

**Do the Police Believe that Legitimacy Promotes Cooperation from the Public?**

Article forthcoming in *Crime & Delinquency*

doi: [10.1177/0011128715597696](https://doi.org/10.1177/0011128715597696)

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## Abstract

Tyler's process-based model of regulation suggests that when citizens perceive the police as a legitimate authority, they are more likely to cooperate in the form of reporting crimes and providing information to the police. Yet most studies have considered citizens' perceptions of police legitimacy—few studies have asked the police what they feel makes them legitimate in the eyes of the public. Likewise, no studies have considered whether the police believe legitimacy is associated with cooperation from the public. The present study addresses this gap using data from a stratified sample of U.S. police executives. Findings suggest police believe performance, rather than procedural justice, is the key to generating cooperation from the public.

The police rely heavily on cooperation from the public in order to perform their jobs. If not for citizens reporting crimes after they occur, a great deal of crime would go unnoticed by law enforcement. A rapidly growing body of research suggests that the best way for the police to increase the likelihood of being met by cooperation from the public is to be perceived by citizens as a legitimate authority. A consistent theme in this line of research is that citizens are more likely to view the police as legitimate when they exercise their authority in a procedurally fair manner (Jackson, Bradford, Stanko, & Hohl, 2012; Mazerolle, Bennett, Antrobus, & Eggins, 2012; Tyler, 1990; Tyler & Huo, 2002).

The problem, however, is that few studies have considered whether the police correctly perceive the sources of their legitimacy in the eyes of the public (see Jonathan-Zamir & Harpaz, 2014; Nix, 2015), and no studies to date have considered whether the police are aware of the beneficial outcomes of legitimacy. Bottoms and Tankebe (2012) suggest that legitimacy is an ongoing dialogue between power-holders and (sometimes multiple) audiences. To date, research has primarily focused on “audience legitimacy.” But what are the practical implications of this body of research if the police themselves do not understand how citizens perceive and respond to police legitimacy? How can the police be expected to emphasize procedural fairness when interacting with citizens if they are not aware of its potential to increase cooperation? Indeed, there is evidence that police officers rely on their own experiences more so than expert opinions when determining “what works in policing” (Lum, Telep, Koper, & Grieco, 2012, p. 78). It is therefore critical to consider the dialogic nature of legitimacy as Bottoms and Tankebe suggest. A key initial inquiry is whether or not the police understand that legitimacy promotes cooperation from the public. Relatedly, it is important to consider the possibility that the police might think different factors shape public cooperation in various segments of the community.

The current study explores these ideas by considering the dialogic nature of legitimacy. Specifically, the current study considers whether the police think being perceived as a legitimate authority increases the likelihood of being met with cooperation from citizens residing in high and low crime areas of the community. This is accomplished using survey data from a stratified sample of U.S. law enforcement executives ( $N = 643$ ). Practical and theoretical implications of the findings are discussed.

### **Literature Review**

In order for the police to effectively deal with crime in society, they must rely to a certain extent on cooperation from citizens. The police simply cannot be everywhere at once; thus, they cannot rely solely on catching offenders in the act of committing their crimes. A great deal of crime only comes to the attention of the police after it has occurred and offenders are long gone—that is, when citizens report crime to the police. Crimes such as burglary, for example, are especially difficult for the police to address because citizens often do not discover they have been victimized until long after the commission of the burglary (Mawby, 2013). In a similar fashion, police investigators rely heavily on witnesses and victims providing information that can help them solve cases. If citizens do not feel inclined to provide helpful information to the police, their job becomes much more difficult. The police therefore have a vested interest in generating citizen cooperation so that they can adequately perform their job.

The process-based model of regulation suggests that citizens are more likely to cooperate with the police when they perceive them as a legitimate authority (Tyler, 1990; Tyler & Huo, 2002). Legitimacy concerns the right of a power-holder to rule and the degree to which the ruled acknowledge said right (Beetham, 1991; Bottoms & Tankebe, 2012; Coicaud, 2002). As it pertains to legal authorities like the police, “legitimacy reflects people’s views about the degree

to which they feel a responsibility to support legal authorities and defer to their decisions” (Tyler & Huo, 2002, p. 101). There has been considerable debate regarding the best way to measure legitimacy in recent years, but Tyler (1990, 2003) conceptualized legitimacy as *trust* and *perceived obligation to obey*.<sup>1</sup> However, scholars have since demonstrated that the two concepts do not load together onto a single factor (Gau, 2011, 2013; Reisig, Bratton, & Gertz, 2007). For example, upon disaggregating Tyler’s legitimacy index, Reisig et al. (2007) found that *trust in the police* influenced cooperation but *obligation to obey* did not. Recent research has treated trust as both theoretically and empirically distinct from legitimacy (e.g., Nix, Wolfe, Rojek, & Kaminski, 2014; Sargeant, Murphy, & Cherney, 2013).

The correlation between police legitimacy and cooperation has received empirical support (Bradford, 2014; Jackson et al., 2012; Murphy & Cherney, 2012; Murphy, Hinds, & Fleming, 2008; Reisig, Tankebe, & Meško, 2014). For instance, using face-to-face interview data from the London Metropolitan Police’s Public Attitudes Survey (METPAS), Jackson et al. (2012) found that police legitimacy was correlated with greater cooperation. Murphy et al. (2008) reached a similar conclusion using a survey of 2611 Australian citizens, but found that citizens who felt the police performed well in terms of controlling crime felt *less* inclined to cooperate with the police. Murphy and Cherney (2012) found that among both ethnic minorities and non-minorities, perceived legitimacy of the police was significantly associated with

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<sup>1</sup> Jackson et al. (2012) define legitimacy as a sense of *moral alignment* with the police in addition to a perceived obligation to obey (i.e., “the police usually act in ways that are consistent with my own ideas about what is right and wrong”). These authors also consider *legality* (i.e., acting in accordance with the law; see also Beetham, 1991) to be an important component of legitimacy. Tyler (2003, p. 310) argues that “perceived obligation to obey is the most direct extension of the concept of legitimacy,” but Bottoms and Tankebe (2012) suggest that citizens can feel obligated to obey the law or legal authorities for reasons other than perceived legitimacy. Perhaps citizens obey legal authorities out of “dull compulsion,” which Carrabine (2004, p. 180) suggests occurs with inmates in the prison context (i.e., they are powerless to do anything else but obey the authorities). Tankebe (2013) uses data from 5,120 interviews with London residents to demonstrate that legitimacy is comprised of four dimensions and exerts a direct effect on citizens’ willingness to cooperate with the police independent of perceived obligation to obey. These four dimensions are *procedural justice*, *distributive justice*, *lawfulness*, and *effectiveness*.

willingness to cooperate. However, among a Ghanaian sample, Tankebe (2009) found that cooperation was influenced more by perceived effectiveness of the police than perceived legitimacy. Still, the evidence overwhelmingly favors the notion that perceived legitimacy of the police promotes cooperation among citizens. How then, do the police achieve legitimacy?

### **Sources of Legitimacy**

The process-based model suggests that the best way for the police to go about achieving legitimacy in the eyes of the public is to interact with citizens in a procedurally just manner. There are two components of procedural justice: *quality of decision making* (i.e., allowing citizens to have a voice in the decision making process, and neutrality, competence, and consistency on the part of the decision maker) and *quality of interpersonal treatment* (i.e., treating individuals with dignity and respect, acknowledging their rights, and considering their needs; see, e.g., Murphy, Tyler, & Curtis, 2009; Tyler, 2004; Tyler & Blader, 2000). Numerous studies have demonstrated that procedural justice is the primary antecedent of evaluations of police legitimacy net of individual or contextual variables (Gau, 2011, 2013; Reisig et al., 2007; Tankebe, 2013; Tyler, 1990; Tyler & Huo, 2002; Wolfe, 2011; Wolfe, Nix, Kaminski, & Rojek, 2015; c.f. Gau, Corsaro, Stewart, & Brunson, 2012). That is, individuals who believe police actions are procedurally fair are more likely to perceive them as a legitimate authority. In turn, they become more likely to cooperate with police by reporting crimes and providing information. Thus, procedural justice on the part of the police ultimately yields cooperation—in statistical terminology, its effect is mediated by perceived legitimacy. Yet there are other ways the police may go about cultivating legitimacy in the eyes of the public—thus securing greater cooperation.

In contrast to procedural justice, a normative perspective which focuses on fairness of procedures, *distributive justice* is an instrumental perspective that focuses on fairness of

outcomes (Sarat, 1977). Citizens who believe that the police enforce the law consistently and provide the same quality of service to all people tend to view them as a more legitimate authority (Sunshine & Tyler, 2003). For example, Tyler and Wakslak (2004) demonstrated that perceived racial profiling by the police was associated with lower levels of perceived legitimacy of the police. While distributive justice is important in terms of establishing legitimacy, the available evidence suggests it is less important than procedural justice (Hinds & Murphy, 2007; Reisig et al., 2007; Sunshine & Tyler, 2003; Tyler, 1990, 2005; Tyler & Huo, 2002). Another predictor of police legitimacy focuses on how well the police respond to crime and disorder (i.e., *performance*; see Tyler, 2005; Wilson & Kelling, 1982). For example, Sunshine and Tyler (2003) found that the effect of procedural justice on legitimacy was about five times greater than the effect of a police performance scale. Jonathan-Zamir and Weisburd (2013) used a natural experiment to demonstrate that even in the face of threats to national security, procedural justice outperformed police performance in terms of its effect on Israeli citizens' perceptions of police legitimacy. Thus, while performance has been linked to legitimacy, procedural fairness appears to matter more to citizens (Jackson et al., 2012; Sunshine & Tyler, 2003; Wolfe et al., 2015).

The available evidence therefore indicates that procedural justice can be a powerful tool for officers to draw upon during citizen interactions. That is, citizens will be more likely to view the police as legitimate and in turn become more likely to cooperate with police in the long term. But the literature has not reached a firm conclusion about whether or not the police are aware of the power of this process-based model of regulation. Indeed, the police may believe other factors, such as performance, are more important to establishing legitimacy in the eyes of the public. Research suggests this may be a less efficient means of generating public cooperation.

### **The Dialogic Approach to Legitimacy**

Bottoms and Tankebe (2012) recently proposed that researchers adopt a “dialogic” approach to understanding legitimacy. According to the authors, legitimacy involves two parties: power holders and audiences. In order to truly understand legitimacy, researchers must think of it as an ongoing dialogue between these two parties. According to Bottoms and Tankebe, power-holders (e.g., the police) first make a claim to legitimacy. The audience (e.g., the community) then responds—either positively or negatively—to that claim. Power holders, in turn, observe the audience’s response to their claim to legitimacy and may or may not choose to alter it as a result.

The majority of studies that ensued in response to Tyler’s theory have been concerned with audience legitimacy. Yet if the police make claims to legitimacy which are ultimately not in line with what the public needs, it is likely that the public will not recognize the police as legitimate. Thus, police officers’ understanding of the foundations of their legitimacy in the eyes of the public needs to be assessed. This is crucial to the success of the process-based model of regulation. For the model to work, the police must understand that procedural fairness is the key to increasing long-term cooperation. Examining officers’ views of how the public evaluates them will shed light on the degree to which the process-based model is feasible in practice and can prove useful in the translation of citizen survey results into actionable police behaviors. In response to Bottoms and Tankebe’s arguments, Jonathan-Zamir and Harpaz (2014) surveyed 290 Israeli police officers and discovered that they associated their legitimacy with performance more so than with procedural fairness. In other words, the Israeli officers believed that citizens’ evaluations of their legitimacy are based more on how well they fight crime than on how fairly they treat members of the public.

Importantly, Bottoms and Tankebe also suggest that power holders must consider their legitimacy as it pertains to multiple audiences—particularly when those audiences have

conflicting interests. The factors that shape individuals' perceptions of police legitimacy might vary according to, for example, the level of perceived danger or threat of victimization in an area. Jonathan-Zamir and Weisburd (2013) demonstrated that Israeli *citizens* living in areas that experienced more frequent security threats were more concerned with the performance of the police than their counterparts living in areas that experienced fewer security threats. At the same time, procedural justice was the primary antecedent of legitimacy in both areas.

A distinct but related question that remains under-explored is whether or not police legitimacy is partially contingent upon the level of *crime* in an area. Perhaps, like citizens living in areas facing security threats, those residing in high crime areas are more concerned with police performance than citizens residing in low crime areas. Wolfe et al. (2015) address this question by interacting citizen perceptions of police performance with a dummy variable indicating whether the citizen lived in a "low crime neighborhood." The interaction term failed to achieve statistical significance, meaning that in their sample, level of crime did not condition citizens' perceptions of police performance. In other words, citizens in the low crime neighborhood were not significantly more or less concerned with police performance than citizens residing in high crime neighborhoods. Still, in terms of the dialogic approach to legitimacy, it seems reasonable that the police might *believe* this to be the case. Nix (2015) demonstrated that U.S. police executives believe citizens of low crime areas feel more obligated to obey police when they think the police are performing well; in contrast, the responding officers felt procedural justice and distributive justice were more important to citizens residing in high crime areas. To date, there are no studies that consider whether the police: (a) understand that enhancing their legitimacy in the eyes of the public is the key to generating cooperation, or (b) think that citizen cooperation hinges on different factors depending on the level of crime in an area.

## **The Current Study**

Using the dialogic model of legitimacy as a framework, the current study addresses this gap in the literature by exploring what officers believe is the best way to achieve cooperation from citizens residing in high crime areas and low crime areas of the community. It is important to gauge police officers' understanding of the best way to achieve cooperation from the public because they may not be privy to the empirical success of the process-based model of regulation. It bears repeating: how can the police be expected to emphasize procedural fairness during interactions with citizens if they are unaware that it ultimately yields greater public cooperation?

## **Method**

### **Data**

The present study uses survey data from a nationally representative sample of law enforcement executives drawn from the 2014 National Directory of Law Enforcement Administrators (NDLEA) database. It is important to gauge the perceptions of Chief Executives because the ideas they embrace are likely to trickle down throughout the agency and influence line-level officers. In Tyler's (2011, p. 261) words: "The organizational culture of police departments is shaped by the values articulated by their leaders." All municipal and county police departments as well as sheriff's departments in the database were included in the sampling frame. In an effort to reduce sampling error and allow for identification of potential differences between groups, stratification was used to group similar law enforcement executives together in terms of population served, region of the U.S., and agency type (Sudman, 1976). In terms of population served, agencies were placed into one of five groups: (1) less than 10,000, (2) 10,000 – 49,999, (3) 50,000 – 99,999, (4) 100,000 or more, and (5) missing population data.<sup>2</sup> With

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<sup>2</sup> The NDLEA database did not provide a population count for 698 agencies. As such, these agencies were placed into a fifth "missing population" stratum for sampling purposes. This approach is similar to that of Smith et al.

respect to region, agencies were placed into one of four U.S. census categories—Northeast, Midwest, South, or West.<sup>3</sup> Finally, with regard to agency type, agencies were categorized as either police departments (whether county or municipal) or sheriff's departments.

There were a total of 12,315 county or city/municipal police agencies and 3,059 sheriff's departments in the sampling frame. In an effort to maximize the chances of receiving completed surveys from executives at agencies serving large populations, those in the 100,000 or more population group were sampled with certainty (n=859). These agencies represent only five percent of municipal police/sheriff's departments in the U.S. but their officers/deputies interact with a much larger proportion of the public. Thus it was deemed imperative to maximize the probability of receiving completed surveys from executives at these agencies.

The remainder of the sample (n = 1,141) was drawn from agencies in the other 32 strata. This required 35.7 agencies per stratum; however, six strata had a very small number of agencies (46 altogether). As such, all agencies in these six strata were sampled. Then, 42 executives were randomly selected from each remaining stratum with fewer than 1,000 agencies, and 43 executives were randomly selected from each remaining stratum with more than 1,000 agencies. These steps resulted in the selection of 2,000 law enforcement executives to receive the survey. A mixed-strategy method was used to elicit participation—executives received a hardcopy survey in the mail but were also given the option to complete the survey online at a password protected website (Dillman et al., 2009). A total of 663 agencies returned completed surveys representing a 33.5% response rate (72.4% of respondents completed the mail version).

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(2008) which used an older version of the NDLEA database. More important, to simply exclude those agencies with missing population data would be problematic if they are in some way significantly different than those agencies that do have population data. Excluding these agencies would thus require making an assumption that their population data is missing at random.

<sup>3</sup> These are the same regions used by the Uniform Crime Report (UCR).

However, a total of 20 surveys were completed by a civilian employee and are thus unfit for inclusion in the analyses. As such, all analyses conducted below include responses from sworn personnel only ( $N = 643$ ).<sup>4</sup> As is common in survey research, a small proportion of respondents did not provide answers to all of the questions. Imputation of missing data was completed using the Stata 13 *hotdeck* suite (Andridge & Little, 2010; Fuller & Kim, 2005; Gmel, 2001).

Finally, because agencies within various strata had different probabilities of being selected, and because the strata produced varying response rates, a weighting procedure is used to provide a better understanding of police perceptions of their legitimacy in the eyes of the public nationwide. Each strata is weighted based on the extent to which its collection of agencies is represented by the survey respondents belonging to that strata. That is, the strata are weighted so that the findings from this sample are more representative of agencies *nationwide*. Foregoing this weighting procedure could result in biased estimates (see Smith et al., 2010 for a similar discussion). The Appendix provides the number of agencies that fall into each stratum nationwide, the percentage representation of these agencies among all municipal/county police and sheriff's departments in the sampling frame ( $N = 15,356$ ), the number of agencies among the survey respondents, and the percentage representation of these agencies among survey respondents used in the analyses ( $N = 643$ ). The weights used in each of the analyses are obtained by dividing Column B by Column D.

### **High versus Low Crime Areas**

The present study asked respondents to consider two areas in their jurisdiction—one characterized by high rates of crime and another with relatively low criminal activity. Then, each

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<sup>4</sup> Note that executives were asked to complete the survey, but should they delegate the survey to someone else, they were asked to give it to an officer whom they deemed qualified to respond on behalf of the agency. A total of 307 executives (or about 48 percent of the sample) completed the survey themselves, while 336 had one of their officers complete the survey. As such, analyses in the present study control for the rank of the responding officer.

survey question was presented twice—once as it pertained to the high crime area and again as it pertained to the low crime area. Respondents were instructed to answer each question as they felt the average citizen residing in each of these areas would answer. For example, respondents were asked the extent to which they agreed or disagreed that “residents of *high crime areas* are willing to call the police to report a crime” as well as the extent to which they agreed or disagreed that “residents of *low crime areas* are willing to call the police to report a crime.” For the sake of simplicity, each of the survey items used to construct independent and dependent variables is presented only once in general terms. In actuality, there are two of each survey item—one for high crime areas and one for low crime areas. This allows for a comparison of responding officers’ perceptions of the likelihood of citizens in each area exhibiting cooperative behaviors.

### **Dependent Variable**

**Cooperation.** Respondents were presented with two questions intended to measure *perceived willingness of citizens to cooperate*: “Residents are willing to call the police to report a crime” and “Residents are willing to provide information to the police to help find a suspected criminal or solve a case” (Reisig et al., 2007; Sunshine & Tyler, 2003). Responses were measured on a 4-item Likert scale (1 = *strongly disagree* to 4 = *strongly agree*). Principal-axis factor analysis (PAF) revealed that the items loaded onto separate factors for high and low crime areas (high crime  $\lambda = 1.07$ , factor loadings  $> 0.71$ ; low crime  $\lambda = 1.09$ , factor loadings  $> 0.71$ ).<sup>5</sup> The items were used to construct two distinct scales (*cooperation in high crime areas* [ $r = 0.63$ ] and *cooperation in low crime areas* [ $r = 0.64$ ]; see Pearson [1895]) ranging from 2 to 8, with higher scores indicating that responding officers believe citizens are more willing to cooperate with the police. The distribution of the two cooperation scales suggests the sample believes

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<sup>5</sup> Orthogonal varimax rotation was used in this and all other instances in the present study.

citizens in both high ( $M = 5.811$ ,  $SD = 1.392$ ) and low crime areas ( $M = 6.675$ ,  $SD = 1.302$ ) are fairly willing to cooperate with the police. Note, however, that the difference between the two means is statistically significant ( $t = -16.83$ ,  $p < .01$ ). Table 1 provides descriptive statistics for each of the variables used in the analyses.

[Table 1 about here]

### **Independent Variables**

**Procedural justice.** Procedural justice in the eyes of the public (as perceived by the police) was measured using five items: “Residents believe officers treat those they encounter with politeness and dignity,” “Residents believe officers respect the rights of the citizens they come in contact with,” “Residents believe officers make decisions based on facts, not personal interest,” “Residents believe officers take the time to listen to people” and “Residents believe officers allow people involved to express their views before making a decision in a case” (Jonathan-Zamir & Harpaz, 2014; Sunshine & Tyler, 2003). Again, responses were measured on a 4-item Likert scale (1 = *strongly disagree* to 4 = *strongly agree*). PAF revealed that the procedural justice items loaded onto separate factors for high and low crime areas (high crime  $\lambda = 3.00$ , factor loadings  $> 0.64$ ; low crime  $\lambda = 2.45$ , factor loadings  $> 0.45$ ). The items also demonstrated strong internal consistency (high crime  $\alpha = 0.89$ ; low crime  $\alpha = 0.85$ ; see, e.g., Cortina, 1993) and were thus used to create two scales ranging from 5 to 20, with higher scores indicating that responding officers believe citizens think the police exercise their authority in a procedurally fair manner.

**Distributive justice.** Distributive justice was measured using two items. Respondents were asked to indicate the extent they agreed or disagreed (1 = *strongly disagree* to 4 = *strongly agree*) that “Residents believe the police enforce the law consistently when dealing with all

people” and “Residents believe the police provide the same quality of service to all citizens” (Reisig et al., 2007; Sunshine & Tyler, 2003). PAF revealed that the items loaded onto separate factors for high and low crime areas (high crime  $\lambda = 1.45$ , factor loadings  $> 0.81$ ; low crime  $\lambda = 1.24$ , factor loadings  $> 0.75$ ). The items were used to construct two scales (*distributive justice in high crime areas* [ $r = 0.79$ ] and *distributive justice in low crime areas* [ $r = 0.72$ ]) ranging from 2 to 8, with higher scores indicating that responding officers believe citizens think the police distribute their services and enforce the law equally throughout the community.

**Performance.** Citizens’ impressions of police performance (as perceived by the responding officers) were measured via six survey items on a four-point Likert scale (1 = *strongly disagree* to 4 = *strongly agree*): “Residents believe the police are efficient in handling crime in their area of residence,” “Residents believe officers respond quickly when they call for help,” “Residents believe the police are effective in handling violent crimes in the community,” “Residents believe the police are effective in handling drug crimes in the community,” “Residents believe the police deal well with property crimes in the community,” and “Residents feel this is a safe community during the evening/night” (Jonathan-Zamir & Harpaz, 2014; Sunshine & Tyler, 2003). PAF revealed that the performance items loaded onto separate factors for high and low crime areas (high crime  $\lambda = 3.22$ , factor loadings  $> 0.59$ ; low crime  $\lambda = 3.09$ , factor loadings  $> 0.52$ ). The items also demonstrated strong internal consistency (high crime  $\alpha = 0.87$ ; low crime  $\alpha = 0.85$ ) and as such, were used to construct two summated scales ranging from 6 to 24, with higher scores reflecting a belief on the part of responding officers that citizens think the police are effective and efficient in dealing with crime.

**Perceived trust.** In order to capture *perceived levels of citizen trust*, respondents were asked the extent to which they felt residents “feel the police make the right decisions for people

in their area of residence,” “agree with the values that guide the work of our agency,” and “believe the police can be trusted to make decisions that are right for the people in their neighborhood” (Jonathan-Zamir & Harpaz, 2014; Jonathan-Zamir & Weisburd, 2013).

Responses were measured on a four-point Likert scale (1 = *strongly disagree* to 4 = *strongly agree*). The six items loaded onto two factors (high crime  $\lambda = 1.57$ , factor loadings  $> 0.65$ ; low crime  $\lambda = 1.57$ , factor loadings  $> 0.65$ ), each demonstrating strong internal consistency (high crime  $\alpha = .79$ ; low crime  $\alpha = .79$ ). The items were therefore used to construct two scales ranging from 3 to 12, with higher scores on the scales suggesting that the responding officer thinks that citizens believe police actions are made in good faith and with the community in mind.

**Perceived obligation to obey.** In order to capture *perceived level of citizens' obligation to obey* the police, respondents were asked the extent to which they felt residents “believe they should accept decisions made by the police, even if they think the police are wrong,” “believe they should do what the police say, even if they do not understand the reason for police actions,” “believe they should do what the police say even if they disagree,” and “believe they should do what the police say even when they do not like the way they are being treated” (Sunshine & Tyler, 2003). Again, responses were measured on a four-point Likert scale. The eight items loaded onto two factors (high crime  $\lambda = 2.09$ , factor loadings  $> 0.58$ ; low crime  $\lambda = 1.76$ , factor loadings  $> 0.54$ ), each demonstrating strong internal consistency (high crime  $\alpha = 0.84$ ; low crime  $\alpha = 0.81$ ). Accordingly, the items were used to construct two scales ranging from 4 to 16, with higher scores on the scales suggesting that the responding officer believes that citizens feel more obligated to obey the police.

## **Controls**

In addition to the aforementioned variables, several demographic control variables are included in the analyses in order to provide unbiased estimates of key predictor variables on responding officers' perceptions of citizen cooperation. Rank (1 = *chief executive*), as well as experience both at the current agency and in the current position are all dummy coded (1 = *10 or more years of experience*). Gender (1 = *male*), race (1 = *racial minority*) and agency type (1 = *county or municipal police department*; 0 = *sheriff's department*) are also dummy coded. Region is measured with three dummy variables (*Midwest, South, and West*; Northeast is the reference category). *Large city* is defined as those agencies in the 75<sup>th</sup> percentile of the sample in terms of population served (1 = *agencies serving 210,000 or more citizens*).

### **Analytic Strategy**

A series of six regression models will be used to explore responding officers' perceptions of what makes citizens in high crime areas more likely to cooperate. First, the effect of procedural justice on cooperation will be examined, net of statistical controls. Then, the effects of distributive justice and performance on cooperation are examined respectively, holding all else constant. Next, the extent to which respondents believe trust is associated with cooperation is examined net of statistical controls. The relationship between obligation to obey and cooperation is subsequently examined net of the influence of control variables. Finally, the effects of procedural justice, distributive justice, performance, trust, and obligation to obey on cooperation are examined, holding all else constant. Analyzing the data in this fashion will reveal whether responding officers feel procedural justice, distributive justice, and/or performance are directly associated with citizen cooperation (i.e., rather than indirectly influencing cooperation through their influence on legitimacy). The same steps are followed when exploring responding officers' perceptions of what makes citizens in low crime areas more likely to cooperate.

Diagnostic tests demonstrated that harmful levels of collinearity do not appear to be present in the multivariate models presented below. All bivariate correlations fell below an absolute value of .73 for the high crime area variables and .69 for the low crime area variables. Typically .80 is used as a threshold indicative of harmful collinearity (Mason & Perreault, 1991). Furthermore, all variance inflation factors fell below an absolute value of 3.2 in the high crime models and 2.8 in the low crime models (Tabachnick & Fidell, 2007).

## Results

The analyses in Table 2 explore the perceived independent and additive effects of procedural justice, distributive justice, performance, trust, and obligation to obey on the perceived likelihood of citizens in high crime areas cooperating with the police. Model 1 regresses the two-item cooperation scale onto the procedural justice scale along with each of the control variables. The model as a whole is statistically significant and accounts for roughly 37 percent of the variation in perceived likelihood of cooperation in high crime areas ( $F = 11.37, p < .01$ ). Procedural justice has a positive and significant relationship with perceived cooperation ( $b = .268, p < .01$ ), suggesting the responding officers believe citizens in high crime areas are more likely to cooperate with the police when they evaluate police actions as procedurally fair.

[Table 2 about here]

Model 2 regresses cooperation onto the distributive justice index along with each of the control variables. The model is statistically significant and explains 29 percent of the variation in perceived likelihood of citizen cooperation ( $F = 8.37, p < .01$ ). The effect of distributive justice is moderately strong ( $b = .450, p < .01$ ), which suggests the respondents believe cooperation from the public is more likely to occur when citizens believe the police enforce the law consistently and provide the same quality of service to all citizens. In Model 3, cooperation is regressed onto the performance index along with each of the control variables. This model is

statistically significant and accounts for slightly more variation in perceived cooperation ( $F = 11.03, p < .01; R^2 = .43$ ) than Models 1 or 2. The performance estimate is significantly and positively related to cooperation ( $b = .264, p < .01$ ), indicating that respondents believe police performance is important to citizens in terms of their willingness to cooperate with police.

Model 4 regresses cooperation onto the trust scale and each of the control variables. The model is statistically significant and accounts for about 31 percent of the variation in perceived cooperation ( $F = 9.33, p < .01$ ). The trust estimate is moderately strong ( $b = .426, p < .01$ ), which is evidence that respondents believe citizens who trust the police are more likely to cooperate. This finding parallels prior research using citizen samples which suggests that trust promotes cooperation with police (Sargeant et al., 2013). In Model 5, cooperation is regressed onto the obligation to obey index along with each of the controls. The model accounts for less variation than previous models ( $R^2 = .19$ ) but is still statistically significant ( $F = 4.36, p < .01$ ). This suggests respondents believe citizens in high crime areas are more likely to cooperate with police when they feel obligated to obey the police. Jackson et al. (2012) report similar findings using METPAS data.

Model 6 regresses cooperation onto each of the independent variables along with all of the control variables. Performance dominates the model, as evidenced by the fact that it is the only independent variable that is statistically significant ( $b = .172, p < .01$ ). The procedural justice, distributive justice, trust, and obligation to obey coefficients are each reduced in magnitude by roughly 68, 93, 78, and 99 percent, respectively. Each of these reductions is statistically significant at  $p < .01$ . Moreover, the model as a whole only accounts for slightly more of the variation in cooperation ( $R^2 = .47$ ) than Model 3. That is, accounting for procedural justice, distributive justice, trust, and obligation to obey in addition to performance only yields a

4 percent increase in the amount of explained variation in perceived cooperation (Model 3  $R^2 = .43$ ). This finding is in stark contrast to Tyler's research, which suggests that procedural justice—more so than performance—should increase cooperation through its effect on variables such as trust and obligation to obey (Tyler, 1990; Tyler & Huo, 2002; c.f. Tankebe, 2009).

Table 3 explores the perceived independent and additive effects of each of the aforementioned variables on the perceived likelihood of citizens in low crime areas cooperating with the police. Model 1 regresses the cooperation in low crime areas scale onto the procedural justice scale along with each control variable. The model as a whole is statistically significant ( $F = 4.92, p < .01$ ) and accounts for roughly 35 percent of the variation in perceived likelihood of public cooperation. The procedural justice estimate ( $b = .340, p < .01$ ) indicates that respondents from the sample believe citizens residing in low crime areas who perceive police actions as procedurally fair are more likely to cooperate with the police. Furthermore, the standardized partial regression coefficient for procedural justice in Model 1 of Table 3 ( $\beta = .570$ ) is nearly identical to that of Model 1, Table 2 ( $\beta = .578$ ). This suggests that respondents believe procedural justice is equally associated with citizen cooperation in high and low crime areas.

[Table 3 about here]

Similar findings emerge in Models 2 through 5. In Model 2, distributive justice ( $\beta = .530, p < .01$ ) is positively associated with perceived likelihood of cooperation from the public. In Model 3, performance ( $\beta = .585, p < .01$ ) is positively associated with cooperation, and in Model 4, trust ( $\beta = .568, p < .01$ ) emerges as the only statistically significant variable. In addition, each of the coefficients for the independent variables in these models is similar in magnitude to their respective coefficients from the models in Table 2—again indicating that respondents feel these concepts are equally associated with citizen cooperation in high and low crime areas. In Model 5,

obligation to obey ( $\beta = .306, p < .05$ ) is positively correlated with cooperation, but the model as a whole is not statistically significant and explains somewhat less of the variation in perceived cooperation (about 14 percent) than Models 1 through 4 (between 31 and 36 percent).

Model 6 simultaneously regresses cooperation onto all of the independent and control variables. The model is statistically significant ( $F = 6.42, p < .01$ ) and explains nearly half of the variation in perceived cooperation. Consistent with Table 2, performance ( $b = .127, p < .01$ ) remains closely connected to perceived likelihood of cooperation in this fully specified model. Moreover, the magnitude of the procedural justice, distributive justice, and trust coefficients are reduced by 71, 81, and 57 percent, respectively (each reduction is statistically significant at  $p < .01$ ). The obligation to obey coefficient is also reduced by 66 percent, but the reduction is not statistically significant. Note that the trust estimate retains statistical significance in Model 6, indicating that responding officers believe generating feelings of trust among citizens in low crime areas can also lead to cooperative behaviors. Indeed, the standardized partial regression coefficients for trust ( $\beta = .242$ ) and performance ( $\beta = .249$ ) are nearly identical. This suggests that respondents from the sample believe citizens are most likely to cooperate when they trust the police (Sargeant et al., 2013) and believe they are performing well (see Tankebe, 2009).

### **Discussion and Conclusion**

The process-based model of regulation hypothesizes that when citizens perceive the police as legitimate, they are more likely to cooperate (Tyler & Huo, 2002). The best way for the police to enhance their legitimacy, according to Tyler (1990, 2004), is to exercise their authority in a procedurally fair manner when interacting with the public. Scholars have devoted a great deal of attention to the sources and consequences of legitimacy using citizen surveys. Until very recently, the perspectives of the other party involved in police-citizen interactions—the police—

have not been examined. Accordingly, Bottoms and Tankebe (2012, p. 119) argue that scholars must consider the “dual and interactive character of legitimacy.” Doing so is crucial because the police may not be aware that procedural justice is the best way to enhance their legitimacy and ultimately increase the likelihood of public cooperation. Indeed, studies that have examined what the police believe underscores their legitimacy in the eyes of the public have yielded mixed evidence (Jonathan-Zamir & Harpaz, 2014; Nix, 2015). The present study moved this line of literature forward by asking law enforcement executives across the United States how they feel they are viewed by citizens from different areas within the community—namely, residents of high and low crime areas. A number of key findings emerged which warrant further discussion.

The data reveal that officers in the present sample believe performance to be the primary means of attaining cooperation from citizens in high crime areas. This finding contradicts Tyler’s process-based model, which suggests that cooperation from the public is *most* likely to occur when the police are procedurally fair, thereby enhancing their legitimacy in the eyes of the public. In other words, according to the process-based model, procedural justice promotes cooperation through its effect on legitimacy perceptions (i.e., trust in the police and obligation to obey). The present sample does not perceive this to be the case—at least in high crime areas. Analyses (not shown) revealed that procedural justice was significantly associated with trust and obligation to obey in high crime areas, yet trust was not significantly associated with cooperation in high crime areas. Instead, officers believe these citizens are most likely to cooperate with the police when they believe the police are effectively dealing with crime in the community (Tankebe, 2009).

The fact that the present sample believes performance is the key to generating cooperation from citizens in high crime areas has important theoretical implications. One of the

main appeals of Tyler's process-based model is that in addition to complying in both the immediate situation and long term, citizens are more likely to *cooperate* with the police when they are procedurally fair (Jackson et al., 2012; Tyler & Huo, 2002). That is, they are more likely to report crimes and provide information to the police. The police rely heavily on public cooperation to fight crime and disorder in the community, but the present data reveal that they are unaware of the best pathway to achieving said cooperation: procedural fairness. Over time, should the police stress performance over procedural fairness, community members might become less inclined to cooperate. At the very least, individuals who experience procedural *injustice* on one occasion might be less motivated to report future victimizations and/or crimes they otherwise witness. This reduced willingness to cooperate could result in poorer performance over time due to fewer crimes being brought to the attention of the police.

On the other hand, police appear to believe that in low crime areas, citizen cooperation is shaped by both performance and trust. This is more in line with findings from empirical studies that have examined citizens' perceptions of police legitimacy (Jackson et al., 2012; Tyler, 1990; Tyler & Huo, 2002). Yet this finding also indicates that the police believe the process-based model is more likely to be effective in low crime areas than in high crime areas. As such, they may be less willing to emphasize procedural fairness when interacting with citizens of high crime areas. These are arguably the areas that could benefit the most from process-based policing, as residents of these areas tend to harbor cynical attitudes toward the law and the police (Sampson & Bartusch, 1998; Sampson & Wilson, 1995). Police could presumably restore confidence in their authority among these citizens by being procedurally fair while interacting with them. Yet the officers in this sample do not believe procedural justice can increase cooperation among citizens in high crime areas.

This study is not without limitations. For starters, the data is cross-sectional so it is not possible to speak about the causality of the observed relationships. In addition, the present study only surveyed one officer at each agency in the sample. Roughly 50 percent of the respondents were the Chief Executive of their respective agency (the remainder of respondents were hand selected by their Chief or Sheriff as an officer who could speak on behalf of the agency). As this is the first study of its kind in the U.S., it was important to gauge the perceptions of Chief Executives because the ideas they embrace are likely to trickle down throughout the agency and influence line-level officers. Nevertheless, it would be ideal to survey line level officers themselves moving forward, as they interact with citizens on a daily basis. Despite limitations such as these, the present study moves the procedural justice and legitimacy literatures forward by considering the dialogic nature of legitimacy, as Bottoms and Tankebe (2012) recommend.

In conclusion, the present study indicates that the police associate public cooperation with their ability to effectively deal with crime in the community. This was especially true with regards to high crime areas, although in low crime areas of the community, respondents felt trust could also breed cooperation. Future research should continue to explore police officers' understanding of their legitimacy in the eyes of the public, while also considering that their perceptions might vary according to contextual differences like level of crime. Their perceived legitimacy in the eyes of the public will affect police claims to legitimacy—yet if they do not accurately perceive their legitimacy in the eyes of the public, the police might make legitimacy claims that are ultimately not in line with what the community demands.

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Appendix: Weighting Procedure

Population Served	Census Region	Agency Type	[A] Population Count	[B] % of Population [A]/[15,356]	[C] Respondent Count	[D] % of Survey Respondents [C]/[643]	[E] Weight [B]/[D]
Missing	Northeast	County/Municipal Police	117	0.762%	8	1.244%	0.612
		County Sheriff	0	0	0	0	0
	Midwest	County/Municipal Police	259	1.687%	8	1.244%	1.356
		County Sheriff	0	0	0	0	0
	South	County/Municipal Police	281	1.830%	8	1.244%	1.471
		County Sheriff	3	0.020%	2	0.311%	0.064
	West	County/Municipal Police	36	0.234%	7	1.089%	0.215
		County Sheriff	1	0.007%	0	0	0
Less than 10,000	Northeast	County/Municipal Police	1,520	9.900%	9	1.400%	7.073
		County Sheriff	6	0.039%	2	0.311%	0.125
	Midwest	County/Municipal Police	3,008	19.588%	15	2.333%	8.397
		County Sheriff	322	2.097%	5	0.778%	2.697
	South	County/Municipal Police	2,799	18.227%	15	2.333%	7.813
		County Sheriff	219	1.427%	8	1.244%	1.147
	West	County/Municipal Police	661	4.305%	10	1.555%	2.768
		County Sheriff	129	0.840%	6	0.933%	0.900

Population Served	Census Region	Agency Type	[A] Population Count	[B] % of Population [A]/[15,356]	[C] Respondent Count	[D] % of Survey Respondents [C]/[643]	[E] Weight [B]/[D]
10,000- 49,999	Northeast	County/Municipal Police	923	6.011%	15	2.333%	2.577
		County Sheriff	52	0.339%	7	1.089%	0.311
	Midwest	County/Municipal Police	837	5.451%	14	2.177%	2.504
		County Sheriff	497	3.237%	10	1.555%	2.081
	South	County/Municipal Police	747	4.865%	14	2.177%	2.234
		County Sheriff	754	4.910%	10	1.555%	3.157
	West	County/Municipal Police	361	2.351%	16	2.488%	0.945
		County Sheriff	142	0.925%	9	1.400%	0.661
50,000- 99,999	Northeast	County/Municipal Police	93	0.606%	16	2.488%	0.244
		County Sheriff	44	0.287%	4	0.622%	0.461
	Midwest	County/Municipal Police	120	0.781%	14	2.177%	0.359
		County Sheriff	98	0.638%	12	1.866%	0.342
	South	County/Municipal Police	119	0.775%	21	3.266%	0.237
		County Sheriff	183	1.192%	13	2.022%	0.590
	West	County/Municipal Police	127	0.827%	16	2.488%	0.332
		County Sheriff	49	0.319%	13	2.022%	0.158
100,000 or more	Northeast	County/Municipal Police	37	0.241%	17	2.644%	0.091
		County Sheriff	100	0.651%	17	2.644%	0.246
	Midwest	County/Municipal Police	49	0.319%	22	3.421%	0.093
		County Sheriff	136	0.886%	56	8.709%	0.102
	South	County/Municipal Police	117	0.762%	58	9.020%	0.084
		County Sheriff	217	1.413%	76	11.820%	0.120
	West	County/Municipal Police	97	0.632%	52	8.087%	0.078
		County Sheriff	96	0.625%	38	5.910%	0.106

Table 1. Descriptive statistics.

	M	S.D.	Min	Max
Cooperation <sub>H</sub>	5.811	1.392	2	8
Cooperation <sub>L</sub>	6.675	1.302	2	8
Trust <sub>H</sub>	8.662	1.657	3	12
Trust <sub>L</sub>	9.875	1.461	3	12
Obey <sub>H</sub>	8.923	2.438	4	16
Obey <sub>L</sub>	10.459	2.152	4	16
Procedural justice <sub>H</sub>	14.222	2.998	5	20
Procedural justice <sub>L</sub>	16.274	2.184	9	20
Distributive justice <sub>H</sub>	5.269	1.512	2	8
Distributive justice <sub>L</sub>	6.295	1.059	2	8
Performance <sub>H</sub>	17.425	3.229	6	24
Performance <sub>L</sub>	19.255	2.555	9	24
Chief executive	.477	--	0	1
Male	.942	--	0	1
Racial minority	.123	--	0	1
Agency 10+ years	.765	--	0	1
Position 10+ years	.137	--	0	1
Police department	.552	--	0	1
Northeast	.148	--	0	1
Midwest	.243	--	0	1
South	.350	--	0	1
West	.260	--	0	1
Large City	.250	--	0	1

Table 2. The perceived effect of key predictor variables on cooperation in high crime areas.

Variable	Cooperation <sup>a</sup>											
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$
Procedural justice	.268** (.041)	.578	--	--	--	--	--	--	--	--	.086 (.057)	.185
Distributive justice	--	--	.450** (.080)	.489	--	--	--	--	--	--	.031 (.072)	.033
Performance	--	--	--	--	.264** (.032)	.613	--	--	--	--	.172** (.053)	.399
Trust	--	--	--	--	--	--	.426** (.076)	.507	--	--	.095 (.077)	.113
Obligation to obey	--	--	--	--	--	--	--	--	.215** (.061)	.376	.003 (.047)	.006
Executive	.450 (.270)	.136	.354 (.249)	.107	.300 (.227)	.091	.511* (.254)	.154	.492 (.264)	.149	.340 (.227)	.103
Male	.256 (.404)	.039	-.220 (.244)	-.033	-.055 (.279)	-.008	-.024 (.319)	-.004	-.150 (.313)	-.023	.048 (.295)	.007
Racial minority	-.337 (.207)	-.087	-.346 (.238)	-.089	-.183 (.176)	-.047	-.384 (.221)	-.099	-.137 (.257)	-.036	-.254 (.171)	-.066
10 years at agency	-.153 (.278)	-.053	-.212 (.299)	-.074	-.211 (.251)	-.073	-.223 (.276)	-.078	-.336 (.292)	-.117	-.211 (.230)	-.073
10 years in position	.350 (.335)	.103	.164 (.308)	.048	.215 (.267)	.063	.277 (.314)	.082	.286 (.311)	.084	.318 (.276)	.094
Police department <sup>b</sup>	-.263 (.181)	-.076	-.364* (.178)	-.104	-.288 (.167)	-.083	-.350 (.180)	-.100	-.273 (.195)	-.078	-.279 (.157)	-.080
Midwest	-.042 (.318)	-.014	.082 (.371)	.028	.133 (.258)	.045	.139 (.349)	.048	.125 (.345)	.043	.016 (.281)	.005
South	-.053 (.251)	-.018	.093 (.309)	.032	.189 (.218)	.065	.253 (.263)	.087	.184 (.287)	.063	.032 (.207)	.011
West	.235 (.261)	.053	.456 (.293)	.103	.259 (.246)	.058	.302 (.273)	.068	.310 (.273)	.070	.176 (.244)	.040
Large city	-.083 (.193)	-.010	-.208 (.164)	-.025	.051 (.173)	.006	-.176 (.175)	-.021	-.141 (.190)	-.017	.039 (.171)	.005
Intercept	1.696* (.818)	--	3.714** (.572)	--	1.230 (.698)	--	2.008* (.842)	--	3.907** (.718)	--	.562 (.764)	--
<i>F</i> -Test	11.37**		8.37**		11.03**		9.33**		4.36**		12.16**	
<i>R</i> <sup>2</sup>	.37		.29		.43		.31		.19		.47	

<sup>a</sup> Ordinary Least Squares regression; <sup>b</sup> "Sheriff's Department" is the reference category; \**p* < .05; \*\**p* < .01

Table 3. The perceived effect of key predictor variables on cooperation in low crime areas.

Variable	Cooperation <sup>a</sup>											
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$
Procedural justice	.340** (.056)	.570	--	--	--	--	--	--	--	--	.100 (.066)	.168
Distributive justice	--	--	.652** (.134)	.530	--	--	--	--	--	--	.126 (.117)	.103
Performance	--	--	--	--	.298** (.044)	.585	--	--	--	--	.127** (.047)	.249
Trust	--	--	--	--	--	--	.507** (.096)	.568	--	--	.216* (.103)	.242
Obligation to obey	--	--	--	--	--	--	--	--	.185* (.081)	.306	.062 (.042)	.103
Executive	.224 (.272)	.073	-.015 (.251)	-.005	.161 (.267)	.052	.012 (.172)	.004	.073 (.274)	.024	.037 (.186)	.012
Male	-.267 (.260)	-.043	-.303 (.285)	-.049	-.340 (.302)	-.055	.025 (.277)	.004	.118 (.415)	.019	-.273 (.240)	-.044
Racial minority	-.171 (.305)	-.047	-.152 (.294)	-.042	-.102 (.318)	-.028	.022 (.228)	.006	-.095 (.326)	-.026	.025 (.218)	.007
10 years at agency	.404 (.218)	.150	.219 (.251)	.081	.114 (.199)	.042	.328 (.219)	.122	.130 (.246)	.048	.226 (.184)	.084
10 years in position	-.233 (.306)	-.073	-.246 (.268)	-.078	-.436 (.271)	-.138	-.056 (.227)	-.018	-.191 (.267)	-.060	-.227 (.198)	-.071
Police department <sup>b</sup>	.056 (.146)	.017	.148 (.146)	.045	-.054 (.155)	-.016	.139 (.155)	.043	-.044 (.167)	-.014	.102 (.131)	.031
Midwest	.283 (.362)	.104	.328 (.371)	.120	.131 (.330)	.048	.233 (.347)	.085	.452 (.378)	.166	.068 (.321)	.025
South	.327 (.331)	.120	.371 (.371)	.137	.268 (.310)	.099	.225 (.303)	.083	.499 (.340)	.183	.054 (.306)	.020
West	.169 (.320)	.041	.258 (.327)	.069	.108 (.297)	.026	.044 (.330)	.011	.314 (.325)	.076	-.093 (.306)	-.022
Large city	.208 (.171)	.027	.212 (.146)	.027	.217 (.168)	.028	.138 (.136)	.018	.243 (.174)	.031	.211 (.130)	.027
Intercept	.764 (1.021)	--	2.409** (.865)	--	1.062 (.932)	--	1.162 (.971)	--	4.206** (1.030)	--	-.963 (1.050)	--
<i>F</i> -Test	4.92**		3.61**		6.87**		4.71**		1.27		6.42**	
<i>R</i> <sup>2</sup>	.35		.31		.36		.33		.14		.47	

<sup>a</sup> Ordinary Least Squares regression; <sup>b</sup> "Sheriff's Department" is the reference category; \**p* < .05; \*\**p* < .01