

**TESTING A THEORETICAL MODEL OF PERCEIVED AUDIENCE LEGITIMACY:  
THE NEGLECTED LINKAGE IN THE DIALOGIC MODEL OF POLICE-  
COMMUNITY RELATIONS**

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Policing in the United States is characterized by an ongoing dialogue with the public regarding what it means to wield legitimate or rightful authority (Bottoms and Tankebe, 2012; Tyler, 1990). The police make various claims to legitimacy, to which their audience—the public—interprets and reacts favorably or unfavorably, conveying or withholding audience legitimacy. A critical element of this process is *perceived audience legitimacy*—that is, how the police believe they are viewed by the public (Bottoms and Tankebe, 2012). Perceived audience legitimacy shapes officers' orientations toward their job and may ultimately explain the way they interact with members of the public. For example, officers who perceive greater audience legitimacy express more support for a democratic approach to policing, including the installation of citizen oversight bodies (Kang and Nalla, 2011), and are more likely to use procedural justice when interacting with citizens (Bradford and Quinton, 2014; Jonathan-Zamir and Harpaz, 2018). Further, officers who believe they possess higher levels of audience legitimacy tend to view citizens as more cooperative, though this relationship appears to vary by neighborhood conditions (Nix, 2017a).

The idea that officers' perceptions of their legitimacy in the public eye would explain the way they approach their job is consistent with the police culture literature, which has documented the salience of officer cynicism and its effects (Muir, 1977; Niederhoffer, 1967). Cynical cops embrace an aggressive style of policing—they “believe that the citizenry is hostile to police” and “see themselves as a principally negative force in peoples' lives” (Worden, 1995: 58). They express job dissatisfaction (Regoli, Crank, and Culbertson, 1989) and more frequently engage in problematic behaviors (Hickman, 2008). Yet, in this literature, the conceptualization and measurement of cynicism has been broad, overlooking important nuances and causal relations between the presumed components of officer perceptions. For example, researchers

have employed measures that combine officers' perceptions of citizens' *attitudes*, citizens' *behaviors*, and the favorability of media coverage (Niederhoffer, 1967; Regoli, 1976; Regoli, Crank, and Rivera, 1990). Such broad measures inhibit our ability to understand fully what impacts officers' orientations.

Perceived audience legitimacy refers to how officers believe their community *views* them—a judgment they likely make based on how citizens actually *behave* toward them. Officers who recently have been disrespected by citizens (i.e., had their legitimacy challenged) may be more likely to generalize such treatment to the larger community, believing that most citizens exhibit animus toward police, and do not view them as a legitimate authority. In addition to direct contact with hostile citizens, media coverage of police work may also influence officers' perceptions of audience legitimacy. Recent studies indicate that media coverage of policing has increased officers' apprehension in the post-Ferguson era (Nix and Pickett, 2017; Wolfe and Nix, 2016). Indeed, this may explain why officers in some cities have become less proactive in recent years (Morgan and Pally, 2016; Shjarback et al., 2017). This would be consistent with the dialogic model of police legitimacy: officers perceive that hostile media coverage, because of its influence on the public and representation of its views, undermines police legitimacy, and adjust their behaviors in response (Bottoms and Tankebe, 2012). Thus, to the extent that media coverage influences officers' perceived audience legitimacy, it is likely also to affect officers' approach to policing.

At the same time, the broader social context may also shape officers' perceptions of audience legitimacy and subsequent behavioral responses. Research suggests officers use force more often in areas characterized by racial and economic inequality (Sorensen, Marquart, and Brock, 1993), as well as in areas with higher rates of violence (Jacobs and Britt, 1979; Jacobs

and O'Brien, 1998; Klinger et al., 2016). Perceived audience legitimacy might explain such ecological variation in police use of force. That is, community characteristics such as racial/ethnic heterogeneity and violent crime rates may shape officers' perceptions of audience legitimacy and, in turn, influence the occurrence of force. Violent crime rates and the size/growth of the minority population likely act as cognitive heuristics to officers, signaling the extent to which the community supports the police (Moon and Zager, 2007; Nix, 2017b; Shjarback, Nix, and Wolfe, 2018) and in turn influencing their policing style (Klinger, 1997).

Unfortunately, we know little about the sources of perceived audience legitimacy among officers. This is an important research gap given the current state of affairs in the United States, where policing has been under the microscope for the last several years (Weitzer, 2015). To advance the literature, we develop a theoretical model of the sources of audience legitimacy and test this model using two separate surveys conducted in 2018: the first with a sample of police officers from a large agency in a southern US city ( $N = 546$ ), and the second with a national probability sample of police executives ( $N = 665$ ). Our findings suggest that perceived citizen animus and community violence are associated with perceived audience legitimacy, but minority population size and growth are not. Further, personal experience with citizen disrespect influences perceived audience legitimacy indirectly, through its direct association with global perceptions of citizen animus.

### **THE CONSTRUCT OF AUDIENCE LEGITIMACY**

Since Tyler's (1990) seminal study, audience legitimacy has received a great deal of attention in the criminological literature (e.g., Jackson et al., 2012; Mazerolle et al., 2013; McLean, Wolfe, and Pratt, 2018; Wolfe et al., 2016). Yet, interestingly, scholars disagree on the conceptualization of legitimacy. On the one hand, Tyler (2003: 310) contends that citizens'

internal sense of obligation to obey authorities is “the most direct extension of the concept of legitimacy,” and is strongly influenced by perceived fairness of authorities when exercising their power (see e.g., Sunshine and Tyler, 2003; Tyler, 1990; Tyler and Huo, 2002). On the other hand, Bottoms and Tankebe (2012) argue that obligation to obey cannot be equated to legitimacy, as people can feel compelled to obey authorities for reasons apart from legitimacy. For example, while perceived legitimacy undoubtedly causes some people to feel obligated to obey authorities, others might obey due to fear of the consequences of disobedience, while still others might feel powerless and see no realistic alternative to obedience (i.e., “dull compulsion,” see Carrabine, 2004:180). Given these possibilities, Tankebe (2013: 105-106) argues that obligation to obey “can be considered a ‘dependent variable,’ sometimes explained by perceived legitimacy, and sometimes not...to the extent that legitimacy and obligation are conceptually distinct, conflating them can only obstruct efforts to understand both concepts.” He maintains that legitimacy is comprised of three overarching dimensions: lawfulness, shared values, and consent (see Beetham, 1991; Coicaud, 2002; Weber, 1978).

Shared values can be further broken down into procedural fairness, distributive fairness, and effectiveness, according to Tankebe. Citing the “rise of universalism” (Wilson, 1993) in modern society, Tankebe (2013: 111) argues there is a “shared aspiration in liberal democracies that citizens possess equal self-worth and dignity that should not be violated.” In other words, fair treatment (in terms of procedures and the distribution of outcomes) is a normative value that must be shared by legitimate authorities and those subject to their power. Additionally, legitimate authorities must demonstrate effectiveness in dealing with crime and disorder so as to “satisfy the ends which justify its enormous concentration of power” (Beetham, 1991: 137). Though often considered an instrumental concern that factors into the legitimation of police,

Tankebe (2013: 112) considers effectiveness a “normative condition for their legitimacy” (see also Bottoms and Tankebe, 2012: 146-47). Based partly on the results of a confirmatory factor analysis of survey data from more than 4,000 Londoners, Tankebe (2013:125) submits that “what police researchers have persistently tended to use as predictors of legitimacy (procedural fairness, distributive fairness, lawfulness, and effectiveness) are rather the constituent parts of legitimacy” (see also Sun et al., 2018; Tankebe et al., 2016). However, it bears clarifying these results do not confirm that this proposed four-dimensional construct represents legitimacy (see Jackson and Bradford, 2019).

Despite the lack of consensus on what constitutes legitimacy, there is substantial agreement that procedural fairness, distributive fairness, lawfulness, and effectiveness are very closely related to audience legitimacy. That is, they are either legitimacy per se, as Tankebe (2013) claims, or they are the most important and proximate antecedents of legitimacy, as others claim (Jackson and Bradford, 2019; Tyler, 2003). We revisit this point in the conclusion, when we discuss the implications of our findings. In any event, the evidence accumulated to date suggests when citizens recognize police authority as legitimate (however measured), they are more likely to comply with officers during interactions, and to abide by the law when the police are not present (see e.g., Walters and Bolger, 2018). When officers lack legitimacy, they must rely more on coercive tactics to achieve compliance. Yet, how do officers come to realize how much legitimacy they have (or do not have) in the eyes of citizens? As Bottoms and Tankebe (2012: 129) point out, police legitimacy entails more than how citizens feel about the police—it is a continuous and relational dialogue involving both police (as power-holders) and citizens (as the audience to their power):

[T]hose in power (or seeking power) in a given context make a claim to be the legitimate ruler(s); then members of the audience respond to this claim; the

power-holder might adjust the nature of the claim in light of the audience's response; and this process repeats itself.

A crucial part of this ongoing dialogue—the decision whether to adjust their claim to legitimacy—results from officers' *perceived* audience legitimacy (or lack thereof).

Relative to the large body of literature on police legitimacy from the citizen's perspective, very few studies have focused on police officers' perceptions of their audience legitimacy (Jonathan-Zamir and Harpaz, 2014; Nix, 2017b). Such perceptions appear to be significant. For example, officers who perceive greater audience legitimacy exhibit a greater willingness to exercise procedural justice with citizens (Jonathan-Zamir and Harpaz, 2018), and consistent with Bottoms and Tankebe's theory, have higher levels of self-legitimacy, which subsequently increases commitment to community partnerships (Wolfe and Nix, 2016) and decreases reliance on coercive force to gain control over encounters (Tankebe and Meško, 2015). Given such prosocial outcomes, research is needed that sheds light on the antecedents of perceived audience legitimacy.

### **THEORIZING THE SOURCES OF PERCEIVED AUDIENCE LEGITIMACY**

What factors affect officers' perceptions of their audience legitimacy? The extant literature suggests several possibilities, including officers' perceptions of how they are treated by citizens and the media, and the broader community context in which they work.

### **EXPERIENCES WITH CITIZEN DISRESPECT**

Citizen disrespect communicates to officers that they are not viewed as legitimate. As Van Maanen (1978: 316) observed, officers take it as an indication "that their position and authority in the interaction are not being taken seriously." Such a legitimacy challenge may partially explain why officers respond more punitively to disrespectful citizens (Van Maanen, 1978; Westley, 1970). Decades of research focused on the dynamics of police-citizen

interactions demonstrates that officers are more likely to arrest hostile and/or noncompliant citizens (Klinger, 1994; Lundman, 1994; Piliavan and Briar, 1964; Worden and Shepard, 1996) and use higher levels of force when citizens are physically resistant (Alpert and Dunham, 2004; Terrill, 2001). Disrespect by citizens also triggers other, less punitive behavioral responses from officers (Mastrofski, Reising, and McCluskey, 2002). For example, a pair of experiments by Nix and colleagues (2017) revealed that officers placed less importance on exercising procedural justice with disrespectful citizens. Similarly, Pickett and Nix (2019) showed that officers are more likely to support aggressive styles of policing if they believe citizens treat officers unfairly and disrespectfully. One potential explanation for findings such as these is that disrespect signals compromised legitimacy, and that the encounter necessitates a more punitive response.

The effects of citizen disrespect likely extend beyond the interaction level and contribute to officers' general outlooks and expectations. Toch (1996: 107) reminds us that repeated exposure to citizen disrespect can have a cumulative effect on officers, such that they can be seen as "composite[s] of the incidents in which [they have] been involved." Van Maanen (1978: 311-15) similarly argued that the "experientially based meanings" that officers learn to ascribe to citizens are "sustained and continually reaffirmed through [their] everyday activity." Canteen talk provides additional opportunities for officers to be exposed vicariously to citizen disrespect, via their peers' experiences (Waddington, 1999). As their direct and vicarious experiences with disrespectful treatment by citizens increases, officers' perceived audience legitimacy likely decreases, which may in turn influence their outlook and policing style. A recent study by Pickett and Ryon (2017) provides preliminary support for such a causal process. In their national survey, officer support for due process reforms in policing (e.g., early intervention systems, civilian oversight, sensitivity training) was significantly associated with the global belief that citizens are



fair and respectful when interacting with officers. Perceived audience legitimacy is likely the key mechanism that would explain this relationship. Officers who believe citizens are generally fair and respectful towards the police likely believe they have greater legitimacy in the public eye, and thus are not opposed to policing reforms meant to expand due process protections and citizen oversight.

## **MEDIA COVERAGE OF LAW ENFORCEMENT**

Another possible antecedent of perceived audience legitimacy is the extent to which officers believe the news media are hostile toward law enforcement. Communications studies suggest individuals frequently harbor hostile media perceptions—the belief that media coverage is biased against their group (Hansen and Kim, 2011; Rojas, 2010; Vallone, Ross, and Leeper, 1985). Moreover, individuals tend to believe the media influence other peoples' attitudes and behaviors (Paul, Salwen, and Dupagne, 2000; Sun, Pan, and Shen, 2008), which in turn exerts causal effects on their own attitudes and behaviors (Rojas, 2010; Tal-Or et al., 2010).

In his classic survey of New York police officers, Niederhoffer (1967: 234) found that the vast majority believed newspapers “seem to enjoy giving an unfavorable slant to news concerning the police, and prominently play up police misdeeds rather than virtues.” Accurate or not, these attitudes persist today. In a survey of police officers at a southeastern U.S. agency, Nix and Pickett (2017) found that officers who felt the media were more hostile toward policing (i.e., negative, unfair, deceptive, unreliable) were more likely to think citizen distrust, noncompliance, and animus toward police had increased from 2014 to 2016. In a separate agency, Wolfe and Nix (2016) found that officers reported being less motivated as a result of negative publicity surrounding law enforcement post-Ferguson, and expressed less desire to collaborate with their community to solve problems. Notably, both studies used coarse measures of media perceptions

that did not distinguish local versus national media – but recent work suggests officers view local media as more impactful to their organization than national media (Matusiak, 2019). We expect officers’ perceptions of local media to be more consequential than their perceptions of national media, given local media’s focus on stories closest to home and on the officers’ agency specifically. Officers who believe the local media are hostile toward police are likely to believe this coverage undermines their legitimacy in the eyes of the local community (Crank and Langworthy, 1992).

### **VIOLENT CRIME IN THE LOCAL COMMUNITY**

Danger perception theory posits that officer aggression—namely, the use of force—is driven by real or perceived danger (Goldkamp, 1976; Jacobs and Britt, 1979). The extant literature generally supports this contention: officers working in areas with higher rates of community violence tend to use nonlethal and lethal force more frequently (Fyfe, 1980; Lee Vaughn, and Lim, 2014; Lim, Fridell, and Lee, 2014; Terrill and Reisig, 2003). Klinger and colleagues’ (2016) analysis in St. Louis suggests the amount of firearm violence in a community predicts the use of lethal force by officers. In their study, the racial composition of neighborhoods did not have a direct relationship with officer-involved shootings, but it did have an indirect relationship through its relationship with firearm violence. Neighborhoods with moderate levels of firearm violence experienced more officer-involved shootings; however, officers apparently stayed away from neighborhoods with the highest levels of firearm violence (see also, Klinger, 1997).

Officers’ experiences working in violent communities may condition them to expect more citizen noncompliance, disrespect, and violence directed toward the police (Smith and Alpert, 2007). The level of violent crime in a jurisdiction—to the extent that it is perceived by

officers—likely serves as a partial indicator of the degree to which the public supports the police (Moon and Zager, 2007; Nix, 2017b). In other words, the violent crime rate is used as a cognitive heuristic when officers think about the level of legitimacy they garner from the public. Officers are likely to believe they have less legitimacy in areas with higher levels of violence, and, in turn, police those areas more aggressively than places with less violence. Or, in areas with the highest levels of violence, officers may reason that their legitimacy has been entirely compromised, and respond by de-policing. In any event, we expect crime rates, real or perceived, to be significantly associated with officers' perceptions of audience legitimacy independent of their direct experiences with citizen disrespect.

### **MINORITY GROUP SIZE AND GROWTH**

Nonwhite citizens generally express less confidence in and support of the police (Tuch and Weitzer, 1997). Blacks' and Hispanics' confidence, in particular, has deteriorated since Ferguson (Norman, 2017). Similar to our discussion of violent crime rates, community racial/ethnic composition also may be used by officers as a mental shortcut for estimating the level of legitimacy they possess in the eyes of the community. Officers working in predominantly black/Hispanic neighborhoods may adopt a more aggressive approach to policing, reasoning that their compromised legitimacy in those neighborhoods generates noncompliance and a lack of cooperation among residents. Indeed, prior studies have found that racial composition is associated with such policing outcomes as arrest rates (Liska and Chamlin, 1984; Liska, Chamlin, and Reed, 1985) and the use of nonlethal and lethal force (Jacobs and O'Brien, 1998; Lersch et al., 2008; Liska and Yu, 1992; Smith, 1986). Focusing on ethnic composition, Holmes et al. (2018) recently found a significant relationship between percent Hispanic and police-caused homicides of Hispanics across 230 cities. To date, however, we have no empirical

evidence concerning whether the racial/ethnic composition of a community influences officers' perceived audience legitimacy. If so, this could help clarify why such ecological factors are associated with officer behaviors.

Alternatively, the racial threat hypothesis posits that as the relative size of the minority population increases in an area, the majority group perceives greater threat—economic, political, cultural, or criminal—and in turn, the criminal justice system is used as a tool to suppress the minority population, thereby protecting the majority's status (Blalock, 1967; Horowitz, 1985). For instance, in areas where the size of the minority population is larger, white citizens are more fearful (Pickett et al. 2012), tend to be more supportive of punitive crime control policies (Baumer et al., 2003; King and Wheelock, 2007), and exhibit greater empowerment of the police (Holmes et al., 2008; Stults and Baumer, 2007). The community's racialized fears should be evident to police officers, and perhaps factor into their judgments about the legitimacy they hold in the eyes of community members. As but one example, officers working in areas experiencing a recent growth in minority populations may sense increased fear of crime among white citizens, believing that it undermines their legitimacy in the eyes of those who comprise the majority of the community. If so, this could explain some of the relationships researchers have documented between population makeup (i.e., percent minority, change in percent minority) and various policing outcomes, like use of force (Sorensen et al., 1993), searches (Novak and Chamlin, 2012), and misconduct (Kane, 2002), among others.

### **HYPOTHESES AND CURRENT FOCUS**

Based on our review of the literature, we tested the following hypotheses with our studies.

*H1. Officers who have recently been disrespected by citizens will perceive lower levels of audience legitimacy.*

H2. *Officers who perceive greater citizen animus in general will perceive lower levels of audience legitimacy.*

H3. *Officers who believe local media are more hostile toward law enforcement will perceive lower levels of audience legitimacy.*

H4. *Officers who believe crime is increasing will perceive lower levels of audience legitimacy.*

H5. *Actual violent crime rates will be inversely associated with perceived audience legitimacy.*

H6. *In areas where the relative size of the minority population is larger or has grown recently, officers will perceive lower levels of audience legitimacy.*

We tested these hypotheses with two samples of police officers—the first sample consisting of patrol officers from a southern U.S. police department and the second study consisting of a national sample of police chief executives. It was necessary to examine the predictors of perceived audience legitimacy in different studies for several reasons. First, there is an ongoing debate regarding the conceptualization of audience legitimacy. Tyler (1990) argues that legitimacy is comprised of two elements: *trust* and *obligation to obey*. Alternatively, Tankebe (2013) contends that perceived obligation to obey the police is an outcome of legitimacy, rather than a component of it. He argues that legitimacy is comprised of perceived police *procedural justice*, *distributive justice*, *lawfulness*, and *effectiveness* (see also Sun et al., 2018; Tankebe, Reisig, and Wang, 2016). Although we do not take a position on this debate, we are wary of the potential for mono-operation bias (Shadish et al., 2002), and as such, believe it is important to ensure our results are robust to the measurement of legitimacy. Accordingly, Study 1 uses a Tylerian measure of audience legitimacy comprised of trust and obligation to obey. Study 2, in contrast, operationalizes audience legitimacy in a manner consistent with Tankebe and colleagues' conceptualization.

Second, analyzing data from a single agency sample (Study 1) allowed us to examine the relationship between officers' subjective perceptions of changes in their local crime rate on

perceived audience legitimacy. Study 2, the national sample of chief executives, provided the opportunity to examine whether an objective measure of the crime rate had a similar effect on perceived audience legitimacy. These different operationalizations of crime allow us to assess the validity of our theoretical claims. Third, it is valuable to have empirical results from samples comprised of different types of police officers because it sheds light on whether the predictors of audience legitimacy are unique to a particular officer type (i.e., line-level vs. executive), agency, jurisdiction type (e.g., population size, political climate), or US region.

## **STUDY 1**

### **METHOD**

For our first study, we administered a survey to a large police department in a southern US city. The city has a large population (>100,000) that is rapidly growing—having increased by approximately 17% from 2010 to 2016. Sixty-eight percent of its residents are white, 8 percent are black, 6 percent are Asian, and the remainder belongs to some other race. One-third of the population is of Hispanic or Latino decent. According to the Federal Bureau of Investigation’s Uniform Crime Report (UCR), the overall violent crime rate in the metropolitan statistical area has increased slightly in recent years (from 2014 to 2016).

In January 2018, with the help of an executive lieutenant, we invited all 1,752 sworn employees to participate in an anonymous online survey. The executive lieutenant sent three reminder emails over the next two weeks, with the data collection period ending in early February. We used a self-administered web-based survey to minimize social desirability bias, although we knew it would likely yield a low response rate (Tourangeau, Conrad, and Couper, 2013). Response rates to police surveys have declined over the past decade (Nix et al., 2019), and computerized surveys of police officers have tended to obtain low response rates: 21%

(Donner, Fridell, and Jennings, 2016), 25% (Skogan, 2015), 28% (Reynolds and Helfers, 2018), and “just over 30%” (Bradford and Quinton, 2014: 1032). Similar to this literature, 546 out of the 1,752 officers invited to participate in our survey did so, resulting in a 31% response rate. We are not especially concerned about the response rate because the demographics of our sample closely resembled those of the agency, and because we are able to test the generalizability of the findings in a second survey.<sup>1</sup> There is also a weak relationship between response rates and nonresponse bias (Peytcheva, 2013; Pickett et al., 2018).

### **DEPENDENT VARIABLE: AUDIENCE LEGITIMACY**

We asked officers to indicate their level of agreement (1=strongly agree to 5=strongly disagree) with the following statements: “Most civilians feel an obligation to obey police officers,” “Most civilians believe they should do what the police say, even if they disagree,” and “Most civilians believe this department can be trusted to make decisions that are right for the people in their neighborhood.” We reverse coded the items so that higher scores indicated greater agreement, and averaged responses to generate a mean index, *audience legitimacy* ( $\alpha=.87$ ).

Descriptive statistics for all variables used in Study 1 are presented in Table 1.

[TABLE 1 ABOUT HERE]

### **PREDICTOR VARIABLES**

#### **Recently Disrespected**

Our first predictor variable captured officers’ direct experiences with citizen disrespect. We asked officers how many times civilians had done each of the following to them in the past year while they were on duty: (1) called you names, (2) treated you with disrespect, and (3)

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<sup>1</sup> In terms of gender and race, 90% of respondents were male (vs. 90% of the agency) and 67% were white non-Hispanics (vs. 69% of the agency). In terms of age, 17% of the sample were fifty or older (vs. 14% of the agency), 44% were in their forties (vs. 40% of the agency), 32% were in their thirties (vs. 36% of the agency), and 7% were in their twenties (vs. 11% of the agency).

verbally abused you. Answer choices included 1=never, 2=one to three times, 3=four to six times, 4=seven to nine times, and 5=ten or more times (Weitzer and Tuch, 2006). We averaged responses to these three questions to generate a mean index ( $\alpha=.95$ ), with higher scores indicating more direct exposure to disrespectful citizens in the past year.

### **Citizen Animus**

Realizing that direct exposure to citizen disrespect accumulates over time (Toch, 1996), and that officers may additionally be vicariously exposed to citizen disrespect, we measured respondents' global perceptions of how citizens treat police officers. We asked respondents to indicate their level of agreement (1 = strongly agree to 5 = strongly disagree) with seven statements: (1) People often disrespect and insult the police, (2) People are normally polite when dealing with the police, (3) People treat police officers with dignity, (4) People treat the police worse than they treat other government employees, (5) People treat police officers unfairly, (6) People normally listen to the police before jumping to conclusions in incidents, and (7) People will ignore or walk away from the police when officers try to explain a situation (Pickett and Ryon, 2017). Theoretically, officers' perceptions of citizen *behavior* are distinct from, and a cause of, their perceptions of audience legitimacy. Supporting this theoretical assumption, a promax-rotated factor analysis indicated that the animus items loaded onto a separate factor than the audience legitimacy items, with acceptable pattern loadings (see Appendix A). We averaged responses to the items to generate a mean index, *citizen animus* ( $\alpha=.82$ ), whereby higher scores reflect the global belief that citizens treat police officers disrespectfully and unfairly.<sup>2</sup>

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<sup>2</sup> As noted by a reviewer, *citizen animus* and *recently disrespected* are conceptually similar. There is a moderate bivariate correlation between the two scales ( $r = .46$ ; see Appendix B, Table B1), but factor analysis (with promax rotation) indicated the individual items used to construct each scale load on separate factors. The full pattern matrix for this analysis is available on request.



## Perceived Crime Trend

In this study, we use a perceptual measure of crime, but in study 2, we use an objective measure based on FBI data. For study 1, we asked respondents the following question: “In your best judgment, has the overall crime rate in [city blinded] increased or decreased over the past three years?” Answer choices included 1 = decreased greatly, 2 = decreased, 3 = stayed about the same, 4 = increased, and 5 = increased greatly.

## CONTROLS

In our analyses, we controlled for officers’ gender (1 = *male*), race/ethnicity, (1 = non-Hispanic *white*), and education (1 = *four-year degree* or higher). In addition, we controlled for *years of experience* with a continuous variable, and *rank* with two dummy variables, *front-line supervisor* (i.e., corporal or sergeant) and *upper management* (i.e., lieutenant, commander, assistant chief, or chief). *Police officer* is the reference category.

## ANALYTIC STRATEGY

Because the outcome (audience legitimacy) was a mean index that approximated a normally distributed continuous variable, we used ordinary least squares (OLS) regression equations to test hypotheses 1, 2, and 4. Due to evidence of heteroscedasticity of error terms, we estimated our models using robust standard errors. Collinearity did not appear to be a problem. All variance inflation factors fell below 3.0 (mean VIF=1.39), and all bivariate correlations were less than  $|\cdot60|$  (Tabachnick and Fidell, 2007). As is common in survey research, respondents sometimes skipped over questions, resulting in item-missing data for some of the variables in our analyses. To account for this, we used multiple imputation ( $m=25$ ; see e.g., Allison, 2002; McKnight et al., 2007; Rubin, 1996). Multiple imputation avoids the bias that can be created by listwise deletion and helps maintain power by, for example, retaining respondents in the analysis

who were missing a value for one item out of a larger scale (Sterne et al., 2009).<sup>3</sup> The mean of our dependent variable did not differ significantly between respondents with no item-missing data and respondents with missing data on one or more variables, suggesting our data satisfied the Missing At Random (MAR) assumption.<sup>4</sup> Finally, we meet the general recommendation to have at least 20 respondents per variable in our statistical models (Tabachnick and Fidell, 2007), and our sample size is sufficient for having approximately 80% power to detect pre-specified individual regression coefficients for medium-sized effects (Maxwell, 2004).

## RESULTS

Before discussing our multivariate results, it is instructive to examine more closely the distributions of our dependent and predictor variables. *Audience legitimacy* ranged from 1 to 5 with a mean of 3.48 (SD = .78). Roughly 46% of respondents scored 4 or higher on this scale, indicating a large portion of the sample agreed citizens in their community trust the police and feel obligated to obey them. *Recently disrespected* ranged from 1 to 5 with a mean of 3.33 (SD = 1.39). On the one hand, 6.5% of the sample scored 1 on this scale – indicating they had never been called names, treated disrespectfully, or verbally abused while on duty in the past year. On the other hand, nearly 30% of the sample scored 5 on the scale, indicating frequently being disrespected while on duty. *Citizen animus* ranged from 1.57 to 5 with a mean of 3.42 (SD = .66). Roughly 23% of the sample scored 4 or higher on this scale, indicating they agree citizens generally treat police badly. Finally, *perceived crime trend* ranged from 1 to 5 with a mean of 3.75 (SD = .77). Seventy percent of the sample believed crime had increased or increased greatly over the past three years, while 22% felt it had stayed about the same, and the remaining 8% felt it had decreased or decreased greatly.

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<sup>3</sup> We obtained substantively similar results using listwise deletion (available on request).

<sup>4</sup> “Complete data” group mean = 3.496 vs. “Some missing data” group mean = 3.359 ( $t = 1.180$ ,  $p = .24$ ).

Turning to our multivariate analyses, Model 1 in Table 2 presents the results of an OLS model that regressed perceived audience legitimacy onto *recently disrespected* and each of our control variables. Consistent with our first hypothesis, officers' recent experiences with citizen disrespect were significantly and inversely associated with their perceived audience legitimacy ( $b = -.154, p < .001$ ). In Model 2, we regressed perceived audience legitimacy onto citizen animus and the controls. The results supported our second hypothesis: citizen animus was strongly and inversely associated with perceived audience legitimacy ( $b = -.464, p < .001$ ). Model 3 presents the results of an OLS model that regressed perceived audience legitimacy onto perceived crime trend along with the controls. The results are supportive of Hypothesis 4, indicating that perceived crime trend ( $b = -.185, p < .001$ ) is significantly and inversely associated with perceived audience legitimacy. Rank was significant in this model as well, with front-line supervisors ( $b = .225, p = .009$ ) and upper management ( $b = .371, p = .005$ ) perceiving significantly higher levels of audience legitimacy.

[TABLE 2 ABOUT HERE]

In Model 4 of Table 2, all three predictors were included in the regression equation, and the results provided further support for Hypothesis 2. Independent of their recent experiences with citizen disrespect and their perceptions of the crime trend, officers who perceived higher levels of citizen animus ( $b = -.394, p < .001$ ) reported significantly lower levels of audience legitimacy. The direct effect of recent experience with citizen disrespect was reduced to nonsignificance; but, perceived crime trend ( $b = -.096, p = .023$ ) remained significantly and inversely associated with perceived audience legitimacy.

However, consistent with our theoretical discussion above, it is possible that officers' experience with citizen disrespect is one element in the accumulation of their views of citizen

animus more generally. If so, citizen disrespect may be indirectly related to perceived audience legitimacy through perceptions of general citizen animus. In other words, recent experiences with citizen disrespect may increase officers' global perceptions of citizen animus, which in turn shape perceived audience legitimacy. We tested for an indirect effect using a Sobel test with bootstrap confidence intervals (Hayes, 2013; Zhao, Lynch, and Chen, 2010). This analysis indicated that recent experience with citizen disrespect had a statistically significant indirect association with perceived audience legitimacy, through citizen animus ( $b = -.088, p < .001, 95\% \text{ CI} = -.118 \text{ to } -.059$ ).<sup>5</sup> That is, officers' personal experiences with disrespect in the past year influenced their global assessments of how citizens tend to behave toward police, which in turn shaped their perceptions of whether the public sanctions their legal authority.

## STUDY 2

### METHOD

For our second study, we conducted a survey with a national probability sample of municipal police chiefs. Using the National Directory of Law Enforcement Administrators (NDLEA), we obtained the mailing addresses of 12,039 municipal police departments along with the names of their current police chief. We placed each of these departments into one of four strata based on the number of officers they employed: 0 to 24, 25 to 49, 50 to 99, and 100 or more.<sup>6</sup> We then drew a random sample of 624 agencies from each stratum, resulting in a stratified random sample of 2,496 departments.

In February 2018, we pre-notified the chiefs of each police department in our sample about the survey via a postcard, which informed them of the upcoming mail survey and provided

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<sup>5</sup> Full results are available on request.

<sup>6</sup> The Bureau of Justice Statistics utilizes a similar sampling strategy (i.e., stratifying by agency size) for its *Law Enforcement Management and Administrative Statistics* (LEMAS) survey (see also Strom and Hickman, 2010).

a link to an online version if they preferred to take it at that time. One week later, we mailed the survey (along with a cover letter outlining the purpose of the study and their rights as research participants) to the chief of each department in our sample. Again, they were given the option to complete the survey online if they preferred. We then mailed surveys along with reminder letters to those who had yet to respond approximately two weeks later (Dillman et al., 2009). We received 675 surveys (369 by mail, 306 online) by the time data collection ended in mid-April, resulting a 27% response rate.<sup>7</sup> As noted previously, the best available evidence indicates survey response rate and non-response bias are only weakly correlated (Peytcheva, 2013; Pickett et al., 2018). This evidence, coupled with other evidence that we discuss later, bolsters our confidence that this sample is representative of the population from which it was drawn.

#### **DEPENDENT VARIABLE: AUDIENCE LEGITIMACY**

There is an ongoing debate among criminologists about the proper conceptualization of legitimacy (Reisig et al., 2007; Tankebe, 2013; Tyler and Jackson, 2014). Most often, researchers have measured audience legitimacy similar to the way we did in Study 1, as obligation to obey. However, Tankebe (2013) has proposed a four dimensional construct consisting of procedural justice, distributive justice, lawfulness, and effectiveness. Mono-operation bias occurs when researchers assume that any one measure, like the *audience legitimacy* scale used in Study 1, accurately taps some broader theoretical concept, like audience legitimacy, but the findings actually differ depending on the specific measures used (Shadish et al., 2002). Given the aforementioned debate about legitimacy, in an effort to minimize mono-operation bias and threats to external validity, we used different survey questions to measure

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<sup>7</sup> We removed ten of the 675 respondents because one worked for a sheriff's department, one worked for a village department that contracts with its state police force, and eight failed to provide enough information for us to determine which stratum from which they were sampled.

perceived audience legitimacy in this study, as well as surveying a different sample. This second study also enabled us to examine potential relationships between our dependent variable and additional, theoretically-germane variables. We asked respondents to indicate their agreement (1 = strongly agree to 5 = strongly disagree) with the following seven statements: *Most residents believe the police...* (1) are corrupt, (2) use rules and procedures that are fair to everyone, (3) clearly explain the reasons for their actions, (4) treat people with respect, (5) are biased against them, (6) do a good job tackling crime in the community, and (7) represent their values (Tankebe, 2013; Tankebe, Reisig, and Wang, 2016). Exploratory factor analysis indicated the seven items loaded onto a single construct (See Appendix A). We coded responses so that higher scores reflected greater perceived *audience legitimacy* and averaged them to create a mean index ( $\alpha = .76$ ). Descriptive statistics for each variable included in the analyses for Study 2 are presented in Table 3.

[TABLE 3 ABOUT HERE]

## **PREDICTOR VARIABLES**

### **Citizen Animus**

We asked respondents to indicate their level of agreement with the same seven statements used to measure citizen animus in Study 1. As with Study 1, factor analysis with promax rotation indicated the citizen animus and audience legitimacy questions loaded onto separate factors (see Appendix A). Accordingly, we coded items so that higher scores reflected greater perceived animosity of citizens and averaged them to generate a mean index, *citizen animus* ( $\alpha = .81$ ).

### **Hostile Media Perceptions**

According to Crank and Langworthy's (1992:339) institutional theory of policing, the media represent one of many actors in an institutional environment "on whom departments

depend for legitimacy.” While several studies have examined the impact of media coverage on officers’ perceptions, our study goes beyond much of the existing research by measuring views about both national and local media (Nix and Pickett, 2017). Per our theory, and prior work, perceptions of local media should be most important since agencies have stronger relationships with local news organizations and often lean on them to communicate with the public (Chermak and Weiss, 2005; Surrette, 2001). Matusiak (2019), for example, asked police chiefs in Texas how impactful 26 stakeholders – including national and local media – were to their organization (0 = not important at all to 5 = extreme importance). The sample rated local media’s impact as more important than national media (means = 3.82 and 1.59, respectively). In multivariate analyses, local media perceptions were inversely associated, whereas national media perceptions were positively associated, with the organizational goal of prioritizing law and order (see also Matusiak et al. 2017).

We asked respondents to consider how the media portrays law enforcement, both nationally and locally. They were asked whether “NATIONAL MEDIA COVERAGE of law enforcement” is (1) positive or negative, (2) fair or unfair, (3) truthful or untruthful, and (4) reliable or unreliable. For each question, respondents were asked to answer on a four-point item-specific response scale (e.g., 1 = very positive, 2 = positive, 3 = negative, 4 = very negative). We then presented respondents with the same set of questions as they pertained to “LOCAL MEDIA COVERAGE of their agency.” Responses to these eight items loaded onto two factors with acceptable loadings (national media = .75 to .83, local media = .84 to .86). As such, we created two mean indexes, *hostile national media* ( $\alpha = .88$ ) and *hostile local media* ( $\alpha = .93$ ), wherein higher scores reflect a belief that media coverage of the police is more hostile.

### **Average Violent Crime Rate**

Using UCR data, we calculated each jurisdiction's average violent crime rate from 2014 to 2016.<sup>8</sup> For each year, we divided the total number of murders and nonnegligent manslaughters, rapes, robberies, and aggravated assaults in each jurisdiction by its reported population and multiplied by 100,000. Similar to previous studies (Baumer et al., 2003), we averaged these annual rates to create a three-year *average violent crime rate*, which ranged from 0 to 2,802 violent crimes per 100,000 citizens (mean = 349). In order to reduce the right skew of this variable, we used its natural log in our analyses.

### **Minority Presence**

We used data from the 2016 American Community Survey's (ACS) 5-year estimates to calculate the percentage of each city's population who identified as (1) Black or African American alone or (2) Hispanic or Latino (of any race). Percent black ranged from 0 to 94.32 (mean = 11.79) and percent Hispanic ranged from 0 to 93.66 (mean = 14.02). Both variables were right skewed, so we again used natural log transformations to normalize the distributions. The transformed versions of *%Black* and *%Hispanic* served as predictors in our analyses. We also obtained estimates of each city's racial/ethnic makeup from the 2000 decennial census in order to calculate absolute changes in %Black and %Hispanic from 2000 to 2016. *Change %Black* ranged from -14.38 to 32.65 with a mean of 1.60. *Change %Hispanic* ranged from -7.24 to 72.88 with a mean of 4.35. Both variables were skewed, so we used their natural log transformations in our analyses.

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<sup>8</sup> At the time of this writing, the 2017 UCR had not yet been published.



## CONTROLS

We controlled for several respondent/agency characteristics in our models. We controlled for rank with a binary variable (1 = *chief*, 0 = other), as some surveys were completed by an officer other than the chief.<sup>9</sup> We also controlled for respondents' *years of experience* with a continuous variable and their level of education with a binary variable (1 = *Master's degree* or higher, 0 = less than Master's degree), as there is evidence that each is associated with cynicism/distrust of citizens (Paoline, Myers, and Worden, 2000; Shjarback et al., 2018; Sobol, 2010). In addition, we controlled for the size of the respondent's department, since chiefs of small departments are generally more accessible to the public (Brown, 1981) and may enjoy a more informal relationship with citizens (Kowalewski et al., 1984). Chiefs of larger departments, meanwhile, tend to be more cynical of their communities (Regoli, Crank, and Culbertson, 1989). We defined departments with 100 or more officers as a *large agency* (1 = yes, 0 = no). Although limited, there is evidence of a possible relationship between perceived audience legitimacy and officer race, gender, or the interaction of the two (Gau and Paoline, 2017; Paoline, 2000; Worden, 1993). Most of our sample reported being non-Hispanic white (89%) and male (94%). The small number of nonwhites and females would make resulting regression coefficients for separate binary control variables unstable. Therefore, we elected to control for race and gender with a single binary variable, *white male* (1 = yes, 0 = no).

We controlled for various community characteristics as well. Prior research has uncovered regional variation in terms of the danger officers face on the job, as measured by assaults (Wilson and Zhao, 2008) and felonious killings of officers (Kaminski, 2008). Such incidents are more prevalent in the southern United States, so it is plausible officers working in

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<sup>9</sup> Approximately 27% of respondents were not the chief of their department. However, the majority of these (over 80%) were lieutenants, majors, commanders, deputy chiefs, or other high-ranking officers.

the South may perceive lower levels of audience legitimacy than do their counterparts from other regions. Region is measured with three dummy variables: *Northeast*, *Midwest*, and *West* (*South* is the reference group).<sup>10</sup> Similarly, large cities and those with higher levels of unemployment tend to experience higher levels of crime, making it necessary to control for these factors as well (Chiricos, 1987; Nolan, 2004; Phillips and Land, 2012). The *population size* and *unemployment rate* of each department's city were obtained from 2016 ACS 5-year estimates. Population size ranged from 126 to 2.2 million with a mean of approximately 63,000. Unemployment rate ranged from 0 to 27.2% with a mean of 7.47%. Both were highly skewed, so we used their natural log transformations as control variables in our models. Finally, studies suggest political conservatism is associated with various attitudes toward police, including support for the use of force (Gerber and Jackson, 2017; Silver and Pickett, 2015), militarization (Moule, Fox, and Parry, 2018), and overall confidence in police (Cao, Stack, and Sun, 1998). By extension, a jurisdiction's political climate might influence officers' perceptions of their audience legitimacy. Therefore, we controlled for the percentage of the county that voted for Donald Trump in 2016 as a measure of the local political climate (Leip, 2018).

## **ANALYTIC STRATEGY**

Prior to analysis, we weighted the sample in order to account for the sampling design, which oversampled larger departments. As in Study 1, our outcome variable was a mean scale that approximated a normally distributed continuous variable. Accordingly, we used OLS regression to test hypotheses 2, 3, 5, and 6. Due to evidence of heteroscedasticity, we estimated models using robust standard errors. Collinearity did not appear to be a problem in any of the models. All variance inflation factors fell below 3.0 (mean VIF = 1.77), and none of the bivariate

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<sup>10</sup> Regions were defined as they are in the UCR.

correlations exceeded  $|.70|$  (Tabachnick and Fidell, 2007). As in Study 1, we used multiple imputation ( $m=25$ ) to account for item-missing data (McKnight et al., 2007).<sup>11</sup> Again, respondents with complete data and those with missing data on one or more variables were not significantly different in terms of their mean *audience legitimacy*, suggesting we met the Missing At Random assumption.<sup>12</sup> The number of subjects per variable in each of our regression models well exceeds 20, and our sample size is sufficient for 80% power to detect pre-specified individual regression coefficients for medium-sized effects (Maxwell, 2004; Tabachnick and Fidell, 2007).

## RESULTS

Fifty-seven percent of this sample scored 4 or higher on *audience legitimacy* (mean = 3.94, SD = .46), indicating the majority felt their communities believe police treat people fairly, act lawfully, and deal with crime effectively. *Citizen animus* ranged from 1 to 4.71 with a mean of 2.75 (SD = .64). Just 2% of the sample scored 4 or higher on this scale. Indeed, compared to officers employed at the southern agency surveyed in Study 1 (mean = 3.42, SD = .66), this sample of executives expressed significantly lower perceptions of citizen animus ( $t = -17.67, p < .001$ ). *Hostile local media* ranged from 1 to 5 with a mean of 2.36 (SD = .71), whereas *hostile national media* ranged from 2 to 5 with a mean of 3.77 (SD = .70). The difference in means is statistically significant ( $t = -39.72, p < .001$ ), and indicates respondents generally believe national media coverage of policing is more negative, unfair, untruthful and unreliable than local media coverage of their agency, specifically. To be sure, just 5% of the sample scored 4 or higher on *hostile local media*, whereas nearly 47% scored 4 or higher on *hostile national media*.

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<sup>11</sup> As in Study 1, results using listwise deletion were substantively similar (available on request).

<sup>12</sup> “Complete data” group mean = 3.932 vs. “Some missing” group mean = 3.866 ( $t = 1.483, p = .14$ ).

Table 4 presents the results of our multivariate analyses. In Model 1, we regressed perceived audience legitimacy onto citizen animus along with the control variables. Supporting Hypothesis 2, citizen animus ( $b = -.297, p < .001$ ) was significantly and inversely associated with perceived audience legitimacy. Population size ( $b = -.050, p = .046$ ) and the unemployment rate ( $b = -.147, p = .011$ ) were also significant, such that executives working in larger cities, and cities with higher levels of unemployment, perceived lower levels of audience legitimacy. In Model 2, we regressed hostile local and national media perceptions onto perceived audience legitimacy, as well as the controls. The results supported our third hypothesis, in that greater perceived hostility of the *local media* ( $b = -.170, p < .001$ ) was inversely associated with perceived audience legitimacy. Perceived hostility of the national media was non-significant. Unemployment rate ( $b = -.202, p = .003$ ) was again significantly associated with perceived audience legitimacy.

[TABLE 4 ABOUT HERE]

Model 3 of Table 4 presents the results of an OLS model that regressed audience legitimacy onto violent crime rate and the controls. The violent crime rate ( $b = -.060, p = .018$ ) was significantly and inversely associated with perceived audience legitimacy, consistent with our fifth hypothesis. The unemployment rate again had an inverse relationship with perceived audience legitimacy, but the relationship was not statistically significant ( $b = -.142, p = .053$ ). In Model 4, we regressed perceived audience legitimacy onto our minority presence measures, along with the controls. Percent black was statistically significant ( $b = -.064, p = .030$ ), such that executives working in cities with a larger percentage of black residents perceived lower levels of audience legitimacy. This provides partial support for our sixth hypothesis, and it is worth noting that this effect was significant independent of variation in unemployment rate (which was itself

significant:  $b = -.156, p = .020$ ). However, percent Hispanic was non-significant, as were changes in the percentage of the black and Hispanic populations.

Model 5 of Table 4 presents the results of an OLS model that regressed perceived audience legitimacy onto all of our predictor and control variables. The model provided further support for our second, third, and fifth hypotheses. Citizen animus ( $b = -.275, p < .001$ ), hostile local media ( $b = -.098, p = .045$ ), and violent crime rate ( $b = -.058, p = .020$ ) were each significantly and inversely associated with perceived audience legitimacy. Percent black was rendered non-significant by the inclusion of these other predictors.

## DISCUSSION

Police officer behaviors have far-reaching impacts on their own lives, the lives of citizens, and the communities they are entrusted to protect (McLean et al., 2018). While most officer behaviors are beneficial to the public, some officer actions rise to the level of misconduct or complacency that can inhibit the fulfillment of public safety or directly harm citizens and officers. Therefore, it is necessary to gain solid understanding of the factors that shape line-level officers' attitudes and behaviors, as well as those of higher-ranking officers. Perceived audience legitimacy—the extent to which officers believe the public views them as a legitimate authority—has recently emerged as an important predictor of numerous police-related outcomes. When officers believe the public trusts the police, defers to their power, and sanctions their authority, it provides the feeling of empowerment and confidence. In turn, officers who believe the public affords them more legitimacy are more likely to using democratic styles of policing and, ultimately, use force less frequently (Jonathan-Zamir and Harpaz, 2018; Tankebe and Meško, 2015). Accordingly, we need to know what factors are associated with officers' perceptions of audience legitimacy. Not only will this provide a deeper understanding of the

dynamics of audience legitimacy, it may also allow us to understand more fully why certain factors produce favorable or unfavorable officer behaviors. Our studies addressed these issues and, in this final section of the paper, we discuss the main findings and their theoretical and practical significance.

Citizen animus was strongly associated with perceived audience legitimacy in both of our studies. Patrol officers and executives who believed citizens, in general, display greater disrespect toward the police felt the public affords the police less legitimacy. This is not terribly surprising but, nonetheless, the finding adds to the broader literature on the dialogic model of legitimacy (Bottoms and Tankebe, 2012). What is more interesting, however, is that in Study 1 we found that officers who had more recent exposure to disrespectful citizens had lower perceived audience legitimacy, but this relationship was rendered statistically non-significant once we controlled for officers' global views of citizen animus. Further analysis revealed that citizen animus mediated the effects of personal experience with disrespectful citizens. This suggests that direct citizen disrespect increases officers' global belief that members of the public tend to be disrespectful toward the police, which subsequently diminishes their perceptions of audience legitimacy.

These findings inform our broader understanding of the development and effects of cynical orientations toward the public among police. The direct experience of disrespect likely has a cumulative effect and shapes officers' opinions regarding citizens' intentions, demeanors, and levels of cooperation (Niederhoffer, 1967; Toch, 1996). Our studies extend this literature by suggesting that officers' global perceptions of citizen animus contribute to a cynical outlook in general and lead them to believe the public does not afford them legitimacy. This finding has important consequences for how officers may interact with the public. Perceived lack of

audience legitimacy will tend to make officers less likely to use democratic styles of policing (e.g., use procedural justice) and more likely to use force (Bradford and Quinton, 2014; Tankebe and Meško, 2015). Similarly, if “the organizational culture of police departments is shaped by the values articulated by their leaders” (Tyler, 2011: 261), agencies led by executives who perceive low levels of audience legitimacy may be less likely to engage with their community or listen to their concerns. For example, in Oregon, two sheriffs have recently directed their deputies to stop responding to calls for service inside Portland city limits, citing a “hostile environment” created by residents and politicians (Sparling, 2019). In other words, direct and vicarious experiences with citizen disrespect produce more cynical global views about citizens’ behavioral tendencies toward police and, in turn, diminish perceptions of audience legitimacy, which may lead to less desirable police behaviors.

In Study 2, we found that hostile local media coverage of the police reduces perceptions of audience legitimacy. This suggests that local media may serve as a symbolic representative of the public in the eyes of management-level police officers. With this finding, we see that local media coverage of the police has implications for how executives feel and behave. Negative media coverage, while warranted in some situations, may further alienate the police from citizens and lead to behavioral adaptations like de-policing or, the opposite, more aggressive law enforcement (Shjarback et al., 2018) if their attitudes transfer to the rest of their agencies (Tyler, 2011). In fact, the trickle-down model, which has been supported by a long line of organizational behavior research, would anticipate such a process (Mayer et al., 2009). The good news is two-fold. First, this finding also suggests that *positive* media coverage of the police may improve executives’ views of citizen behavior and audience legitimacy. Second, we found that executives’ perceptions of hostile *national-level* media coverage of policing did not affect their

views concerning the amount of legitimacy their local community affords them. This suggests that the intense scrutiny of the police across the US may not necessarily have adverse effects on police attitudes and behaviors as much as we may have thought (Nix and Pickett, 2017; Wolfe and Nix, 2016). Indeed, policing is a local activity; our evidence suggests executives have the ability to separate other jurisdictions' animosity toward the police from their own.

At the outset of these studies, we argued that officers' experiences with citizen disrespect, cumulatively developed global views of citizen animus, and opinions of local media coverage were key explanatory variables of perceived audience legitimacy. Our findings supported this argument. Yet, we also contended that officers' working environments play an important role in this process, consistent with danger perception theory. Much of the extant literature has tested danger perception theory with objective indicators of crime (e.g., levels of community violence), rather than perceived levels of danger. Accordingly, in Study 1, we measured officers' perceptions of the crime trend in their jurisdiction. Officers who believed the crime rate had increased recently were less likely to believe the public views the police as a legitimate authority. Study 2 confirmed this relationship with management-level officers and by using an objective indicator of crime rate. We showed that executives who worked in areas with higher violent crime rates perceived less audience legitimacy, independent of their own views concerning citizen animus or hostile media coverage. This finding is consistent with prior studies that have tested danger perception theory, and coupled with findings from Study 1, suggests future research on the topic of audience legitimacy can utilize perceived or objective indicators of danger, as each yielded similar findings.

The observed relationships between real/perceived crime and audience legitimacy also improves our understanding of the dialogic model—local policing context matters because it



serves as a cognitive heuristic when considering how much legitimacy the public affords the police. This mental shortcut is likely based in reality because communities with higher crime rates have higher rates of assaults on officers and lower levels of citizen cooperation (Kaminski, Jefferis, and Gu, 2003; Kaminski and Sorensen, 1995). Coupled with Shjarback and colleagues' (2018) recent findings, the literature now provides compelling evidence that violent crime rates shape executives' psychological orientations toward the public by increasing views of citizen animus, decreasing feelings of legitimacy from the public, and inhibiting confidence that the public will cooperate with officers. Such factors may prove to be important causal mechanisms that explain the long-established connection between community structural characteristics and neighborhood-level variation in officer use of force (Shjarback, 2018). Accordingly, the most pressing issue for future research aiming to build on our findings is to determine the extent to which officers' perceptions of audience legitimacy mediate the link between violent crime rate (and other structural characteristics) and police use of force (and other important outcomes). We were limited in our ability to explore this full process because measuring officer use of force (or other potentially controversial outcomes) with survey methodologies is difficult. We hope our analyses motivate future research that connects survey data (e.g., regarding perceptions of audience legitimacy) with official, line-level officer data.

Finally, we argued that the racial/ethnic makeup of a community also would serve as a cognitive heuristic for executives when thinking about how much legitimacy the public affords the police. The logic behind this argument was that because minorities have more negative views of the police (Carr, Napolitano, and Keating, 2007; Decker, 1981; Tyler, 2005), executives would perceive less audience legitimacy in jurisdictions with larger or growing minority populations. In a truncated model, we saw that the percentage of the population that was black

was associated with less perceived audience legitimacy, but this effect was diminished (to non-significance) by the inclusion of perceived citizen animus, hostile media coverage, and violent crime rate. This suggests that the racial/ethnic makeup of a community is much less salient to executives when they assess the level of support they have from the public. Experience with citizen disrespect, perceived hostility of local media, and high violent crime levels are what appear to undermine perceived audience legitimacy. In some respects, we view this as an encouraging finding because many narratives suggest that breakdowns in police-community relations emanate from racial/ethnic animosity. At least in our studies, this does not necessarily appear to be the case when considering officers' and executive officers' opinions.

While these findings add to the literature, it is important to acknowledge the limitations of our analyses. First, we employed an alternative measure of perceived audience legitimacy in Study 2: a four dimensional construct comprised of perceived procedural justice, distributive justice, lawfulness, and effectiveness in the eyes of the public. This is consistent with Tankebe's (2013) theoretical reasoning, which derived from prior work by Weber (1978), Beetham (1991), and Coicaud (2002). Our motivation for using this alternative measure was not to pick a side in the debate about the appropriate conceptualization of legitimacy, but rather to be thorough. Indeed, to employ one set of measures, but not the other, would amount to picking a side in the absence of empirical evidence. As Jackson and Bradford (2019) pointed out, Tankebe's (2013) analyses cannot be cited as evidence that his proposed conceptualization is more preferable than those who adopt the view that legitimacy is comprised of feelings of trust in and obligation to obey authorities. To be sure, "legitimacy is an abstract and unobservable psychological construct, and there are numerous ways to operationalise the perceived right to power, aside from the standard ways of institutional trust and/or normative alignment and/or obligation to obey"

(Jackson and Bradford, 2019: 22-23). Our supplemental analyses revealed that citizen animus was significantly and inversely associated with procedural justice, distributive justice, lawfulness, and effectiveness (see Appendix C). If we assume that legitimacy is best conceptualized as trust in the police and felt obligation to obey them, these findings suggest the effect of citizen animus on perceived audience legitimacy is slightly more distal, and may operate indirectly through its effect on perceived procedural justice, distributive justice, lawfulness, and/or effectiveness in the eyes of the public. Unfortunately, we could not test for this possibility, but we hope that future studies will endeavor to do so. In any event, Jackson and Bradford (2019:22) submit that “there is space for alternative approaches to measuring legitimacy,” and we concur. However, our studies cannot speak to which approach is superior.

Second, our contextual indicators were city-level measures that cannot account for neighborhood heterogeneity, which could result in aggregation bias. Again, we hope future research builds on our findings by examining similar issues at the neighborhood level, particularly because police attitudes and behaviors can vary within patrol districts, squads, and shifts (Klinger, 1997). Third, the mediation analysis we conducted in Study 1 suggests that officers’ recent experiences with disrespectful citizens were indirectly associated with perceived audience legitimacy, through their direct effect on global perceptions of citizen animus. Although consistent with prior observations (Toch, 1996; Van Maanen, 1978), it is also possible that officers’ perceptions of citizen animus influence the way citizen interactions unfold and are interpreted by officers. For example, an officer who perceives higher levels of citizen animus may police more aggressively (Pickett and Nix, 2019), which could anger citizens and prompt them to curse at the officer, call him/her names, or exhibit otherwise disrespectful behaviors. In the case of this officer, experiences with citizens being disrespectful might be the more

proximate predictor of perceived audience legitimacy, as opposed to his/her global perceptions of citizen animus. As our data were cross sectional, we cannot rule out this possibility.

Finally, the response rates in both studies were low, creating the potential for nonresponse bias. There is meta-analytic evidence from surveys of different populations (voters, employees, hospital patients) that response rates are weakly correlated with nonresponse bias (Groves and Peytcheva, 2008), but maybe it is different for police surveys. No evidence exists that it is, but it is possible. Nonresponse biases regression coefficients only when it induces a correlation between the regressors and the error term—that is, when the outcome causes nonresponse, or when the list of regressors excludes common causes of both nonresponse and the outcome (Solon et al., 2015; Winship and Radbill, 1994). We have no reason to believe this occurred in either study. The response distributions to several other questions on our surveys closely align with those elicited from similar questions on larger, nationally representative surveys conducted by the National Police Research Platform (Morin et al., 2017) and the Bureau of Justice Statistics (Hyland, 2018).<sup>13</sup> This boosts our confidence that the results are unbiased. Further supplementary analyses (see Appendix C) support this assumption, and suggest that even if there is substantial nonresponse bias (an outcome-nonresponse correlation exceeding  $r = .50$ ), the main substantive findings are unlikely to change. Nevertheless, future research should replicate our studies using data from police surveys with higher response rates.

In the end, our studies revealed that officers' experience with citizen disrespect, global views of citizen animus, perceptions of hostile local media coverage, and the local violent crime

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<sup>13</sup> As one example, 63% of the sample we surveyed as part of Study 1 *supported* or *strongly supported* wearing body-worn cameras, compared with 66% who reported being *in favor* on the National Police Research Platform survey (Morin et al. 2017). Similarly, we asked the sample surveyed in Study 2 whether their agency was currently using body-worn cameras. Forty-seven percent responded “yes,” compared with 48% who answered yes on the 2016 *Law Enforcement Management and Administrative Statistics* survey administered by the Bureau of Justice Statistics (Hyland, 2018).

rate are central predictors of the extent to which they believe the public views them as a legitimate authority. These findings are important in their own right, but even more so when we consider the possibility of audience legitimacy explaining the relationships between other variables and officer behaviors. For example, citizen demeanor and community context (e.g., violent crime rate) each predict officer behaviors such as the use of force. Our studies demonstrate these same factors are key predictors of audience legitimacy. Thus, audience legitimacy may be a key intervening mechanism. We hope future research attempts to explore this possibility.

## REFERENCES

- Allison, Paul D. 2002. *Missing data*. Thousand Oaks, CA: Sage.
- Alpert, Geoffrey P., and Roger G. Dunham. 2004. *Understanding police use of force: Officers, suspects, and reciprocity*. Cambridge University Press.
- Baumer, Eric P., Steven F. Messner, and Richard Rosenfeld. 2003. Explaining spatial variation in support for capital punishment: A multilevel analysis. *American Journal of Sociology* 108(4): 844-875.
- Beetham, David. 1991. *The legitimation of power*. London, U.K.: Macmillan.
- Blalock, Hubert M. 1967. *Toward a theory of minority-group relations*. New York, NY: Wiley.
- Bottoms, Anthony, and Justice Tankebe. 2012. Beyond procedural justice: a dialogic approach to legitimacy in criminal justice. *Journal of Criminal Law and Criminology* 102: 119–170.
- Bradford, Ben, and Paul Quinton. 2014. Self-legitimacy, police culture and support for democratic policing in an English constabulary. *British Journal of Criminology* 54(6): 1023-1046.
- Brown, Michael K. 1981. *Working the street: Police discretion and the limits of reform*. New York, NY: Russell Sage Foundation.
- Cao, Liqun, Steven Stack, and Yi Sun. 1998. Public attitudes toward the police: A comparative study between Japan and America. *Journal of Criminal Justice* 26(4): 279-289.
- Carr, Patrick J., Laura Napolitano, and Jessica Keating. 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.
- Chermak, Steven, and Alexander Weiss. 2005. Maintaining legitimacy using external communication strategies: An analysis of police-media relations. *Journal of Criminal Justice* 33(5): 501-512.
- Chiricos, Theodore G. 1987. Rates of crime and unemployment: An analysis of aggregate research evidence. *Social Problems* 34(2): 187-212.
- Coicaud, Jean-Marc. 2002. *Legitimacy and politics: A contribution to the study of political right and political responsibility*. Cambridge, U.K.: Cambridge University Press.
- Crank, John. P, and Robert Langworthy. 1992. An institutional perspective of policing. *Journal of Criminal Law & Criminology* 83: 338-363.
- Decker, Scott H. 1981. Citizen attitudes toward the police: A review of past findings and suggestions for future policy. *Journal of Police Science and Administration* 9(1): 80-87.
- Dillman, Don A., Glenn Phelps, Robert Tortora, Karen Swift, Julie Kohrell, Jodi Berck, and Benjamin L. Messner. 2009. Response rate and measurement differences in mixed-mode surveys using mail, telephone, interactive voice response (IVR) and the Internet. *Social Science Research* 38(1): 1-18.

- Donner, Christopher M., Lorie A. Fridell, and Wesley G. Jennings. 2016. The relationship between self-control and police misconduct: A multi-agency study of first-line police supervisors. *Criminal Justice and Behavior* 7:841-62.
- Fyfe, James J. 1980. Geographic correlates of police shooting: A microanalysis. *Journal of Research in Crime and Delinquency* 17(1): 101-113.
- Gau, Jacinta M., and Eugene A Paoline, III. 2017. Officer race, role orientations, and cynicism toward citizens. *Justice Quarterly* 34(7): 1246-1271.
- Gerber, Monica M., and Jonathan Jackson. 2017. Justifying violence: Legitimacy, ideology and public support for police use of force. *Psychology, Crime and Law* 23: 79-95.
- Goldkamp, John S. 1976. Minorities as victims of police shootings: Interpretations of racial disproportionality and police use of deadly force. *The Justice System Journal* 2(2): 169-183.
- Groves, Robert M., and Emilia Peytcheva. 2008. The impact of nonresponse rates on nonresponse bias: A meta-analysis. *Public Opinion Quarterly* 72:167-189.
- Hansen, Glenn J., and Hyunjung Kim. 2011. Is the media biased against me? A meta-analysis of the hostile media effect research. *Communication Research Reports* 28: 169–179.
- Hayes, Andrew F. 2013. *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York: The Guilford Press.
- Hickman, Matthew J. 2008. On the context of police cynicism and problem behavior. *Applied Psychology in Criminal Justice* 4(1): 1-44.
- Holmes, Malcolm D., Matthew A. Painter, and Brad W. Smith. 2018. Race, place, and police-caused homicide in U.S. municipalities. *Justice Quarterly*. Advance online publication. DOI: [10.1080/07418825.2018.1427782](https://doi.org/10.1080/07418825.2018.1427782).
- Holmes, Malcolm D., Brad W. Smith, Adrienne B. Freng, and Ed A. Muñoz. 2008. Minority threat, crime control, and police resource allocation in the Southwestern United States. *Crime and Delinquency* 54(1): 128-152.
- Horowitz, Donald L. 1985. *Ethnic groups in conflict*. Berkeley and Los Angeles, CA: University of California Press.
- Hyland, Shelley. 2018. *Body-worn cameras in law enforcement agencies, 2016* (No. NCJ 251775). U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.
- Jackson, Jonathan, and Ben Bradford. 2019. Blurring the distinction between empirical and normative legitimacy? A methodological commentary on ‘Police legitimacy and citizen cooperation in China.’ *Asian Journal of Criminology*. Advance online publication. doi: 10.1007/s11417-019-09289-w.
- Jackson, Jonathan, Ben Bradford, Betsy Stanko, and Katrin Hohl. 2012. *Just authority? Trust in the police in England and Wales*. New York, NY: Routledge.

- Jacobs, David. 1998. The determinants of deadly force: A structural analysis of police violence. *American Journal of Sociology* 103(4): 837-862.
- Jacobs, David, and David Britt. 1979. Inequality and police use of deadly force: An empirical assessment of a conflict hypothesis. *Social Problems* 26(4): 403-412.
- Jonathan-Zamir, Tal, and Amikam Harpaz. 2014. Police understanding of the foundations of their legitimacy in the eyes of the public: The case of commanding officers in the Israel National Police. *British Journal of Criminology* 54(3): 469-489.
- Jonathan-Zamir, Tal, and Amikam Harpaz. 2018. Predicting support for procedurally just treatment: The case of the Israel National Police. *Criminal Justice and Behavior* 45(6): 840-862.
- Kaminski, Robert J. 2008. Assessing the county-level structural covariates of police homicides. *Homicide Studies* 12(4): 350-380.
- Kaminski, Robert J., Eric Jefferis, and Joann Gu. 2003. Community correlates of serious assaults on police. *Police Quarterly* 6(2): 119-149.
- Kaminski, Robert J., and David W. Sorensen. 1995. A multivariate analysis of individual, situational and environmental factors associated with police assault injuries. *American Journal of Police* 14(3/4): 3-48.
- Kane, Robert J. 2002. The social ecology of police misconduct. *Criminology* 40(4): 867-896.
- Kang, Wook, and Mahesh K. Nalla. 2011. Perceived citizen cooperation, police operational philosophy, and job satisfaction on support for civilian oversight of the police in South Korea. *Asian Journal of Criminology* 6(2): 177-189.
- King, Ryan D., and Darren Wheelock. 2007. Group threat and social control: Race, perceptions of minorities and the desire to punish. *Social Forces* 85(3): 1255-1280.
- Klinger, David A. 1994. Demeanor or crime? Why "hostile" citizens are more likely to be arrested. *Criminology* 32: 475-493.
- Klinger, David A. 1997. Negotiating order in patrol work: An ecological theory of police response to deviance. *Criminology* 35(2): 277-306.
- Klinger, David A., Richard Rosenfeld, Daniel Isom, and Michael Deckard. 2016. Race, crime, and the micro-ecology of deadly force. *Criminology and Public Policy* 15(1): 193-222.
- Kowalewski, David, William Hall, James Dolan, and James Anderson. 1984. Police environments and operational codes: A case study of rural setting. *Journal of Police Science and Administration* 12: 363-72.
- Lee, Hoon, Michael S. Vaughn, and Hyeyoung Lim. 2014. The impact of neighborhood crime levels on police use of force: An examination at micro and meso levels. *Journal of Criminal Justice* 42(6): 491-499.
- Leip, David. 2018. *Dave Leip's Atlas of U.S. Presidential Elections*. <http://uselectionatlas.org>.



- Lersch, Kim M., Thomas Bazley, Thomas Mieczkowski, and Kristina Childs. 2008. Police use of force and neighbourhood characteristics: An examination of structural disadvantage, crime, and resistance. *Policing and Society* 18(3): 282-300.
- Lim, Hyeyoung, Lorie A. Fridell, and Hoon Lee. 2014. The impact of supervision and neighborhood context on police use of less-lethal force: a multi-level analysis. *Journal of Police Studies* 14(2): 155-182.
- Liska, Allen E., and Paul E. Bellair. 1995. Violent-crime rates and racial composition: Convergence over time. *American Journal of Sociology* 101(3): 578-610.
- Liska, Allen E., and Mitchell B. Chamlin. 1984. Social structure and crime control among macrosocial units. *American Journal of Sociology* 90(2): 383-395.
- Liska, Allen E., and Jiang Yu. 1992. Specifying and testing the threat hypothesis: Police use of deadly force. In Allen E. Liska (Ed.), *Social threat and social control* (pp. 53-68). Albany, NY: State University of New York Press.
- Liska, Allen E., Mitchell B. Chamlin, and Mark D. Reed. 1985. Testing the economic production and conflict models of crime control. *Social Forces* 64(1): 119-138.
- Lundman, Richard J. 1974. Routine police arrest practices: A commonweal perspective. *Social Problems* 22: 127-141.
- Mastrofski, Stephen D., Michael D. Reisig, and John D. McCluskey. 2002. Police disrespect toward the public: An encounter-based analysis. *Criminology* 40(3): 519-552.
- Matusiak, Matthew C. 2019. Environmental predictors of municipal police agency goals. *Police Quarterly* 22: 112-136.
- Matusiak, Matthew C., William R. King, and Edward R. Maguire. 2017. How perceptions of the institutional environment shape organizational priorities: Findings from a survey of police chiefs. *Journal of Crime and Justice* 40: 5-19.
- Maxwell, Scott E. 2004. The persistence of underpowered studies in psychological research: Causes, consequences, and remedies. *Psychological Methods*, 9(2): 147-163.
- Mayer, David M., Maribeth Kuenzi, Rebecca Greenbaum, Mary Bardes, and Rommel Bombie Salvador. 2009. How low does ethical leadership flow? Test of a trickle-down model. *Organizational Behavior and Human Decision Processes* 108: 1-13.
- Mazerolle, Lorraine, Emma Antrobus, Sarah Bennett, and Tom R. Tyler. 2013. Shaping citizen perceptions of police legitimacy: A randomized field trial of procedural justice. *Criminology* 51(1): 33-63.
- McLean, Kyle, Scott E. Wolfe, and Travis C. Pratt. 2018. Legitimacy and the life course: An age-graded examination of changes in legitimacy attitudes over time. *Journal of Research in Crime and Delinquency*. Advance online publication. doi: [10.1177/0022427818793934](https://doi.org/10.1177/0022427818793934).
- McKnight, Patrick E., Katherine M. McKnight, Souraya Sidani, and Aurelio J. Figueredo. 2007. *Missing data: A gentle introduction*. New York, NY: Guilford Press.

- Moon, Byongook, and Laren J. Zager. 2007. Police officers' attitudes toward citizen support: Focus on individual, organizational and neighborhood characteristic factors. *Policing: An International Journal of Police Strategies and Management* 30(3): 484-497.
- Morgan, Stephen L., and Joel A. Pally. 2016. *Ferguson, Gray, and Davis: An analysis of recorded crime incidents and arrests in Baltimore City, March 2010 through December 2015* (A report written for the 21st Century Cities Initiative at Johns Hopkins University). Retrieved from <http://socweb.soc.jhu.edu/faculty/morgan/papers/MorganPally2016.pdf>.
- Morin, Rich, Kim Parker, Renee Stepler, and Andrew Mercer. 2017. *Behind the Badge: Amid protests and calls for reform, how police view their jobs, key issues and recent fatal encounters between blacks and police*. Pew Research Center.
- Moule Jr., Richard K., Bryana H. Fox, and Megan M. Parry. 2018. The long shadow of Ferguson: Legitimacy, legal cynicism, and public perceptions of police militarization. *Crime and Delinquency*. Advance online publication. doi: [10.1177/0011128718770689](https://doi.org/10.1177/0011128718770689).
- Muir, William K. 1979. *Police: Streetcorner politicians*. Chicago, IL: University of Chicago Press.
- Niederhoffer, Arthur. 1967. *Behind the shield: The police in urban society*. Garden City, NY: Anchor Books.
- Nix, Justin. 2017a. Do the police believe that legitimacy promotes cooperation from the public? *Crime and Delinquency* 63(8): 951-975.
- Nix, Justin. 2017b. Police perceptions of their external legitimacy in high and low crime areas of the community. *Crime and Delinquency* 63(10): 1250-1278.
- Nix, Justin, and Justin T. Pickett. 2017. Third-person perceptions, hostile media effects, and policing: Developing a theoretical framework for assessing the Ferguson Effect. *Journal of Criminal Justice* 51: 24-33.
- Nix, Justin, Justin T. Pickett, Hyunin Baek, and Geoffrey P. Alpert. 2019. Police research, officer surveys, and response rates. *Policing and Society* 29(5): 530-550.
- Nix, Justin, Justin T. Pickett, Scott E. Wolfe, and Bradley A. Campbell. 2017. Demeanor, race, and police perceptions of procedural justice: Evidence from two randomized experiments. *Justice Quarterly* 34(7): 1154-1183.
- Nolan, James J. 2004. Establishing the statistical relationship between population size and UCR crime rate: Its impact and implications. *Journal of Criminal Justice* 32: 547-555.
- Norman, Jim. 2017. Confidence in police back at historical average. *Gallup*. Retrieved 10 July 2018 from <https://news.gallup.com/poll/213869/confidence-police-back-historical-average.aspx>.
- Novak, Kenneth J., and Mitchell B. Chamlin. 2012. Racial threat, suspicion, and police behavior: The impact of race and place in traffic enforcement. *Crime and Delinquency* 58(2): 275-300.

- Paoline III, Eugene A., Stephanie M. Myers, and Robert E. Worden. 2000. Police culture, individualism, and community policing: Evidence from two police departments. *Justice Quarterly* 17(3): 575-605.
- Paul, Bryant, Michael B. Salwen, and Michel Dupagne. 2000. The third-person effect: A meta-analysis of the perceptual hypothesis. *Mass Communication and Society* 3: 57-85.
- Peytchev, Andy. 2013. Consequences of survey nonresponse. *The ANNALS of the American Academy of Political and Social Science* 645(1): 88-111.
- Phillips, Julie, and Kenneth C. Land. 2012. The link between unemployment and crime rate fluctuations: An analysis at the county, state, and national levels. *Social Science Research* 41(3): 681-694.
- Pickett, Justin, and Justin Nix. 2019. Demeanor and police culture: Theorizing how civilian cooperation influences police officers. *Policing: An International Journal*. Advance online publication. DOI: 10.1108/PIJPSM-09-2018-0133.
- Pickett, Justin T., and Stephanie Bontrager Ryon. 2017. Procedurally just cooperation: Explaining support for due process reforms in policing. *Journal of Criminal Justice* 48: 9-20.
- Pickett, Justin T., Theodore Chiricos, Kristin M. Golden, and Marc Gertz. 2012. Reconsidering the relationship between perceived neighborhood racial composition and whites' perceptions of victimization risk: Do racial stereotypes matter? *Criminology* 50(1): 145-186.
- Pickett, Justin T., Francis Cullen, Shawn D. Bushway, Theodore Chiricos, and Geoffrey P. Alpert. 2018. The Response rate test: Nonresponse bias and the future of survey research in criminology and criminal justice. *The Criminologist* 43(1): 7-11.
- Piliavin, Irving, and Scott Briar. 1964. Police encounters with juveniles. *American Journal of Sociology* 70: 206-214.
- Regoli, Robert M. 1976. An empirical assessment of Niederhoffer's police cynicism scale. *Journal of Criminal Justice* 4(3): 231-241.
- Regoli, Robert M., John P. Crank, and Robert G. Culbertson. 1989. Police cynicism, job satisfaction, and work relations of police chiefs: An assessment of the influence of department size. *Sociological Focus* 22(3): 161-171.
- Regoli, Robert M., John P. Crank, and George F. Rivera, Jr. 1990. The construction and implementation of an alternative measure of police cynicism. *Criminal Justice and Behavior* 17(4): 395-409.
- Reisig, Michael D., Jason Bratton, and Marc G. Gertz. 2007. The construct validity and refinement of process-based policing measures. *Criminal Justice and Behavior* 34(8): 1005-1028.
- Reynolds, Paul D., and Richard C. Helfers. 2017. Differences in perceptions of organizational fairness based on job characteristics among police officers. *American Journal of Criminal Justice*. Advance online publication. doi: 10.1007/s12103-017-9404-8.

- Rojas, Hernando. 2010. "Corrective" actions in the public sphere: How perceptions of media and media effects shape political behaviors. *International Journal of Public Opinion Research* 22: 343–363.
- Rubin, Donald B. 1996. Multiple imputation after 18+ years (with discussion). *Journal of the American Statistical Association* 91: 473–489.
- Shadish, William R., Thomas D. Cook, and Donald T. Campbell. 2002. *Experimental and quasi-experimental designs for generalized causal inference*. Belmont, CA: Wadsworth Cengage Learning.
- Shjarback, John A. 2018. "Neighborhood" influence on police use of force: State-of-the-art review. *Policing: An International Journal of Police Strategies and Management*. Advance online publication. doi: [10.1108/PLJPSM-07-2017-0087](https://doi.org/10.1108/PLJPSM-07-2017-0087).
- Shjarback, John A., Justin Nix, and Scott E. Wolfe. 2018. The ecological structuring of police officers' perceptions of citizen cooperation. *Crime and Delinquency* 64(9): 1143-1170.
- Silver, Jasmine R., and Justin T. Pickett. 2015. Toward a better understanding of politicized policing attitudes: Conflicted conservatism and support for police use of force. *Criminology* 53: 650-676.
- Skogan, Wesley G. 2015. Surveying police officers. In Michael D. Maltz and Stephen K. Rice (Eds.), *Envisioning Criminology: Researchers on Research as a Process of Discovery*. New York, NY: Springer.
- Smith, Douglass A. 1986. The neighborhood context of police behavior. In Albert J. Reiss, Jr. and Michael Tonry (Eds.), *Communities and Crime* (pp. 313-341). Chicago, IL: University of Chicago Press.
- Smith, Michael R., and Geoffrey P. Alpert. 2007. Explaining police bias: A theory of social conditioning and illusory correlation. *Criminal Justice and Behavior* 34(10): 1262-1283.
- Sobol, James J. 2010. The social ecology of police attitudes. *Policing: An International Journal of Police Strategies and Management* 33(2): 253-269.
- Solon, Gary, Steven J. Haider, and Jeffrey M. Wooldridge. 2015. What are we weighting for? *Journal of Human Resources* 50: 301-316.
- Sorensen, Jonathan R., James W. Marquart, and Deon E. Brock. 1993. Factors related to killings of felons by police officers: A test of the community violence and conflict hypotheses. *Justice Quarterly* 10(3): 417-440.
- Sparling, Zane. 2019 (April). Second sheriff says Portland too risky for deputies. *Portland Tribune*. Retrieved 29 May 2019 from [https://pamplinmedia.com/pt/9-news/426780-333627-second-sheriff-says-portland-too-risky-for-deputies-#disqus\\_thread](https://pamplinmedia.com/pt/9-news/426780-333627-second-sheriff-says-portland-too-risky-for-deputies-#disqus_thread).
- Sterne, Jonathan AC, Ian R. White, John B. Carlin, Michael Spratt, Patrick Royston, Michael G. Kenward, Angela M. Wood, and James R. Carpenter. 2009. Multiple imputation for missing data in epidemiological and clinical research: potential and pitfalls. *BMJ* 338: b2393.

- Strom, Kevin J., and Matthew J. Hickman. 2010. Unanalyzed evidence in law-enforcement agencies: A national examination of forensic processing in police departments. *Criminology and Public Policy* 9(2): 381-404.
- Stults, Brian J., and Eric P. Baumer. 2007. Racial context and police force size: Evaluating the empirical validity of the minority threat perspective. *American Journal of Sociology* 113(2): 507-546.
- Sun, Ivan, Luye Li, Yuning Wu, and Rong Hu. 2018. Police legitimacy and citizen cooperation in China: Testing an alternative model. *Asian Journal of Criminology* 13: 275-291.
- Sun, Ye, Zhongdang Pan, and Lijiang Shen. 2008. Understanding the third-person perception: Evidence from a meta-analysis. *Journal of Communication* 58: 280-300.
- Sunshine, Jason, and Tom R. Tyler. 2003. The role of procedural justice and legitimacy in shaping public support for policing. *Law and Society Review* 37(3): 513-543.
- Surette, Ray. 2001. Public information officers: The civilianization of a criminal justice profession. *Journal of Criminal Justice* 29: 107-117.
- Tabachnick, Barbara G., and Linda S. Fidell. 2007. *Using multivariate statistics* (5<sup>th</sup> ed.). Needham Height, MA: Allyn and Bacon.
- Tal-Or, Nurit, Jonathan Cohen, Yariv Tsfati, and Albert C. Gunther. 2010. Testing causal direction in the influence of presumed media influence. *Communication Research* 37: 801-824.
- Tankebe, Justice. 2013. Viewing things differently: The dimensions of public perceptions of police legitimacy. *Criminology* 51(1): 103-135.
- Tankebe, Justice, and Gorazd Meško. 2015. Police self-legitimacy, use of force, and pro-organizational behavior in Slovenia. In Gorazd Meško and Justice Tankebe (Eds.), *Trust and legitimacy in criminal justice* (pp. 261-77). New York, NY: Springer.
- Tankebe, Justice, Michael D. Reisig, and Xia Wang. 2016. A multidimensional model of police legitimacy: A cross-cultural assessment. *Law and Human Behavior* 40(1): 11-22.
- Terrill, William. 2001. *Police coercion: Application of the force continuum*. New York, NY: LFB Scholarly Publishing LLC.
- Terrill, William, and Michael D. Reisig. 2003. Neighborhood context and police use of force. *Journal of Research in Crime and Delinquency* 40(3): 291-321.
- Toch, Hans. 1996. The violence-prone police officer. In William A. Geller and Hans Toch (Eds.), *Police violence: Understanding and controlling police abuse of force* (pp. 94-112). New Haven, CT: Yale University Press.
- Tourangeau, Roger, Frederick G. Conrad, and Mick P. Couper. 2013. *The science of web surveys*. New York, NY: Oxford University Press.
- Tuch, Steven A., and Ronald Weitzer. 1997. Trends: Racial differences in attitudes toward the police. *The Public Opinion Quarterly* 61(4): 642-663.

- Tyler, Tom R. 1990. *Why people obey the law*. Princeton, NJ: Princeton University Press.
- Tyler, Tom R. 2003. Procedural justice, legitimacy, and the effective rule of law. *Crime and Justice* 30: 283-357.
- Tyler, Tom R. 2005. Policing in black and white: Ethnic group differences in trust and confidence in the police. *Police Quarterly* 8(3): 322-342.
- Tyler, Tom R. 2011. Trust and legitimacy: Policing in the USA and Europe. *European Journal of Criminology* 8: 254-266.
- Tyler, Tom R., and Yuen Huo. 2002. *Trust in the law: Encouraging public cooperation with the police and courts*. Russell Sage Foundation.
- Tyler, Tom R., and Jonathan Jackson. 2014. Popular legitimacy and the exercise of legal authority: Motivating compliance, cooperation, and engagement. *Psychology, Public Policy, and Law* 20(1): 78-95.
- Vallone, Robert P., Lee Ross, and Mark R. Lepper. 1985. The hostile media phenomenon: biased perception and perceptions of media bias in coverage of the Beirut massacre. *Journal of Personality and Social Psychology* 49(3): 577-585.
- Van Maanen, John. 1978. The asshole. In Peter K. Manning and John Van Maanen (Eds.), *Policing: A view from the street* (pp. 221-238). Pacific Palisades, CA: Goodyear Publishing Company.
- Waddington, Peter A. J. 1999. Police (canteen) sub-culture. An appreciation. *British Journal of Criminology* 39(2): 287-309.
- Walters, Glenn D., and P. Colin Bolger. 2018. Procedural justice perceptions, legitimacy beliefs, and compliance with the law: A meta-analysis. *Journal of Experimental Criminology*. Advance online publication. doi: 10.1007/s11292-018-9338-2.
- Weber, Max. 1978. *Economy and Society: An Outline of Interpretive Sociology*, eds. G. Roth and C. Wittich. Los Angeles: University of California Press.
- Weitzer, Ronald. 2015. American policing under fire: Misconduct and reform. *Society* 52(5): 475-480.
- Weitzer, Ronald, and Steven A. Tuch. 2006. *Race and policing in America: Conflict and reform*. Cambridge University Press.
- Westley, William A. 1970. *Violence and the police: A sociological study of law, custom, and morality*. Cambridge, MA: MIT Press.
- Wilson, James Q. 1993. *The moral sense*. New York: Free Press.
- Wilson, Steve, and Jihong Zhao. 2008. Determining the correlates of police victimization: An analysis of organizational level factors on injurious assaults. *Journal of Criminal Justice*: 36(5) 461-468.
- Winship, Christopher, and Larry Radbill. 1994. Sampling weights and regression analysis. *Sociological Methods & Research* 23:230-257.

- Wolfe, Scott E., and Justin Nix. 2016. The alleged “Ferguson Effect” and police willingness to engage in community partnership. *Law and Human Behavior* 40(1): 1-10.
- Wolfe, Scott E., Justin Nix, Robert J. Kaminski, and Jeff Rojek. 2016. Is the effect of procedural justice on police legitimacy invariant? Testing the generality of procedural justice and competing antecedents of legitimacy. *Journal of Quantitative Criminology* 32(2): 253-282.
- Worden, Alissa P. 1993. The attitudes of women and men in policing: Testing conventional and contemporary wisdom. *Criminology* 31: 203-235.
- Worden, Robert E. 1995. Police officers’ belief systems: A framework for analysis. *American Journal of Police* XIV(1): 49-81.
- Worden, Robert E., and Robin L. Shepard. 1996. Demeanor, crime, and police behavior: A reexamination of the Police Services Study data. *Criminology* 34: 83-105.
- Zhao, Xinshu, John G. Lynch, Jr., and Qimei Chen. 2010. Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research* 37(2): 197-206.

**Table 1. Descriptive Statistics for Study 1 - Southern Agency**

Variable	N	Listwise Deletion		Multiple Imputation <sup>a</sup>		Min	Max
		Mean	Std. Dev.	Mean	Std. Dev. <sup>b</sup>		
Audience Legitimacy	476	3.481	.779	3.483	.782	1	5
Recently Disrespected	507	3.335	1.395	3.335	1.394	1	5
Citizen Animus	521	3.418	.659	3.419	.660	1.571	5
Perceived Crime Trend	514	3.747	.774	3.748	.775	1	5
Male	446	.901	—	.900	—	0	1
White	446	.673	—	.673	—	0	1
Four-year Degree	449	.546	—	.546	—	0	1
Years of Experience	436	15.110	8.512	15.109	8.545	0	40
Police Officer (Reference)	—	—	—	—	—	—	—
Front-line Supervisor	447	.367	—	.373	—	0	1
Upper Management	447	.119	—	.118	—	0	1

<sup>a</sup> 25 imputations, N=546 for each variable; <sup>b</sup> Obtained via the “misum” command in Stata 15.



**Table 2. OLS Regression Models Predicting Perceived Audience Legitimacy (Study 1 – Southern Agency, N = 546)**

Variable	Model 1		Model 2		Model 3		Model 4	
	<i>b</i>	SE	<i>b</i>	SE	<i>b</i>	SE	<i>b</i>	SE
Recently Disrespected	-.154***	(.030)	—		—		-.053	(.032)
Citizen Animus	—		-.464***	(.051)	—		-.394***	(.057)
Perceived Crime Trend	—		—		-.185***	(.046)	-.096*	(.042)
Male	.154	(.121)	.050	(.121)	.055	(.123)	.075	(.123)
White	.032	(.081)	.016	(.076)	-.016	(.081)	.017	(.075)
Four-year Degree	.052	(.071)	.031	(.067)	.047	(.071)	.028	(.067)
Experience	.002	(.006)	.007	(.005)	.009	(.005)	.005	(.005)
Police Officer (Reference)	—		—		—		—	
Front-line Supervisor	.112	(.086)	.128	(.082)	.225**	(.086)	.114	(.082)
Upper Management	.215	(.129)	.234	(.120)	.371**	(.129)	.177	(.121)
Intercept	3.715***	(.189)	4.816***	(.226)	3.845***	(.239)	5.133***	(.281)
<i>F</i> -test	8.88***		15.27***		7.32***		12.95***	
Adjusted R <sup>2</sup>	.108		.201		.071		.213	

NOTES: Multiple-imputation estimates (m=25) using OLS regression are displayed. Entries are unstandardized regression coefficients (*b*) and robust standard errors (SE).

\**p* < .05; \*\**p* < .01; \*\*\**p* < .001

**Table 3. Descriptive Statistics for Weighted Variables (Study 2 - National Sample)**

Variable	N	Listwise Deletion		Multiple Imputation <sup>a</sup>		Min	Max
		Mean	Std. Dev.	Mean	Std. Dev. <sup>b</sup>		
Audience Legitimacy	654	3.938	.457	3.935	.458	1.857	5
Citizen Animus	660	2.746	.641	2.746	.641	1	4.714
Hostile Local Media	655	2.359	.707	2.362	.710	1	5
Hostile National Media	655	3.767	.700	3.768	.700	2	5
Violent Crime Rate <sup>c</sup>	589	5.057	1.228	5.065	1.223	0	7.939
% Black <sup>c</sup>	625	1.327	1.220	1.329	1.213	0	4.557
% Hispanic <sup>c</sup>	625	1.837	1.073	1.841	1.068	0	4.550
Change %Black <sup>c</sup>	624	2.825	.249	2.825	.248	.483	3.885
Change %Hispanic <sup>c</sup>	624	2.525	.345	2.527	.344	1.014	4.417
Chief	657	.853	—	.851	—	0	1
Years of Experience	632	27.366	9.174	27.388	9.143	3	50
Master's Degree	630	.267	—	.271	—	0	1
Large Agency	665	.054	—	.054	—	0	1
White Male	618	.865	—	.862	—	0	1
South (reference)	—	—	—	—	—	—	—
Northeast	657	.268	—	.267	—	0	1
Midwest	657	.368	—	.368	—	0	1
West	657	.158	—	.158	—	0	1
Population size <sup>c</sup>	625	8.615	1.407	8.647	1.407	4.836	14.622
Unemployment Rate <sup>c</sup>	626	1.995	.529	1.994	.523	0	3.339
% Trump Voters	631	53.919	16.081	53.690	16.085	8.405	89.335

<sup>a</sup> 25 imputations, N=665 for each variable; <sup>b</sup> Obtained via the “misum” command in Stata 15; <sup>c</sup> Natural log transformation.

**Table 4. OLS Regression Models Predicting Perceived Audience Legitimacy (Study 2 - National Sample, N = 665)**

Variable	Model 1		Model 2		Model 3		Model 4		Model 5	
	<i>b</i>	SE	<i>b</i>	SE	<i>b</i>	SE	<i>b</i>	SE	<i>b</i>	SE
Citizen Animus	-.297***	(.056)	—	—	—	—	—	—	-.275***	(.057)
Hostile Local Media	—	—	-.170***	(.051)	—	—	—	—	-.098*	(.049)
Hostile National Media	—	—	.026	(.037)	—	—	—	—	.063	(.037)
Violent Crime Rate <sup>a</sup>	—	—	—	—	-.060*	(.025)	—	—	-.058*	(.025)
%Black <sup>a</sup>	—	—	—	—	—	—	-.064*	(.029)	-.028	(.027)
%Hispanic <sup>a</sup>	—	—	—	—	—	—	-.002	(.041)	.024	(.037)
Change %Black <sup>a</sup>	—	—	—	—	—	—	.144	(.125)	.125	(.106)
Change %Hispanic <sup>a</sup>	—	—	—	—	—	—	.016	(.104)	-.107	(.093)
Chief	.177	(.100)	.159	(.100)	.185	(.119)	.188	(.116)	.185*	(.089)
Years of Experience	.003	(.004)	.005	(.004)	.006	(.004)	.005	(.004)	.003	(.003)
Master's Degree	.075	(.052)	.088	(.055)	.054	(.055)	.067	(.054)	.063	(.050)
Large Agency	.084	(.068)	.038	(.072)	.026	(.073)	.018	(.070)	.095	(.066)
White Male	-.046	(.063)	-.065	(.066)	-.043	(.071)	-.036	(.070)	-.072	(.062)
South (Reference)	—	—	—	—	—	—	—	—	—	—
Northeast	-.114	(.085)	-.164	(.099)	-.200	(.103)	-.257*	(.111)	-.148	(.093)
Midwest	-.047	(.074)	-.069	(.085)	-.092	(.086)	-.155	(.088)	-.072	(.077)
West	-.045	(.082)	-.051	(.096)	-.048	(.095)	-.153	(.109)	-.153	(.093)
Population size <sup>a</sup>	-.050*	(.025)	-.030	(.027)	-.016	(.030)	-.013	(.031)	-.026	(.027)
Unemployment Rate <sup>a</sup>	-.147*	(.058)	-.202**	(.067)	-.142	(.073)	-.156*	(.067)	-.074	(.062)
%Trump Voters	-.001	(.002)	-.004	(.003)	-.002	(.003)	-.003	(.003)	-.002	(.002)
Intercept	5.355***	(.355)	4.934***	(.405)	4.573***	(.385)	4.055***	(.546)	5.279***	(.497)
<i>F</i> -test	6.19***		4.06***		3.48***		3.18**		5.48***	
Adjusted R <sup>2</sup>	.264		.170		.128		.120		.306	

NOTES: Multiple-imputation estimates (m=25) using OLS regression are displayed. Entries are unstandardized regression coefficients (b) and robust standard errors (SE).

<sup>a</sup> Natural log transformation; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

## APPENDIX A: FACTOR ANALYSES

**Table A1. Pattern Matrices for Factor Analyses with Promax Rotation**

Study 1 – Southern Agency Item	Factor	
	1	2
<i>Citizen Animus</i>		
People often disrespect and insult the police.	.731	
People are normally polite when dealing with the police.*	.495	
People treat police officers with dignity.*	.564	
People treat the police worse than they treat other government employees.	.666	
People treat police officers unfairly.	.762	
People normally listen to the police before jumping to conclusions in incidents.*	.457	
People will ignore or walk away from the police when officers try to explain a situation.	.560	
<i>Audience Legitimacy</i>		
Most civilians feel an obligation to obey police officers.		.852
Most civilians believe they should do what the police say, even if they disagree.		.849
Most civilians feel [this agency] can be trusted to make decisions that are right for the people in their neighborhood.		.727
Eigenvalue	3.721	1.197
<hr/>		
Study 2 – National Sample Item	Factor	
	1	2
<i>Citizen Animus</i>		
People often disrespect and insult the police.	.667	
People are normally polite when dealing with the police.*	.531	
People treat police officers with dignity.*	.580	
People treat the police worse than they treat other government employees.	.657	
People treat police officers unfairly.	.750	
People normally listen to the police before jumping to conclusions in incidents.*	.493	
People will ignore or walk away from the police when officers try to explain a situation.	.568	
<i>Audience Legitimacy [Most residents believe the police...]</i>		
...Are corrupt.*		.453
...Use rules and procedures that are fair to everyone.		.503
...Clearly explain the reasons for their actions.		.630
...Treat people with respect.		.770
...Are biased against them.*		.567
...Do a good job tackling crime in the community.		.573
...Represent their values.		.720
Eigenvalue	4.068	1.365

\* Item reverse coded. Only factor loadings  $\geq .30$  are displayed.

## APPENDIX B: CORRELATION MATRICES

**Table B1. Correlation Matrix for Study 1 Variables**

Variable	Y	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>	X <sub>6</sub>	X <sub>7</sub>	X <sub>8</sub>	X <sub>9</sub>
Y Audience legitimacy	1.00									
X <sub>1</sub> Recently Disrespected	-.33*	1.00								
X <sub>2</sub> Citizen Animus	-.42*	.46*	1.00							
X <sub>3</sub> Perceived Crime Trend	-.15*	.07	.20*	1.00						
X <sub>4</sub> Male	-.01	.13*	-.01	-.02	1.00					
X <sub>5</sub> White	.03	.00	.00	-.03	-.01	1.00				
X <sub>6</sub> Four-year Degree	.01	.02	-.03	-.05	-.16*	-.01	1.00			
X <sub>7</sub> Years of Experience	.19*	-.46*	-.15*	.05	.01	.12*	-.18*	1.00		
X <sub>8</sub> Front-line Supervisor	.11*	-.24*	-.10*	.10*	-.01	.14*	-.04	.37*	1.00	
X <sub>9</sub> Upper Management	.16*	-.34*	-.15*	-.08	-.03	.05*	.05	.37*	-.28*	1.00

*NOTE:* Matrix constructed using listwise deleted data (N = 425). Entries are Pearson's correlation coefficients.

\*  $p < .05$

**Table B2. Correlation Matrix for Study 2 Variables**

Variable	Y	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>	X <sub>6</sub>	X <sub>7</sub>	X <sub>8</sub>	X <sub>9</sub>	X <sub>10</sub>	X <sub>11</sub>	X <sub>12</sub>	X <sub>13</sub>	X <sub>14</sub>	X <sub>15</sub>	X <sub>16</sub>	X <sub>17</sub>	X <sub>18</sub>	X <sub>19</sub>
Y Audience Legitimacy	1.00																			
X <sub>1</sub> Citizen Animus	-.45*	1.00																		
X <sub>2</sub> Hostile Local Media	-.25*	.38*	1.00																	
X <sub>3</sub> Hostile National Media	-.03	.17*	.25*	1.00																
X <sub>4</sub> Violent Crime Rate <sup>a</sup>	-.17*	-.03	.00	.01	1.00															
X <sub>5</sub> % Black <sup>a</sup>	-.03	.04	.10	.04	.26*	1.00														
X <sub>6</sub> % Hispanic <sup>a</sup>	-.05	-.12	.10	.10	.26*	.20*	1.00													
X <sub>7</sub> Change %Black <sup>a</sup>	.09	.00	.04	.04	-.01	.37*	-.02	1.00												
X <sub>8</sub> Change %Hispanic <sup>a</sup>	-.04	-.15	.00	.05	.15*	.19*	.58*	.01	1.00											
X <sub>9</sub> Chief	.21*	-.06	-.17*	-.16*	-.10	-.24*	-.10	-.05	-.09	1.00										
X <sub>10</sub> Years of Experience	.20*	-.24*	-.03	.01	.11	.02	.07	.18*	.10	.28*	1.00									
X <sub>11</sub> Master's Degree	.06	-.08	.13	-.05	.04	.14*	.20*	.00	.02	.10*	.26*	1.00								
X <sub>12</sub> Large Agency	-.06*	-.03	.07*	-.02	.17*	.22*	.18*	-.03	.12*	-.26*	-.01	.12*	1.00							
X <sub>13</sub> White Male	-.02	-.04	-.10	.06	-.05	-.06	-.12	-.02	-.03	.09	.19*	.08	-.08*	1.00						
X <sub>14</sub> Northeast	-.13	.13	.02	.04	-.07	-.14*	-.29*	-.07	-.11	-.09	.09	.01	-.09*	.16*	1.00					
X <sub>15</sub> Midwest	.04	-.02	.02	-.11	-.03	-.08	-.13	.13	-.02	.10	.03	-.01	-.05*	.06	-.42*	1.00				
X <sub>16</sub> West	.03	-.15*	-.04	.05	.04	-.25*	.40*	-.10	.02	.07	.02	.03	.06	-.16	-.29*	-.32*	1.00			
X <sub>17</sub> Population size <sup>a</sup>	-.09	-.21*	.07	-.03	.33*	.37*	.40*	.04	.33*	-.23*	.26*	.31*	.55*	-.01	-.09	-.01	.13*	1.00		
X <sub>18</sub> Unemployment Rate <sup>a</sup>	-.15	.03	-.03	-.16*	.40*	.28*	.28*	.03	.10	-.10	-.02	.08	.07*	-.09	-.06	-.11	.12*	.16	1.00	
X <sub>19</sub> % Trump Voters	-.04	.17*	-.13*	.03	-.09	-.18*	-.25*	-.14*	-.13	.22*	-.14	-.25*	-.17*	.09	-.04	.00	-.26*	-.36*	-.04	1.00

NOTE: Matrix constructed using listwise deleted data (N = 541). Entries are Pearson's correlation coefficients (weighted to account for sampling design using "corr\_svy" command in Stata 15).

<sup>a</sup> Natural log transformation.

\*  $p < .05$

## APPENDIX C: SUPPLEMENTAL ANALYSES

**Table C1. Study 1: Comparison of Observed Results to Simulated Results wherein Nonrespondents Were Assumed to Have Differed Substantially from Respondents on Perceived Audience Legitimacy**

Variable	Observed Data <sup>a</sup>		Simulated Data			
	<i>b</i>	SE	Negative Bias Threshold <sup>b</sup>		Positive Bias Threshold <sup>c</sup>	
	<i>b</i>	SE	<i>b</i>	SE	<i>b</i>	SE
Recently Disrespected	-.053	(.032)	-.017	(.024)	-.048*	(.024)
Citizen Animus	-.394***	(.057)	-.264***	(.044)	-.261***	(.044)
Perceived Crime Trend	-.096*	(.042)	-.069*	(.033)	-.047	(.033)
Male	.075	(.123)	.057	(.098)	.057	(.095)
White	.017	(.075)	.016	(.061)	.016	(.060)
Four-year Degree	.028	(.067)	.021	(.059)	.020	(.058)
Experience	.005	(.005)	.004	(.004)	.004	(.005)
Police Officer (Reference)	—		—		—	
Front-line Supervisor	.114	(.082)	.096	(.074)	.093	(.073)
Upper Management	.177	(.121)	.160	(.113)	.156	(.109)
Intercept	5.133***	(.281)	3.757***	(.217)	5.255	(.205)
N	546		1,752		1,752	
<i>F</i> -test	12.95***		7.40***		6.77***	

<sup>a</sup> Multiple-imputation estimates (m=25) using OLS regression are displayed. Entries are unstandardized regression coefficients (*b*) and robust standard errors (SE).

<sup>b</sup> Mean coefficients and standard errors across 1,000 Monte Carlo simulations where we assumed nonrespondents would have scored 1-2 SDs below the respondent group mean on our dependent variable. *Recently disrespected* was statistically significant 0 times, *citizen animus* 1,000 times, and *perceived crime trend* 712 times.

<sup>c</sup> Mean coefficients and standard errors across 1,000 Monte Carlo simulations where we assumed nonrespondents would have scored 1-2 SDs above the respondent group mean on our dependent variable. *Recently disrespected* was statistically significant 538 times, *citizen animus* 1,000 times, and *perceived crime trend* 21 times.

\**p* < .05; \*\**p* < .01; \*\*\**p* < .001

**Table C2. Study 2: Comparison of Observed Results to Simulated Results wherein Nonrespondents Were Assumed to Have Differed Substantially from Respondents on Perceived Audience Legitimacy**

Variable	Simulated Data					
	Observed Data <sup>a</sup>		Negative Bias Threshold <sup>b</sup>		Positive Bias Threshold <sup>c</sup>	
	<i>b</i>	SE	<i>b</i>	SE	<i>b</i>	SE
Citizen Animus	-.275***	(.057)	-.182***	(.031)	-.177***	(.030)
Hostile Local Media	-.098*	(.049)	-.083**	(.026)	-.077***	(.023)
Hostile National Media	.063	(.037)	.037	(.024)	.032	(.024)
Violent Crime Rate <sup>d</sup>	-.058*	(.025)	-.044*	(.018)	-.040*	(.018)
%Black <sup>d</sup>	-.028	(.027)	-.024	(.020)	-.018	(.019)
%Hispanic <sup>d</sup>	.024	(.037)	.018	(.023)	.015	(.024)
Change %Black <sup>d</sup>	.125	(.106)	.036	(.069)	.051	(.066)
Change %Hispanic <sup>d</sup>	-.107	(.093)	-.048	(.062)	-.059	(.069)
Chief	.185*	(.089)	.065	(.042)	.072	(.043)
Years of Experience	.003	(.003)	.002	(.002)	.001	(.002)
Master's Degree	.063	(.050)	.017	(.034)	.034	(.032)
Large Agency	.095	(.066)	.204***	(.035)	-.092**	(.037)
White Male	-.072	(.062)	-.025	(.043)	-.016	(.041)
South (Reference)	—		—		—	
Northeast	-.148	(.093)	-.069	(.051)	-.094	(.053)
Midwest	-.072	(.077)	-.035	(.045)	-.060	(.044)
West	-.153	(.093)	-.032	(.061)	-.061	(.059)
Population Size <sup>d</sup>	-.026	(.027)	-.068***	(.017)	.042**	(.016)
Unemployment Rate <sup>d</sup>	-.074	(.062)	-.070	(.043)	-.050	(.044)
%Trump Voters	-.002	(.002)	.000	(.001)	-.001	(.001)
Intercept	5.279***	(.497)	5.056***	(.326)	4.796***	(.323)
N		665		2,496		2,496
F-test		5.48***		6.76***		4.32***

<sup>a</sup> Multiple-imputation estimates (m=25) using OLS regression are displayed. Entries are unstandardized regression coefficients (b) and robust standard errors (SE).

<sup>b</sup> Mean coefficients and standard errors across 1,000 Monte Carlo simulations where we assumed nonrespondents would have scored 1-2 SDs below the respondent group mean on our dependent variable. *Citizen animus* was statistically significant 1,000 times, *local media* 1,000 times, *national media* 12 times, and *violent crime rate* 995 times. *%Black*, *%Hispanic*, *Change %Black*, and *Change %Hispanic* were not statistically significant in any of the simulated models.

<sup>c</sup> Mean coefficients and standard errors across 1,000 Monte Carlo simulations where we assumed nonrespondents would have scored 1-2 SDs above the respondent group mean on our dependent variable. *Citizen animus* was statistically significant 1,000 times, *local media* 1,000 times, *national media* 1 time, and *violent crime rate* 914 times. *%Black*, *%Hispanic*, *Change %Black*, and *Change %Hispanic* were not statistically significant in any of the simulated models.

<sup>d</sup> Natural log transformation.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$



**Table C3. Study 2: Regression Models Predicting Procedural Justice, Distributive Justice, Lawfulness, and Effectiveness (N = 665)**

Variable	Procedural Justice		Distributive Justice		Lawfulness		Effectiveness <sup>b</sup>	
	<i>b</i>	SE	<i>b</i>	SE	<i>b</i>	SE	<i>b</i>	SE
Citizen Animus	-.268***	.065	-.341***	.071	-.270***	.073	-.924*	.387
Hostile Local Media	-.091	.057	-.127*	.058	-.097	.059	-.329	.317
Hostile National Media	.025	.047	.162**	.049	.039	.054	-.189	.222
Violent Crime Rate <sup>a</sup>	-.055	.038	-.035	.037	-.082*	.037	-.254	.169
%Black <sup>a</sup>	-.020	.034	-.004	.035	-.076	.040	-.395*	.191
%Hispanic <sup>a</sup>	.055	.045	.049	.057	-.003	.041	-.123	.230
Change %Black <sup>a</sup>	.192	.123	.063	.135	.101	.125	.488	.582
Change %Hispanic <sup>a</sup>	-.220*	.100	-.084	.142	-.122	.123	-.012	.623
Chief	.202	.107	.176	.111	.172	.132	.581	.623
Years of Experience	.000	.004	.006	.004	.005	.005	.014	.022
Master's Degree	.009	.061	.097	.062	.094	.070	-.022	.318
Large Agency	.193*	.081	.049	.096	.075	.087	.230	.424
White Male	.036	.093	-.089	.085	-.140	.087	-1.027**	.343
South (Reference)	—		—		—		—	
Northeast	-.155	.115	-.132	.125	-.204	.123	-1.256*	.508
Midwest	-.034	.089	-.073	.109	-.154	.107	-.976*	.470
West	-.164	.104	-.060	.116	-.276	.145	-1.304*	.588
Population size <sup>a</sup>	-.071*	.030	-.037	.038	.004	.035	-.086	.195
Unemployment Rate <sup>a</sup>	-.019	.076	-.156	.087	-.007	.084	-.170	.348
%Trump Voters	-.001	.002	-.002	.003	-.004	.003	-.011	.012
Intercept	5.541***	.606	5.050***	.641	5.651***	.666	—	
<i>F</i> -test	4.15***		7.48***		4.09***		2.98***	
Adjusted R <sup>2</sup>	.214		.266		.233		—	

NOTES: Multiple-imputation estimates (m=25) using OLS regression are displayed unless otherwise noted. Entries are unstandardized regression coefficients (b) and robust standard errors (SE).

<sup>a</sup> Natural log transformation; <sup>b</sup> Ordered logistic regression; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$