policing in the USA and Europe. *European Journal of Criminology, 8*(4), 254-266, doi: 10.1177/1477370811411462.

Tyler, T. R. (2006a). Why People Obey the Law. New Haven, CT: Yale University Press.

Tyler, T. R. (2006b). Psychological perspectives on legitimacy and legitimation. *Annual Review of Psychology, 57*(1), 375-400, https://doi.org/10.1146/annurev.psych.57.102904.190038.

Tyler, T. R., & Blader, S. L. (2003). The group engagement model: Procedural justice, social identity, and cooperative behavior. *Personality and Social Psychology Review, 7*(3), 349–361. https://doi.org/10.1207/S15327957PSPR0704_07.

Tyler, T. R., & Fagan, J. (2008). Legitimacy and cooperation: Why do people help the police fight crime in their communities. *Ohio St. J. Crim. L., 6*, 231.

Tyler, T. R., & Jackson, J. (2014). Popular legitimacy and the exercise of legal authority. Motivating compliance, cooperation, and engagement. *Psychology, Public Policy, and the Law, 20*(1), 78-95. https://doi.org/10.1037/a0034514.

Tyler, T. R., Goff, P. A., & MacCoun, R. J. (2015a). The impact of psychological science on policing in the United States: Procedural justice, legitimacy, and effective law enforcement. *Psychological Science in the Public Interest, 16*(3), 75–109, https://doi.org/10.1177/1529100615617791.

Tyler, T. R., Jackson, J., & Mentovich, A. (2015b). The consequences of being an object of suspicion: Potential pitfalls of proactive police contact. *Journal of Empirical Legal Studies*, *12*(4), 602-636, https://doi.org/10.1111/jels.12086.

Tyler, T. R., & Jackson, J. (2013). Future challenges in the study of legitimacy and criminal justice, in Tankebe, J. & Liebling, A. (eds.) *Legitimacy and Criminal Justice: An International Exploration*. Oxford: Oxford University Press, pp. 83-104.

Unnever, J. D., Cullen, F. T., & Barnes, J. C. (2017). Racial discrimination and pathways to delinquency: Testing a theory of African American offending. *Race & Justice, 7,* 350–373, doi:10.1177/2153368716658768.

Wacquant, L. (2009) Punishing the Poor: The Neoliberal Government of Social Insecurity. Durham and London: Duke University Press.

Walters, G. D., & Bolger, P. C. (2019). Procedural justice perceptions, legitimacy beliefs, and compliance with the law: A meta-analysis. *Journal of Experimental Criminology, 15*(3), 341-372, https://doi.org/10.1007/s11292-018-9338-2.

Weaver, V. M. (2018). More security may actually make us feel less secure. *Proceedings of the National Academy of Sciences, 115*(39), 9649–9651, https://doi.org/10.1073/pnas.1813014115.

Weaver, V. M., & Geller, A. (2019). De-policing America's youth: Disrupting criminal justice policy feedbacks that distort power and derail prospects. *The ANNALS of the American Academy of Political and Social Science, 685*(1), 190–226, https://psycnet.apa.org/doi/10.1177/0002716219871899.

Weaver, V. M., & Lerman, A. E. (2010). Political consequences of the carceral state. *American Political Science Review, 104*(4), 817–833, https://doi.org/10.1017/S0003055410000456.

Williamson, H., Murphy, K., Sargeant, E., & McCarthy, M. (2022). The role of bounded-authority concerns in shaping citizens' duty to obey authorities during COVID-19. *Policing: An International Journal*, https://doi.org/10.1108/PIJPSM-03-2022-0036.

Table 1. *Measuring Perceptions of Police: Wording of Measures, Descriptive Statistics, and Scale Cronbach's Alphas*

Construct	*Indicators*	*n*	*Mean*	*Standard deviation*	*Cronbach's alpha*
Procedural justice (never-always, 5-point scale)	How often (if ever) do you think the police in your neighbourhood make fair and impartial decisions in the cases they deal with?	1465	3.47	.85	
	How often (if ever) do you think the police in your neighbourhood explain their decisions to the people they deal with?	1464	3.09	1.02	
	How often (if ever) do you think the police in your neighbourhood treat people with respect?	1454	3.61	.83	.86
Distributive justice (disagree/agree, 5-point scale)	The police provide the same level of security to all community members.	1,462	2.97	1.27	
	The police provide the same quality of service to all community members.	1,464	2.93	1.26	
	The police enforce the law consistently when dealing with all community members.	1,464	2.94	1.23	
	The police deploy their resources in this city in an equitable manner.	1,464	3.13	1.17	
	The police ensure that everyone has equal access to the services they provide.	1,464	3.16	1.19	.96
Bounded authority (always-never, 5-point scale)	How often do you think the police exceed their authority?	1,462	3.00	.94	
	How often do you think the police get involved in situations that they have no right to be in?	1,463	2.71	.91	
	How often do you think the police bother people for no good reason?	1,463	2.77	.97	
	How often do you think the police overstep the boundaries of their authority?	1,462	2.99	.94	
	How often do you think the police abuse their power?	1,463	2.97	.95	
	How often do you think the police violate your personal sense of freedom?	1,465	2.34	1.02	
	How often do you think the police restrict your right to determine you own path in life?	1,463	2.11	1.01	.93
Under-policing of Black communities (never/always, 5-point scale)	The police do not protect African American communities	1,464	3.26	1.35	
	The police do not care about solving problems in African Americans communities	1,465	3.25	1.36	
	The police do not keep African American neighbourhoods safe	1,463	3.43	1.27	
	The police do not care about effectively solving crimes in African American communities	1,464	3.25	1.37	
	The police do not care about responding quickly to emergencies in African American communities	1,465	3.19	1.32	

	The police do not put enough officers in African American communities to effectively stop crime	1,465	3.06	1.24	.93
Over-policing of Black communities (never/always, 5-point scale)	The police are generally suspicious of African Americans	1,464	4.12	1.08	
	The police tend to treat African Americans as if they were probably doing something wrong	1,465	4.01	1.15	
	The police tend to treat African Americans as if they might be dangerous or violent	1,465	4.10	1.11	
	Police officers tend to escalate to violence more easily when dealing with African Americans	1,464	3.98	1.25	
	Police enforce the law more strictly when dealing with African Americans	1,465	3.95	1.24	
	The police tend to stop, question, and frisk African Americans more than they should.	1,465	4.04	1.19	.97
Legitimacy: normative alignment (disagree/agree, 5-point scale)	I support the way the police usually act.	1,464	3.11	1.20	
	The police usually act in ways that are consistent with my own ideas about what is right and wrong.	1,464	3.04	1.17	
	The police stand up for values that are important for people like me.	1,465	3.11	1.16	.95
Legitimacy: duty to obey (not at all my duty/completely my duty, 5-point scale)	To what extent is it your moral duty to obey the police?	1,464	3.51	1.28	
	To what extent is it your moral duty to support the decisions of police officers, even if you disagree with them?	1,465	2.52	1.32	
	To what extent is it your moral duty to do what the police tell you, even if you don't understand or agree with the reasons?	1,464	3.23	1.28	.87
Identification with the Black Lives Matter (BLM) movement (disagree/agree, 5-point scale)	In general, I identify with the BLM movement/cause	1,459	3.44	1.44	
	In general, I feel similar to the people in the BLM movement/cause	1,459	3.31	1.45	
	In general, I feel a sense of solidarity with the BLM movement/cause	1,459	3.53	1.45	.96
Systemic police racism (not at all/very much, 5-point scale)	How much is structural racism a problem in the following institutions – police? In terms of breakdown, 7% said “not at all”, 12% said “little bit”, 17% said “somewhat”, 24% said “a lot”, and 40% said “very much”.	1,465	3.78	1.28	

Table 2. *Comparing White and Black Research Participants*

Model	Normative alignment	Duty to obey
Procedural justice	.66***	.53***
Procedural justice * Black	-.01	-.16
Distributive justice	.20**	.25***
Distributive justice * Black	-.03	-.01
Bounded authority	-.15***	.10***
Bounded authority * Black	.02	.20*
Over-policing	-.05	-.03
Over-policing * Black	.00	.09
Under-policing	-.12***	-.25***
Under-policing * Black	.04	.05
Identification with BLM	-.03	-.04
Identification with BLM * Black	-.07	.06

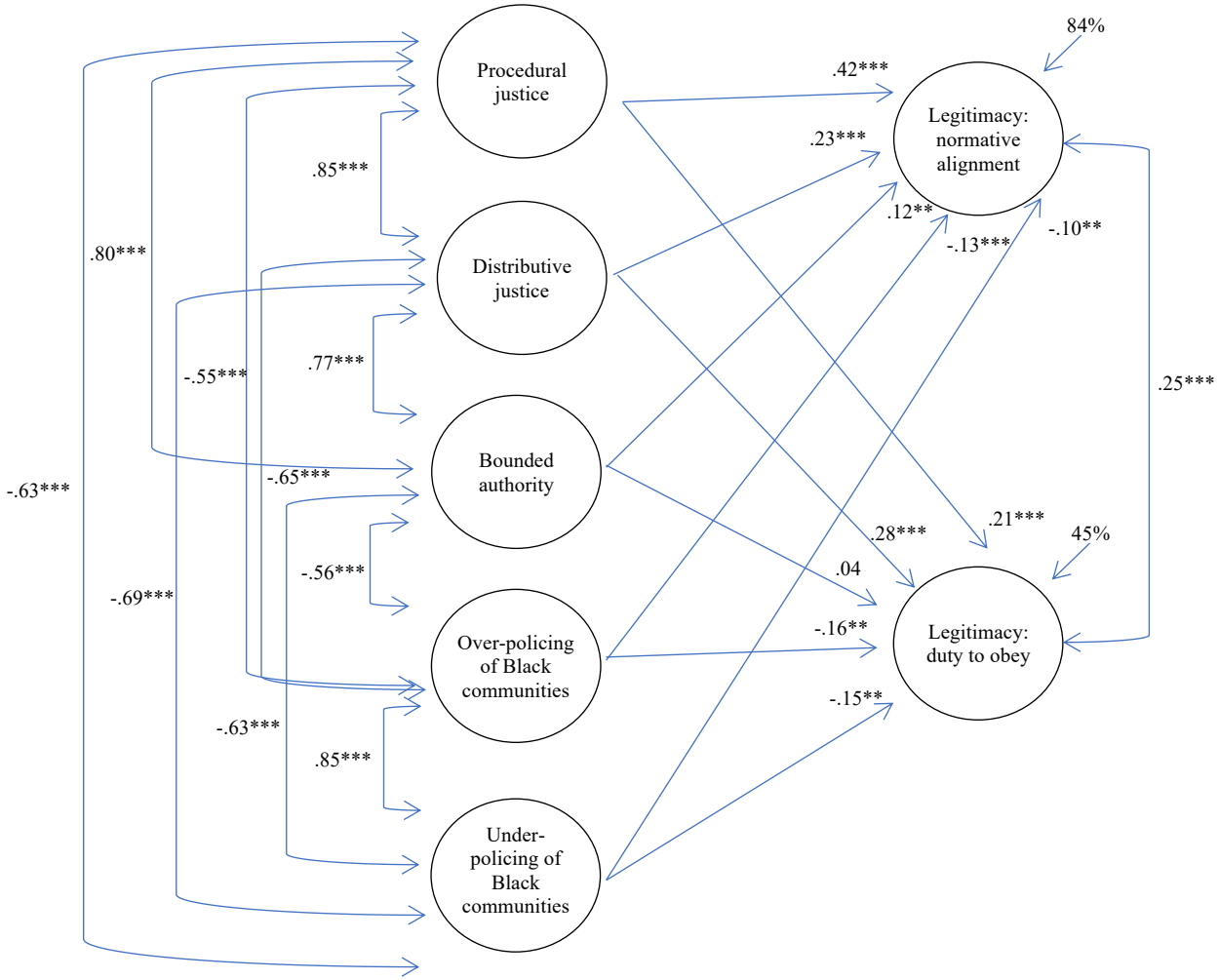
Unstandardized Coefficients from Six Separate Fitted Latent Moderated SEM Models

Table 3. *Does Identification with BLM Mean Racialized Policing is a Bigger Factor in Police Legitimacy?*

Model	Normative alignment	Duty to obey
Over-policing	-.10*	-.17**
Identification with BLM	-.05**	-.06
Identification with BLM * over-policing	-.04**	-.08***
Under-policing	-.11***	-.25***
Identification with BLM	-.06**	-.08**
Identification with BLM * under-policing	-.03**	-.06**
Over-policing	-.11*	-.19**
Identification with BLM	-.06**	-.07*
Identification with BLM * over-policing	-.04**	-.08***
Identification * over-policing * Black	.02	-.07
Under-policing	-.12***	-.26***
Identification with BLM	-.07**	-.10*
Identification with BLM * under-policing	-.03**	-.06***
Identification * under-policing * Black	.02	-.05

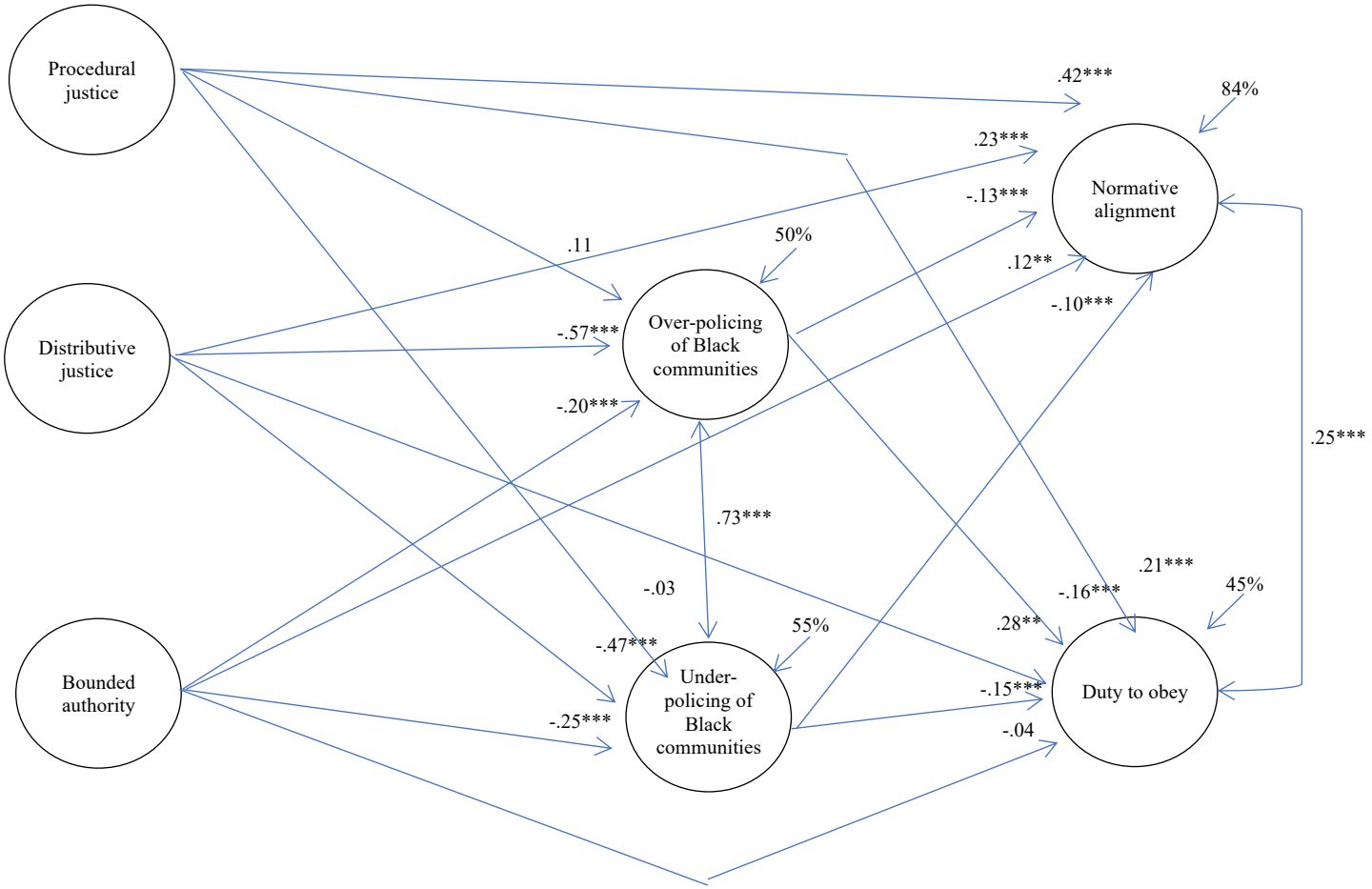
Unstandardized Coefficients from Four Separate Fitted Latent Moderated SEM Models

Figure 1. *What legitimates the police? Testing an extended PJT model of police legitimacy in the US*



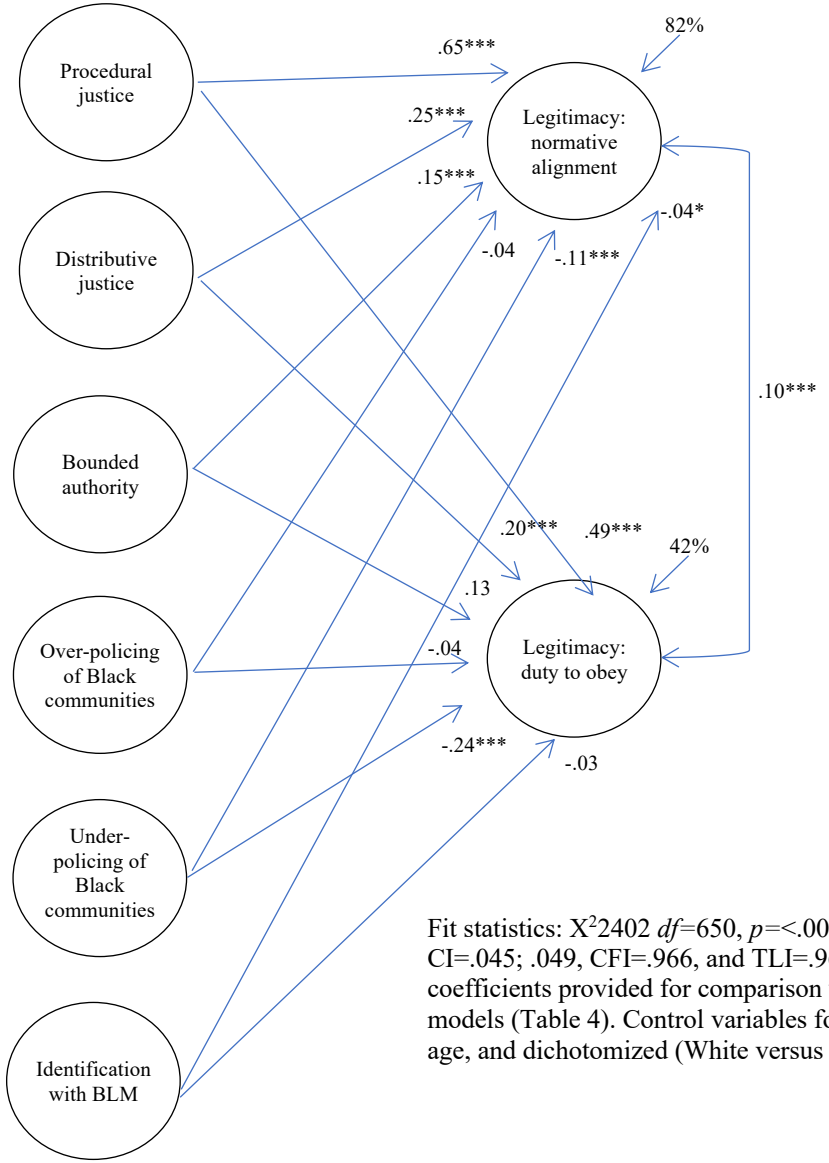
Fit statistics: Chi^2=3075 *df*=578, *p*=<.001, RMSEA=.054, RMSEA 90% CI=.052; .056, CFI=.989, and TLI=.988. Standardized regression coefficients provided. Control variables for all parts of the model: gender, age and race.

Figure 2. *Do perceptions of structural racism play a mediating role? Testing a re-specified version of the extended PJT model of police legitimacy in the US*



Fit statistics: Chi-square=3075 *df*=578, *p*=<.0005, RMSEA=.054, RMSEA 90% CI=.052; .056, CFI=.989, and TLI=.988
Control variables for all parts of the model were gender, age and race. The following were allowed to covary: procedural justice and distributive justice (r=.85), procedural justice and bounded authority (r=.80), and distributive justice and bounded authority (r=.77).

Figure 3. *Is identification with the Black Lives Matter a De-legitimating Factor? (Testing the Model for Only Black and White Research Participants)*



Fit statistics: $X^2$2402 *df*=650, *p*=<.001, RMSEA=.047, RMSEA 90% CI=.045; .049, CFI=.966, and TLI=.961. Unstandardized regression coefficients provided for comparison with latent moderated SEM models (Table 4). Control variables for all parts of the model: gender, age, and dichotomized (White versus Black) race.

Supplementary Material

Assessing empirical distinctiveness and scaling properties

We assess whether the seven types of police perceptions are empirically distinct. This is an important step, because the theoretical model underpinning the various hypotheses assumes that procedural justice, distributive justice, bounded authority, under-policing of Black communities, over-policing of Black communities, and legitimacy (defined along two connected lines) are separate (albeit correlated) constructs.

To investigate this, we fitted a series of fitted CFA models using MPlus 7.2. Indicators were set as categorical. All latent constructs were allowed to covary. Looking at the fit statistics in Table 1, we take the view that it is reasonable to treat the seven types of police perceptions as distinct from each other. The exact and approximate fit statistics suggest that the seven-factor model (M1) and four of the six-factor models (M2a-M2c and M2f) fit the data adequately according to the approximate fit statistics where one typically looks for CFI >.95; TLI >.95; and RMSEA <.08. But the seven-factor model (M1) is marginally better. This indicates that police perceptions can reasonably be defined along seven (correlated) dimensions.

Table 1. *Assessing the Scaling Properties of Police Perceptions*

		Chi-square	df	*P-value*	RMSEA	RMSEA 90% CI	CFI	TLI
M1	Seven factors	3,058	474	<.0005	.061	.059; .063	.990	.989
M2a	Six factors (combining procedural justice and distributive justice)	4,197	480	<.0005	.073	.071; .075	.985	.984
M2b	Six factors (combining procedural justice and bounded authority)	4,913	480	<.0005	.079	.077; .081	.983	.981
M2c	Six factors (combining procedural justice and normative alignment)	3,859	480	<.0005	.069	.067; .071	.987	.985
M2d	Six factors (combining bounded authority and normative alignment)	6,158	480	<.0005	.090	.088; .092	.978	.976
M2e	Six factors (combining normative alignment and duty to obey)	6,056	480	<.0005	.089	.087; .091	.978	.976
M2f	Six factors (combining over-policing and under-policing)	5,044	480	<.0005	.081	.079; .083	.982	.980
M3	Five factors (combining normative alignment and duty to obey, and over-policing and under-policing)	7,392	485	<.0005	.099	.097; .101	.973	.971

Fit Statistics for Various CFA Models, N=1,465

What about the quality of the scales? CFA allows us to assess the quality of measurement, under the assumption that the correlations among scale items is due to the fact that they are measuring the same thing. Factor loadings and R^2s are high in the seven-factor model. This indicates good scaling properties (please see Table 1 of the main paper).[1] Table 2 provides the correlations. While the strongest correlation is r=.79 (between distributive justice and normative alignment), this is just below the standard cut-off of r=.80 for discriminant validity. Looking at the correlations between the latent variables estimated from M1 (Table 2), we also see especially strong positive correlations between: (a)

[1] For procedural justice, the standardized factor loadings range from .82 to .92, and the R^2s range from .68 to .84. For distributive justice, the standardized factor loadings range from .91 to .97, and the R^2s range from .83 to .94. For bounded authority, the standardized factor loadings range from .69 to .95, and the R^2s range from .48 to .9. For over-policing, the standardized factor loadings range from .94 to .96, and the R^2s range from .88 to .92. For under-policing, the standardized factor loadings range from .44 to .96, and the R^2s range from .19 to .92. For legitimacy: normative alignment, the standardized factor loadings range from .94 to .97, and the R^2s range from .87 to .94. For legitimacy: duty to obey, the standardized factor loadings range from .84 to .94, and the R^2s range from .71 to .88. Altogether, based on the results, we moved forward with the seven-factor model.

procedural justice and distributive justice (*r*=.74); (b) procedural justice and bounded authority (*r*=.71); (c) distributive justice and bounded authority (*r*=.72); (d) procedural justice and normative alignment (*r*=.76); (e) bounded authority and normative alignment (*r*=.74); and (f) over-policing and under-policing of Black communities (*r*=.78).

Table 2. *Correlations among Police Perceptions*

Construct	1	2	3	4	5	6	7
1. Procedural justice	-						
2. Distributive justice	.74	-					
3. Bounded authority	.71	.72	-				
4. Over-policing	-.50	-.60	-.54	-			
5. Under-policing	-.57	-.65	-.61	.78	-		
6. Legitimacy: normative alignment	.76	.79	.74	-.63	-.69	-	
7. Legitimacy: duty to obey	.50	.56	.47	-.48	-.51	.61	-

Correlations between Latent Constructs from the Seven-Factor CFA Model
All Bivariate Correlations Have p<.0005 and N=1,465