2015

In the Eye of the Beholder: Exploring the Dialogic Approach to Police Legitimacy

Justin Nix
University of South Carolina - Columbia

IN THE EYE OF THE BEHOLDER:
EXPLORING THE DIALOGIC APPROACH TO POLICE LEGITIMACY

by

Justin Nix

Bachelor of Science
University of South Carolina, 2009

Master of Arts
University of South Carolina, 2011

Submitted in Partial Fulfillment of the Requirements

For the Degree of Doctor of Philosophy in

Criminology and Criminal Justice

College of Arts and Sciences

University of South Carolina

2015

Accepted by:

Scott E. Wolfe, Major Professor

Geoffrey Alpert, Committee Member

Robert J. Kaminski, Committee Member

Jeff Rojek, Committee Member

Tal Jonathan-Zamir, Committee Member

Lacy Ford, Vice Provost and Dean of Graduate Studies

DEDICATION

To my wonderful wife Leticia. Without your love and support I could never have survived the graduate program.

ACKNOWLEDGEMENTS

This study would not have been possible without the help and support of numerous people. First, I would like to thank my committee—Drs. Scott Wolfe, Jeff Rojek, Geoff Alpert, Bob Kaminski, and Tal Jonathan-Zamir. Each member of the committee dedicated their time to help me improve my dissertation and become a better scholar.

Dr. Wolfe was not only the Chair of my committee, but my mentor as well. I could not have completed my dissertation without his constant support—he was there to guide me at every stage of the process. It was Dr. Wolfe who first introduced me to the police legitimacy literature while at the same time helping me publish my first paper. It is impossible to list here all of the things he has taught me over the last three years, so I will simply say thank you for everything.

Dr. Rojek has also been a great mentor. Even though he *constantly* gave me grief for being a Dallas Cowboys fan, it was a small price to pay for his guidance and mentorship. He took me under his wing from Day 1, providing me with numerous research opportunities during my time in grad school. He was originally the Chair of my committee, and when my original dissertation topic no longer seemed feasible he trusted me enough to give me the green light on this project. After moving on to his new job, he was gracious enough to remain on my committee. Thanks Jeff—for all your support throughout the many ups and downs of my time in grad school.

Dr. Alpert is responsible for "breaking me down and building me back up" as he would say. I still think back to his Research Design class and how much I learned that semester, which ultimately was a turning point in my graduate studies. To this day I still picture the Research Wheel and ask myself "What is the question?" as I read and write.

Dr. Kaminski always made himself available for my random stats questions, regardless of the time or how busy he was with his own work. If he couldn't answer my question right away, I always seemed to get a lengthy email soon thereafter with all sorts of resources attached. For that, as well as for the many great discussions we've had about how great Led Zeppelin is, thanks Bob.

Dr. Jonathan-Zamir was kind enough to serve as the outside reader on my dissertation. It was a paper she published in *British Journal of Criminology* that inspired me to do a similar study with a US sample. I was excited when she agreed to be the outside reader. In the end she provided me with great feedback and I thank her.

I also wish to thank Chief Art Acevedo of the Austin (TX) Police Department. He was kind enough to write a letter of support endorsing my study and encouraging his colleagues around the country to participate. I am confident that his letter swayed many respondents who may have otherwise been on the fence about taking the time to complete my survey.

I must also thank the other faculty members at USC, all of whom have helped me along the way at some point or another. It was Dr. John Burrow who convinced me to apply to graduate school in the first place, and later Dr. Barb Koons-Witt who told me to stop being wishy-washy, write my Master's comprehensive exam, and apply to the Ph.D. program. Dr. Eric Sevigny, though not on my committee, was kind enough to stop what

he was doing one afternoon and answer a question about stratified sampling. Dr. Bobby Brame taught me so much in Applied Quantitative Data Analysis that I decided to sit through the class again the following year. He too was always available outside of the classroom and I thank him for all of his tutelage over the last two years. Drs. Tia Anderson and Christi Metcalfe were very helpful as I went on the job market and for that I thank them. Alli Rojek was a great teaching mentor—she always had answers when I had questions about the classroom. Lastly, I would like to thank Dr. Brandon Applegate, who mentors my friend and officemate Heather. When stopping by to speak with her, he always made sure to ask how I was doing. He may not know it, but I also learned a lot from him through Heather.

Finally, I would like to thank my wife Leticia for putting up with me when grad school stressed me out. She talked me out of walking away more than a few times. I would also like to thank my mom who listened to me vent just about every day for the last ten years of college. She has always supported me through good times and bad. Thanks mom.

ABSTRACT

In recent years, police legitimacy has generated a great deal of scholarly attention. Numerous studies carried out in a variety of settings have demonstrated that citizens are more likely to perceive the police as a legitimate authority when they interact with citizens in a procedurally fair way. In turn, citizens become more likely to accept police decisions, comply with the law, and cooperate with the police. Yet until very recently, scholars have only focused on citizen perceptions of legitimacy while neglecting the perspective of the police themselves. It may very well be that the police believe other ideals are more important than procedural justice in terms of establishing legitimacy. Accordingly, Anthony Bottoms and Justice Tankebe suggest that legitimacy should be treated as an ongoing dialogue between power-holders and audiences. The present study adds to a very limited body of research applying this dialogic model to understand legitimacy by surveying a nationally representative sample of U.S. police executives about how they believe citizens residing in different areas of the community evaluate their agencies and their officers. Findings suggest that respondents do in fact appear to be aware that procedural fairness is important to citizens in terms of establishing legitimacy. However, respondents do not appear to realize that citizens are more likely to cooperate with the police when they perceive them as legitimate. Instead, they believe performance is the key to generating cooperation. There also appear to be key differences in how officers believed they are perceived by residents of high crime areas and residents of low

crime areas. Finally, the present study considers whether individual characteristics of the responding officers moderate the strength of relationships between key theoretical variables and legitimacy outcomes. In a similar fashion, the present study explores the possibility that officers believe citizens' perceptions of collective efficacy, disorder, their perceived risk of being caught and punished for breaking the law, or their cynicism toward the law moderate the aforementioned relationships. Practical and theoretical implications are discussed in the final chapter.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

Policing in the United States has experienced numerous changes throughout the last two centuries—twice undergoing comprehensive reforms (Kelling & Moore, 1988). The most recent reform movement came during the 1980s in response to rising crime rates, civil unrest, research that questioned police methods, and highly publicized police riots such as that which occurred at the 1968 Democratic National Convention in Chicago, Illinois (Pelfrey, 2000). What ensued were many attempts by scholars and the police to improve the philosophy of policing. For example, agencies around the country experimented with community- and problem-oriented policing beginning in the 1980s. In the 1990s, Commissioner William Bratton of the New York Police Department championed his Compstat managerial philosophy, citing it as one of the primary reasons for the dramatic crime decline New York experienced throughout the decade (Bratton, 1997). After the terrorist attacks on September 11, 2001, many agencies sought to adopt an "intelligence-led" philosophy (Ratcliffe, 2008). The tenets of each of these philosophies vary widely but the underlying goal of each is to better address the crime problem in the U.S. More specifically, they represent an effort on the part of the police to be more *proactive* in dealing with crime.

The ultimate form of proactivity is prevention. How can the police prevent would-be offenders from breaking the law? Historically, the criminal justice system has been dominated by deterrence theory, which posits that offenders calculate the risks and

rewards associated with breaking the law. When the risk of punishment for a certain behavior is swift, certain, and severe enough, offenders will elect not to engage in said behavior (Beccaria, 1983; Nagin, 1998, 2013). If deterrence is the goal, the police are charged with creating and sustaining a credible risk of being caught breaking the law. This is a difficult task because the police simply cannot be everywhere at once. As such, social order is largely contingent upon the extent to which citizens self-regulate their behavior (Tyler, 1990; Weber, 1978). Self-regulation occurs when citizens believe the law (and by extension, authorities like the police who enforce the law) is legitimate and comply with the law because they feel it *ought* to be obeyed (Tyler & Huo, 2002).

How then, can the police increase the frequency with which people self-regulate? In his seminal book *Why People Obey the Law*, Tom Tyler (1990) proposed that the most effective way for police (and other government social control entities) to generate voluntary cooperation and compliance from citizens is through procedural justice (or procedural fairness)—that is, quality treatment and quality decision making during interactions with citizens. Procedural justice enhances the legitimacy of authorities in the eyes of the public, thereby increasing the likelihood that citizens cooperate (e.g., report criminal activity) and comply with legal authorities both in the immediate situation and long-term. Tyler and Huo (2002) later demonstrated that Whites, African Americans, and Hispanics all place equal importance on the fairness of police and court procedures. This is a significant finding given the historical tension between police and minority groups. Based on their findings and a host of additional empirical research in support of the procedural justice-legitimacy link, Tyler and Huo advocate for what they call the "process-based model" of policing. By striving to exercise their authority in a

procedurally fair manner during interactions with citizens, the police can increase the likelihood that they are met with cooperation and compliance rather than resistance and contempt. By extension, process-based policing reduces the frequency with which the police must resort to coercive force as a means of obtaining compliance during interactions.

The problem is that until recently, scholars have failed to consider what the police believe underscores their legitimacy in the eyes of the public. According to Bottoms and Tankebe (2012), legitimacy is a dialogue that involves power holders and audiences. If the police do not understand that citizens associate their legitimacy with the fairness of procedures used by officers, then process-based regulation is less likely to come to fruition. For example, it is conceivable that the police might believe that citizens are more concerned with their effectiveness in fighting crime than with procedural justice. Recent research suggests this is precisely the case among Israeli National Police commanding officers (Jonathan-Zamir & Harpaz, 2014). To date, no research using the dialogic approach to understand legitimacy has been conducted in the United States. The present study addresses this gap by surveying a nationally representative stratified sample of law enforcement executives about how they believe citizens evaluate their agency and its officers. In addition to replicating Jonathan-Zamir and Harpaz (2014), the present study poses a number of additional research questions that have important theoretical and policy implications.

CHAPTER 2

POLICE LEGITIMACY

Tyler (1990) argues that people comply with the law and authority figures such as the police due to *instrumental* and *normative* concerns. Instrumental concerns include performance of the police, risk/deterrence, and distributive justice. Normative concerns include personal obedience (i.e., a person's general beliefs about how he/she should behave) and legitimacy (i.e., their perception of whether the police have just authority over them) (Sunshine & Tyler, 2003). Historically, the criminal justice system has been dominated by deterrence theory—the idea that compliance with the law is gained through the perceived risk of being caught and punished for criminal behavior (Blumstein, Cohen, & Nagin, 1978; Cornish & Clarke, 1986). For example, Wilson and Kelling's (1982) theory of broken windows suggests that the most effective way to reduce crime is through *order maintenance.* By cracking down on incivilities and less serious forms of crime, the police can deter potential offenders from committing crime in the long term (i.e., their compliance with the law would increase). Judges issue sentences that are intended, in part, to outweigh the benefits of the offense committed in order to deter individuals from future offending. Yet Tyler's (1990) findings suggest that people obey the law more so because they believe it is legitimate than because of instrumental concerns regarding police effectiveness or the fear of being punished. That is, normative concerns play a greater role in shaping compliance than instrumental concern over personal outcomes.

In its broadest sense, 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). Establishing legitimacy is thus crucial to the police because it increases the likelihood of deference from the community. When they are viewed as a legitimate authority, the police are less likely to have to use coercive force against citizens. According to Tom Tyler's theory of procedural justice, the police can enhance their legitimacy in the eyes of the public by exercising their authority in a procedurally fair manner (Tyler, 1990, 2004; Tyler & Huo, 2002).

Establishing legitimacy in the eyes of the public is an important goal for the police, who are empowered by the public to uphold the law. Because the police cannot be everywhere at once, they rely heavily on voluntary compliance with the law in order to maintain social order. Moreover, even when directly interacting with citizens, police cannot be sure that they will always receive deference. For example, Mastrofski, Snipes, and Supina (1996) observed police-citizen encounters in Richmond, Virginia and found an overall noncompliance rate of 22 percent. When citizens view the police as a legitimate authority, they are more likely to obey the law and cooperate with police by reporting crimes and informally enforcing societal norms. Compliance and cooperation are essential to the crime suppression function of the police. More important, citizens are more likely to comply with police decisions in the long term when they perceive the police as a legitimate authority (Sunshine & Tyler, 2003; Tyler & Huo, 2002).

The Process-Based Model

Legitimacy has enjoyed a great deal of attention in the field of criminology during recent years. Current research in this area has been dominated by Tom Tyler's (1990) theory of procedural justice, which he developed based on the work of Thibaut and Walker (1975) and Leventhal (1980). Thibaut and Walker's framework suggests that people are concerned with controlling processes and outcomes. Their findings revealed that during disputes, litigants were not directly concerned with receiving favorable outcomes, but rather their ability to influence third-party decisions. Ability to influence decision making procedures in turn shaped their satisfaction with outcomes regardless of whether said outcomes negatively influenced the individuals (e.g., losing the decision).

Leventhal (1980) identified six criteria used by citizens to judge the fairness of legal procedures. First, citizens believe that legal procedures should be applied *consistently* across individuals and over time. Second, procedures should be applied objectively (i.e., *bias-suppression*). Third, procedures should be based on *accurate* information and informed opinion. Fourth, procedures must be in place that allow for erroneous decisions to be reversed (i.e., *correctability*). Fifth, procedures should be *representative* by reflecting the concerns and values of various subgroups within the population affected by said procedures. Finally, individuals all have their own moral compass and, as such, they may judge the fairness of procedures in terms of how well it aligns with their moral and ethical values (i.e., *ethicality*).

Tyler (1990) combined these two frameworks in his study which focused on citizens' views about the legitimacy of legal authorities and the law more generally. Using two waves of telephone interviews with Chicago residents, Tyler first

demonstrated that legitimacy (conceptualized as *perceived obligation to obey the police* and *institutional trust/support for the police*) had an independent influence on compliance regardless of age, sex, race, income or education. Second, he established that citizens' evaluations of police legitimacy are not based on instrumental concerns over being caught and punished for breaking the law, but instead on normative concerns regarding the fairness of procedures. Finally, he explored the manner in which citizens evaluate procedural justice and found that they focus on seven *noninstrumental* aspects of interactions: "the authorities' motivation, honesty, bias, and ethicality; their opportunities for representation; the quality of the decisions; and the opportunity for correcting errors" (p. 137). His findings support earlier research which suggests people value the opportunity to plead their case to authorities even when they do not think they can sway the authority and influence their outcome (see Tyler, Rasinski, & Spodick, 1985).

One key limitation of Tyler's Chicago study was that it did not measure immediate decision acceptance (i.e., compliance and deference *during* personal encounters with the police). Later research by Tyler and Huo (2002) addressed this issue by interviewing 1,656 Oakland and Los Angeles residents who had personal interactions with police officers and judges. The authors oversampled minority residents in order to compare their experiences to the experiences of white residents. Findings revealed that procedural justice during interactions with police/court officials influenced citizens' willingness to accept decisions and was the primary factor that citizens used to evaluate such authorities. And although general attitudes toward the police have previously been shown to vary by race (e.g., satisfaction; see Engel, 2005; Wu, Sun, & Triplett, 2009), Whites, Hispanics, and African Americans all placed equal importance on procedural

fairness in Tyler and Huo's study. The authors conclude that establishing legitimacy through procedural justice is a more efficient and effective means of regulating society than relying *solely* on deterrence. This strategy of "process-based regulation" (p. 204) is advantageous to the police because it not only increases compliance during specific interactions with the public, but it also increases long-term compliance and cooperation.

The key to the process-based model of regulation is that the police (and courts) must exercise their authority in a procedurally just fashion. There are three components of procedural justice: *quality of decision making, quality of interpersonal treatment,* and *motive-based trust* (Tyler & Lind, 1992). Quality of decision-making includes allowing people to express their concerns before making a decision that ultimately affects them and neutrality, competence, and consistency on the part of the decision maker. According to Tyler (2004, p. 94), "because people are seldom in a position to know what the correct or reasonable outcome is, they focus on evidence that the decision-making procedures by which outcomes are arrived at show evidence of fairness." Quality of interpersonal treatment involves treating individuals with dignity and respect, acknowledging their rights, and considering their needs. Tyler argues that quality treatment reaffirms one's social status and sense of self-worth, which is extremely important during an interaction which can be demeaning to the citizen. Finally, motive based trust refers to "inferences about the intentions behind actions, intentions that flow from a person's unobservable motivations and character" (Tyler & Huo, 2002, p. 61). Citizens therefore *trust* a police officer when they believe the officer's motives are pure and he/she has the citizen's needs and concerns in mind when making decisions.

These three elements—quality of decision-making, quality of treatment, and motive-based trust—constitute procedural fairness which in turn increases the perceived legitimacy of the police among citizens (Tyler, 1990; Tyler & Lind, 1992; Tyler & Huo, 2002). However, Tyler and Blader (2000) included motive-based trust as an aspect of quality of treatment, which together with quality of decision making shape individuals' procedural justice judgments. Subsequent procedural justice research has followed this lead by largely focusing on quality of decision making and quality of interpersonal treatment as the primary components of procedural fairness (Gau, 2011; Murphy, Tyler, & Curtis, 2009; Reisig, Bratton, & Gertz, 2007). Numerous studies have demonstrated that procedural justice is the primary antecedent of evaluations of police legitimacy net of other factors (Gau, 2011, 2013; Gau, Corsaro, Stewart, & Brunson, 2012; Reisig et al., 2007; Tankebe, 2013; Tyler, 1990; Tyler & Huo, 2002; Wolfe, 2011; Wolfe, Nix, Kaminski, & Rojek, 2015). That is, individuals who believe police actions are procedurally fair are more likely to perceive them as a legitimate authority.

When citizens perceive the police as a legitimate authority, they are more likely to cooperate with them by reporting crimes and informally enforcing societal norms. In addition, legitimacy yields greater compliance both in the immediate situation (i.e., during a police-citizen interaction) and in the long-term. The appeal of the process-based model is that it generates *voluntary* cooperation and compliance. This in turn is believed to decrease the frequency with which the police have to resort to coercive force because people will become self-regulating (Tyler & Huo, 2002). Relying on the public to self-regulate themselves because they feel they ought to appears to be a much more effective and efficient strategy than sustaining a credible threat of punishment for law breaking.

This self-regulatory ability stems from normative evaluations of legal authority legitimacy that do not necessitate the presence of law enforcement or threat of punishment to achieve compliance with the law.

Aside from Tyler's research, subsequent studies have largely focused on procedural justice and other potential antecedents of police legitimacy. Those studies that have examined the outcomes of legitimacy have yielded results that support the process-based model. Individuals who perceive the police as legitimate are more likely to comply with the law (Jackson, Bradford, Stanko, & Hohl, 2012a; Murphy et al., 2009; Papachristos, Meares, & Fagan, 2012; Reisig, Tankebe, & Meško, 2014a; Reisig, Wolfe, & Holtfreter, 2011; Sunshine & Tyler, 2003). For example, Reisig et al. (2011) used cross-sectional survey data to demonstrate that police legitimacy was associated with greater compliance. The correlation between police legitimacy and cooperation has also received empirical support (Jackson et al., 2012a; Murphy & Cherney, 2012; Murphy, Hinds, & Fleming, 2008; Reisig, Tankebe, & Meško, 2014b). For instance, using face-to-face interview data from the London Metropolitan Police's Public Attitudes Survey (METPAS), Jackson et al. (2012a) found that police legitimacy was correlated with greater cooperation. However, among a Ghanaian sample, Tankebe (2009) found that citizen cooperation was influenced more by perceived effectiveness of the police than perceived legitimacy.

Competing Antecedents of Legitimacy

Distributive justice. Tyler (1990, 2003) suggests that police legitimacy can be influenced by both normative and instrumental concerns. 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). In the organizational context, researchers have shown that distributive justice is associated with increased job satisfaction, more positive evaluations of supervisors, and trust in management (Alexander & Ruderman, 1987). As it applies to the police, citizens who believe that the police provide the same quality of service to all people tend to view them as a more legitimate authority (Sunshine & Tyler, 2003). Sarat (1977) contends that "the perception of unequal treatment is the single most important source of popular dissatisfaction with the American legal system" (p. 434). According to distributive justice theory, people are more willing to empower (and subsequently obey) legal authorities such as the police when they feel that outcomes are distributed fairly to them and to society more broadly. That is, citizens place importance on the extent to which the police provide the same quality of service and enforce the law consistently when dealing with all people (e.g., regardless of race or social status).

Tyler and Wakslak (2004) used four studies to demonstrate that perceived racial profiling by the police was associated with lower levels of perceived legitimacy of the police. In the first study, phone interviews with 521 residents of Los Angeles and Oakland who had recently been stopped by the police revealed that those who attributed their experience to profiling expressed less willingness to accept police decisions. Structural equation modeling (SEM) revealed that perceived distributive fairness (e.g., "The outcome I received was fair" and "I received the outcome I deserved according to the law") on the part of the officer was associated with reduced profiling attributions (b = -.23). However, two elements of procedural justice—quality of interpersonal treatment (b = -.60) and motive-based trust (b = -.41)—also exerted a significant effect on profiling

attributions, which in turn increased willingness to accept police decisions. In the second study, which involved phone interviews with 721 New York City (NYC) residents between the ages of 18 and 26, those who felt profiling was widespread (b = -.35), was not justified (b = -.18), or had personally experienced police profiling (b = -.15) were less supportive of the police. The third study involved a random mail sample of 586 registered voters in NYC and revealed that although distributive justice was associated with increased support for the police among both whites (b = .28) and nonwhites (b = .16), quality of decision making (b = .53 for whites and .69 for nonwhites) and quality of treatment (b = .63 for whites and .68 for nonwhites) were much more important in terms of fostering support. Further, quality of decision making and quality of treatment each directly reduced perceptions of profiling while distributive justice did not. The fourth study used a stratified sample of 1,653 NYC residents and demonstrated that distributive justice was associated with greater perceived legitimacy of police (measured using a 17-item scale that included measures of *perceived obligation to obey the police* and *trust/confidence in the institution of policing*) and performance in fighting crime (e.g., "When people call the police for help, how quickly do they respond" and "How effective are the police in fighting crime in your neighborhood") for both whites (b = .44) and nonwhites (b = .15). In this instance distributive justice outperformed measures of procedural justice in terms of predicting legitimacy among white respondents but not nonwhite respondents. Among nonwhites, quality of decision making (b = .39), quality of interpersonal treatment (b = .44), and trust (b = .18) all exerted a stronger influence on legitimacy. Collectively, an important takeaway from these four studies is that while distributive justice is important to citizens' evaluations of the police (i.e., legitimacy,

support, willingness to accept decisions, performance), it appears less important than procedural justice (see also, Hinds & Murphy, 2007; Reisig et al., 2007; Sunshine & Tyler, 2003; Tyler, 1990, 2005; Tyler & Huo, 2002).

Police performance. Another potential predictor of police legitimacy focuses on performance—the effectiveness of the police in fighting crime and disorder in the community (Tyler, 2005; Wilson & Kelling, 1982). While performance has been linked to legitimacy, procedural fairness tends to matter more to citizens (Jackson et al., 2012a; Sunshine & Tyler, 2003; Wolfe et al., 2015). Yet the evidence is more mixed than that stemming from research comparing the effects of procedural and distributive fairness. For example, Sunshine and Tyler found that the effect of procedural justice on legitimacy was about five times greater than the effect of a police performance scale. Likewise, Wolfe et al. (2015) found that procedural justice had a stronger effect on respondents' obligation to obey and trust in the police than performance. However, recent studies performed outside of the U.S. indicate that performance might matter more to citizens than the use of fair procedures. Data from the South African Social Attitudes Survey reveal that, among South Africans, police performance and crime in the community have a stronger effect on perceived legitimacy of the police (i.e., *duty to obey* and *moral alignment with police*) than procedural fairness (Bradford, Huq, Jackson, & Roberts, 2014). In a related fashion, scholars have demonstrated that effectiveness is more important in terms of generating cooperation (one of the ultimate outcomes of the process-based model) than procedural justice outside of the U.S. Tankebe (2009) found that Ghanaians' cooperation with police was influenced more so by their effectiveness in fighting crime than procedural justice.

Sargeant, Murphy, and Cherney (2013) reached a similar conclusion about Vietnamese individuals using the Australian Community Capacity Survey.

On the other hand, 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. While residents of Sderot (a small city near the Gaza Strip that had recently experienced more missile threats and attacks than any other community in Israel) were more concerned with police performance (b = .61) than residents in comparison communities (b = .39), they were almost equally concerned with procedural fairness (Sderot b = .51, control b = .58; the difference is not statistically significant). The evidence is therefore mixed and more research is needed that directly compares the effects of procedural justice and performance on legitimacy.

Empirical Issues Concerning the Process-Based Model

Much of the literature reviewed up to this point has been concerned with (a) whether legitimacy is associated with increased cooperation and compliance, and (b) what the strongest predictor of legitimacy is. In the sections that follow, two important empirical issues will be considered: the measurement of procedural justice and legitimacy, and the generality of the process-based model. In order for research pertaining to police legitimacy to have any sort of practical implications, it is critical for scholars to reach an agreement about what exactly legitimacy *is*. Likewise, testing the generality of the process-based model is important because it sheds light on how applicable the model is in different contexts. The more general the model is, the greater its potential utility to the police who deal with a diverse array of people on a daily basis.

Measurement

Legitimacy. There has been considerable debate regarding the best way to measure legitimacy. Tyler (1990, 2003) conceptualizes legitimacy as *trust* and *perceived obligation to obey*, but scholars have since demonstrated that the two concepts do not load together onto a single factor (Gau, 2011, 2013; Reisig et al., 2007). For example, upon disaggregating Tyler's legitimacy index, Reisig et al. (2007) found that *trust in the police* influenced compliance and cooperation but *obligation to obey* did not. Hawdon (2008) points out that it is entirely possible for citizens to view the police as a legitimate institution without necessarily trusting certain officers. In his words, "the role is legitimate; the individual is trusted" (p. 186). Bottoms and Tankebe (2012, p. 164) note that legitimacy and trust are not conceptually identical—while legitimacy is "a concept focused on the present," trust tends to be future-oriented. Recent research has therefore treated trust as both theoretically and empirically distinct from legitimacy (e.g., Nix, Wolfe, Rojek, & Kaminski, 2014; Sargeant, Murphy, & Cherney, 2013).

According to Beetham (1991), an authority is legitimate when "it conforms to established rules, the rules are *morally justifiable* and there is evidence of consent by the subordinate to the particular power relation" (p. 16, emphasis added). In other words, legitimacy hinges in part on the degree to which the police and the public share common beliefs about the maintenance of social order. Jackson et al. (2012b) therefore define legitimacy as a sense of *moral alignment* with the police in addition to a perceived obligation to obey (see also Jackson et al., 2012a). Jackson and his colleagues measure *moral alignment* using three items: "the police usually act in ways that are consistent with my own ideas about what is right and wrong," "the police can be trusted to make

decisions that are right for the people in this neighbourhood," and "my own feelings about what is right and wrong usually agree with the law." In later conceptualization, Jackson et al. (2012a, 2013a) treat legitimacy as being comprised of three sub-components: *obligation to obey*, *moral alignment*, and *legality* (i.e., acting in accordance with the law; see also Beetham, 1991; Hough, Jackson, Bradford, Myhill, & Quinton, 2010; Jackson, Huq, Bradford, & Tyler, 2013b).

Tyler (2003, p. 310) argues that "perceived obligation to obey is the most direct extension of the concept of legitimacy." Bottoms and Tankebe (2012), however, submit that citizens can feel obligated to obey the law or legal authorities for reasons other than perceived legitimacy. Deterrence theory, for example, suggests that rational citizens feel obligated to obey the law because they fear being punished—regardless of whether or not they perceive it as legitimate (Becker, 1968; Cornish & Clarke, 1986). Or 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). Drawing upon the writings of Beetham (1991) and Coicaud (2002), 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* (e.g., "The police use rules and procedures that are fair to everyone"), *distributive justice* (e.g., "People usually receive the outcomes they deserve under the law"), *lawfulness* (e.g., "The law represents the moral values of people like me"), and *effectiveness* (measured by asking respondents how well the police deal with a series of seven crimes). Legitimacy defined in this manner

also has an indirect influence on cooperation that operates through perceived obligation to obey. Thus, *lawfulness* (or *moral alignment*) has recently emerged as an important concept in legitimacy research. Tankebe's research also suggests that concepts scholars have typically treated as predictors of police legitimacy (i.e., procedural justice, distributive justice, and effectiveness) are actually components of legitimacy.

Procedural justice. Much like the debate surrounding the proper way to conceptualize and operationalize legitimacy, researchers have measured procedural justice in a variety of ways. It is typically measured using questions that tap either individuals' *global* or *specific* attitudes toward police. Global procedural justice refers to assessments of the police in general. Specific procedural justice on the other hand refers to evaluations of how officers conduct themselves during particular police-citizen interactions. While global attitudes can be influenced by personal and vicarious experiences (e.g., media coverage or hearing about a friend's interaction with the police), specific attitudes develop based on a face-to-face interaction with police. Gau (2013) demonstrated that both specific (e.g., "The officer treated me with respect" and "The officer took the time to listen to what I had to say") and global indicators of procedural justice (e.g., "The police treat people with respect" and "The police take the time to listen to people") predict legitimacy perceptions, but that global predictors exert a stronger influence on perceived legitimacy. Furthermore, global attitudes appear to remain stable over time and isolated interactions tend not to affect them strongly. Using a panel design, Tyler (1990) found that prior attitudes toward police (i.e., global attitudes) were key predictors of procedural justice and legitimacy, but perceived procedural justice during specific interactions significantly increased citizens' perceived legitimacy of the police.

Findings from the Queensland Community Engagement Trial (QCET) support the notion that specific interactions can influence people's satisfaction with the police, perceived global procedural justice, legitimacy, willingness to cooperate, and future compliant behavior (Mazerolle, Bennett, Antrobus, & Eggins, 2012; Mazerolle, Antrobus, Bennett, & Tyler, 2013). The QCET involved a randomized field experiment, whereby sixty "Random Breath Testing" (RBT) checkpoints were assigned to receive control (i.e., business-as-usual) or treatment conditions during which the officers conducted themselves in a procedurally fair manner (i.e., they read from scripts that highlighted neutrality, trustworthiness, citizen participation, and treating the citizens with dignity and respect). Drivers in both groups then received surveys that inquired about their attitudes toward driving under the influence, satisfaction with the police (i.e., "I was satisfied with the way the officer conducted the RBT"), and compliance (i.e., "I did as I was told by the officer"). Of the 20,985 surveys distributed, 2,762 were returned for a 13.2 percent response rate. Mazerolle et al. (2012) revealed that drivers in the treatment group were more likely to comply and indicated being more satisfied with police than drivers in the control group. Later, Mazerolle et al. (2013) used structural equation modeling to demonstrate that perceived procedural justice on the part of officers during RBTs was associated with greater perceived legitimacy (operationalized as *obligation to obey,* e.g., "I feel a moral obligation to obey police"; *moral alignment,* e.g., "My own feelings about what is right and wrong usually agree with the rules and laws enforced by police"; and *disengagement from the police,* e.g., "I do not care if I am not doing the right thing by the police" [reverse coded]) and willingness to cooperate (e.g., the likelihood

that a respondent would call the police to report a crime or report dangerous/suspicious activity to the police).

Though an important topic certainly worthy of empirical consideration, the present study is not explicitly focused on such measurement issues. The purpose of discussing it here is to accurately depict the current body of knowledge pertaining to procedural justice theory. It should be clear that scholars have yet to agree on the best way to operationalize procedural justice and legitimacy. As Bottoms and Tankebe (2012) put it, "the concept of legitimacy is elusive and multifaceted" (p. 168). Yet regardless of how various researchers have elected to measure the two concepts, procedural justice and legitimacy are consistently revealed to be positively correlated with one another. That is, greater procedural justice tends to be associated with greater perceived legitimacy of the police.

Generality

Another important debate surrounding procedural justice theory is the extent to which it can be labeled a "general" theory. That is, does it operate in the same manner for all people, regardless of individual or situational differences? According to Tyler (1990):

> Another important issue is the degree to which the meaning of procedural justice is universal—*the extent to which the fairness of procedures is always judged against the same criteria*. Two extreme positions might be imagined. One would have stable criteria, with people always judging the fairness of procedures the same way…the other would emphasize the relationship between the characteristics of the respondent, or of his or her recent personal experience, and the criteria used to evaluate the fairness of the procedures" (p. 121, emphasis added).

Tyler suggests six demographic variables which might influence one's interpretation of procedural justice: race, education, income, sex, age, and political ideology. In a similar

vein, it is conceivable that a number of variables might confound or moderate the relationship between procedural justice and perceived legitimacy of the police (e.g., neighborhood context). Thus, Jackson and colleagues (2012a, p. 197) pose the question: "Does the procedural justice model work differently for different social groups or in different neighbourhood contexts?" That is, is the effect of procedural justice on legitimacy invariant?

Much of the procedural justice oriented research to date has been conducted using general population surveys and has typically only been concerned with minor forms of law-breaking. However, scholars have used a variety of different samples to examine the relationship between procedural justice and citizens' evaluations of the police, which has in turn extended the generality of the process-based model. For example, Paternoster, Brame, Bachman, and Sherman (1997) reanalyzed data from the Milwaukee Domestic Violence Experiment and found that procedural fairness on the part of officers called to the scene of domestic assaults resulted in fewer future assaults by the offenders. Papachristos et al. (2012) used data from the Chicago Gun Project (CGP), a survey of 141 known gang offenders, and found that CGP offenders were more likely to comply with the law when they believed in the legitimacy of the law and the police. These authors were interested in compliance and perceived police legitimacy among active, violent offenders (i.e., those individuals in the community who are most likely to commit serious crimes) as opposed to the normal, mostly law-abiding citizens who typically complete general population surveys (e.g., Tyler, 1990; Tyler & Huo, 2002). Their findings suggest that the process-based model can be just as effective at promoting compliance and legitimacy among serious offenders as it can among average citizens.

Research demonstrates that the effect of procedural justice on perceived legitimacy of the police is typically invariant across age, gender, political alignment, income, education, and moral values (Jackson et al., 2012a; Napier & Tyler, 2008; Tyler, 1988, 1994, 2000; Wolfe et al., 2015). The procedural justice-legitimacy link also appears to be invariant across neighborhood context (Gau et al., 2012; Jackson et al., 2012a; Wolfe et al., 2015) and past experiences (Jackson et al., 2012a; Sunshine & Tyler, 2003; Tyler & Wakslak, 2004), and seems to operate in the same manner both inside and outside of the U.S. (Jackson et al., 2012a; Jonathan-Zamir & Weisburd, 2013; Mazerolle et al., 2012, 2013; Murphy et al., 2009; Reisig, Tankebe, & Meško, 2014a, b; Tankebe, 2008). There are, however, some notable exceptions. Tyler (2005) found that quality of treatment was significantly correlated with trust in the police among African Americans and Hispanics, but not Whites. Similarly, Tyler and Wakslak (2004) discovered that distributive justice had a stronger effect on perceived legitimacy than procedural justice among whites, but among nonwhites, procedural justice outperformed distributive justice. Gau et al. (2012) demonstrated that the effect of concentrated disadvantage on perceived legitimacy of the police remained significant even after controlling for procedural justice. Findings such as this suggest that neighborhood context may exert an important influence on legitimacy that cannot be counteracted by procedural fairness on the part of police officers. However, Wolfe et al. (2015) found that the effect of procedural justice on *obligation to obey the police* and *trust in the police* did not vary according to individual differences in perceived collective efficacy or disorder, but that the effect of procedural justice on *trust* did vary slightly according to prior victimization. In their study, the influence of procedural fairness on trust in the police was stronger for victims than non-

victims. This suggests it is perhaps even more crucial that the police use fair procedures when interacting with crime victims. On the other hand, Jackson et al. (2012a) found that the effect of procedural justice on legitimacy was invariant across prior victimization as well as neighborhood context, age, gender, ethnicity, or having been stopped by the police in the previous 12 months. The effect of procedural fairness on trust in the police, however, was stronger for those with greater levels of fear of crime and disorder. This suggests that process-based policing is even *more* crucial when the police interact with fearful citizens.

Also at the individual level, Piquero, Gomez-Smith, and Langton (2004) showed that low levels of self-control conditioned individuals' perceptions of procedural fairness (i.e., those with low self-control were more likely to perceive sanctions as unfair), and Wolfe (2011) discovered that low self-control weakened the effect of procedural justice on perceived legitimacy. People with low self-control are impulsive, shortsighted, and insensitive to others (Gottfredson & Hirschi, 1990). In the case of a police-citizen interaction, they would be more concerned with immediate gratification (i.e., a favorable outcome) than long term benefits (i.e., an increasingly self-regulatory society achieved through procedural justice). As such, the process-based model may not be as effective at generating compliance and legitimacy among those with low self-control. However, Reisig et al. (2011) found that legitimacy exerted a direct effect on citizens' compliance with the law independent of variations in self-control. The results of this limited body of research are inconsistent, but more importantly, aside from Jackson et al. (2012a) and Wolfe et al. (2015), these studies only implicitly test the invariance of procedural justice theory (i.e., the aims of the various studies were not to test for invariance). There simply

is not enough research to date that specifically tests the invariance of procedural justice theory to reach definitive conclusions regarding the framework's overall generality.

Implications

The policy implications of Tyler and Huo's (2002) process-based model are extensive. Above all else, people want to be treated fairly and they want to be treated with respect. And while minority groups tend to have lower levels of satisfaction with (Engel, 2005; Wu, Sun, & Triplett, 2009) or trust in police (Hindelang, 1974; Tyler, 2005), procedural justice remains the primary antecedent of perceived legitimacy regardless of citizen race (Tyler & Huo, 2002; Tyler & Wakslak, 2004). Of particular interest to the police is that they can potentially override the negative emotions that arise from an undesirable outcome such as a speeding ticket or arrest so long as the procedures used by officers are deemed fair by citizens. Negative experiences appear to influence peoples' attitudes toward police more strongly than positive experiences (Brandl, Frank, Worden, & Bynum, 1994; Rosenbaum, Schuck, Costello, Hawkins, & Ring, 2005), thus making procedural fairness all the more important during police-citizen interactions that often result in undesirable outcomes for the citizen.

Even when citizens question the legitimacy of a particular law, they still tend to comply so long as police behave in a procedurally fair manner. Upon surveying 2,120 Australian citizens in 2007, Murphy et al. (2009) found that procedural justice was even more important in terms of generating compliance among individuals who question the legitimacy of the law (e.g., "My feelings about what is right and wrong are usually consistent with the laws enforced by the police") compared to those who believe the law is legitimate. If the police bear these notions in mind and strive to handle interactions in a

procedurally fair manner, they could reap the long term benefits of self-regulation on the part of the public. That is, citizens will *voluntarily* comply with the law and cooperate with police by reporting crime and informally enforcing social norms. This is an especially desirable outcome for the police given that, as Sunshine and Tyler (2003, pp. 535-36) point out, "[T]he police have more control over how they treat people than they do over the crime rate." Crime will always fluctuate due, at least in part, to factors the police cannot control. The police can however control the way they treat people.

The police are faced with the difficult task of enforcing the law, which oftentimes means they must distribute undesirable outcomes to members of the public. But what if a citizen elects not to comply with an officer's directives—or worse, if he/she becomes physically combative? Currently, the police are equipped with firearms, conductive energy devices (e.g., TASERs), and/or batons as a form of coercive force intended to promote compliance. These weapons serve as manifestations of deterrence theory. Yet solely relying on the threat of force is dangerous for citizens and the police alike. For example, Hutson et al. (2009) analyzed data from a random mail survey of 315 emergency physicians and found that 99.8 percent of them believe that excessive force by the police occurs. In addition, 97.8 percent of responding physicians indicated that they had managed patients whom they suspected had been the victims of excessive force by the police. On the flipside, injuries to officers also occur: Alpert and Dunham (2004) found that 38 percent of Miami-Dade police officers and 25 percent of Baltimore County (Maryland) police officers indicated they had been injured during use-of-force incidents.

The appeal of the process-based model is that it can potentially generate increased compliance without having to use or threaten to use force on citizens. As such, it can

make society a safer place for both citizens and the police. However, establishing legitimacy is not intended to replace the need for officers to carry weapons. Policing remains a dangerous job and there will likely always be situations that require the use of force. The process-based model does however hold promise in that it can potentially reduce the frequency with which these types of situations occur.

The Dialogic Approach to Legitimacy

Bottoms and Tankebe (2012) recently proposed that researchers adopt what they call the "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. In the case of the police and the community, the police are the power-holders and the community is the audience. According to Bottoms and Tankebe, power-holders (i.e., the police) first make a claim to legitimacy. The audience 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.

In order to understand what is meant by a "claim to legitimacy," it is helpful to differentiate between the various types of power holders. Joseph Raz (2009) suggests there are three types: (1) people or groups who exert naked power, (2) de facto authorities, and (3) legitimate authorities. An example of the first group would be hostage takers—they do not claim any *right* to rule nor do they suggest those under their control are morally obligated to obey. Rather, they use fear and/or physical coercion to gain obedience. The second group—de facto authorities—make a claim to legitimacy, but their audience has not recognized their claim. Finally, legitimate authorities claim the

right to exercise power over their audience(s), who in turn recognize and accept that claim (see also Bottoms & Tankebe, 2012, pp. 125-126).

How then, do the police make a claim to legitimacy? Steve Herbert (2006) submits there are three ways in which the police may establish and enhance their legitimacy. First and foremost, they must serve their audience's (i.e., the citizens in their jurisdiction) needs.[1] Second, they must separate themselves from the public for two reasons: to uphold societal values and to maintain esprit de corps (which can serve to enhance performance). Finally, Herbert suggests that to make a fully legitimate claim to authority, the police must be proactive. That is, the police should take initiative in maintaining social order rather than reacting to crime and disorder as it occurs. These three notions—subservience, separation, and generativity—are the key to making a successful claim to police legitimacy according to Herbert.

Until the development of the dialogic model, scholars largely failed to consider one of the parties involved in the legitimacy dialogue: the police. The vast majority of studies that ensued in response to Tyler's theory have been concerned with audience (i.e., citizen) perceptions of legitimacy. A crucial starting point for scholars seeking to apply the dialogic approach to legitimacy research is to develop a better understanding of how the police perceive their own legitimacy which can be referred to as "self-legitimacy." Bottoms and Tankebe (2012) pose the following question: "What importance do officers assign the *manner* in which they exercise their authority, the *ends* that particular practices are designed to achieve and their relationship to *community values*, and so on?" (p. 162,

[1] This does not imply that everyone in the community will have the same needs. Thus, as Bottoms and Tankebe (2012) suggest, power holders—especially the police—must consider their legitimacy in the eyes of multiple audiences (e.g., citizens from different neighborhoods within an agency's jurisdiction).

emphasis in original). Thus, it is important to ask the police what they believe makes their authority legitimate. What do individual officers believe gives them rightful authority over citizens? 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, maybe even more fundamentally, 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 compliance and 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 (142 commanding officers and 148 "up and coming" officers working on bachelor's or master's degrees) and discovered that they associated their legitimacy with crime suppression ability (i.e., 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. The authors used survey items that were similar to those previously used in citizen surveys regarding legitimacy (e.g., Sunshine & Tyler, 2003; Tyler & Wakslak 2004; Reisig et al., 2007). Items were manipulated so that they reflected officers' views of what the community thinks of them. Thus, "Police respect the rights of citizens they come into contact with" was reworded so that it read "In my view,

the average Israeli citizen believes that the police respect the rights of citizens they come into contact with" (see Jonathan-Zamir & Harpaz, 2014, p. 10). Within their multivariate regression equations, the authors found that officers believe Israeli citizens' instrumental concerns regarding performance/deterrence ($\beta = 0.39$) are associated with their legitimacy more so than procedural justice ($\beta = 0.29$). If the police and the public cannot agree on the foundations of legitimacy, the process-based model is not likely to be exploited by the police. As Jonathan-Zamir and Harpaz point out:

> If…the police have an inaccurate understanding of citizen priorities, they may choose to emphasize aggressive crime control at the expense of procedural fairness in their work and claims to legitimacy, which may ultimately weaken their legitimacy in the eyes of the public (p. 6).

The findings are important because they are the first to explore such a question using the dialogic model of legitimacy and demonstrate the model's utility in an Israeli context. To date we do not have any comparison studies and, more importantly, a number of unanswered research questions remain stemming from Bottoms and Tankebe's arguments and Jonathan-Zamir and Harpaz's findings. Therefore, it is clearly important to apply the dialogic model to U.S. legitimacy research and move the literature forward by examining in further detail several key areas of inquiry that are discussed in the following sections. Do U.S. law enforcement officers also feel that the foundation of their legitimacy is based on how well they fight crime and to a lesser degree procedurally fair treatment of citizens? Further, are police officers' beliefs concerning the antecedents of their own legitimacy influenced by individual or contextual differences?

Potential Moderating Variables

In terms of audience views of legitimacy, scholars have considered a number of factors which might moderate the relationship between procedural justice and police legitimacy or legitimacy-based outcomes (i.e., cooperation). Some of the more notable variables that have been considered include neighborhood contextual variables (e.g., collective efficacy [Gau et al., 2012]), legal cynicism (Tyler & Huo, 2002), and deterrence perceptions (Reisig et al., 2007). The procedural justice-legitimacy link appears to be robust across such factors, but it does not necessarily follow that the same will be true among the police. It is therefore important for researchers to account for these variables as they begin exploring the dialogic approach to legitimacy. The potential moderating influence of neighborhood contextual variables (e.g., level of crime, perceived collective efficacy, and perceived disorder), perceived risk of apprehension (i.e., deterrence), and legal cynicism will be discussed as they pertain to the dialogic model below.

Neighborhood context. Research suggests that police behavior is not uniform across all walks of society. On the contrary, it appears that their behavior varies, in part, according to neighborhood context. Whyte (1943) observed that the police develop standards of behavior in different neighborhoods in response to incompatible social pressures. Bayley and Mendelsohn (1969) suggest that the police are more apt to use coercion and make arrests in high-crime areas, and Smith (1986) later demonstrated that the police are less likely to (a) stop suspicious persons and (b) file incident reports in neighborhoods with higher levels of crime. Smith found that those who do get stopped in high crime neighborhoods are three times as likely to be arrested as those stopped in

more affluent neighborhoods—regardless of the crime committed, the race and demeanor of the suspect, or the victim's preferences for filing charges. Klinger (1997) suggests that officers working in high-crime areas tend to be more cynical, view criminal behavior as more normal, view victims as less deserving of vigorous police attention, and have less time on their hands. As such, only more serious criminal offenses receive vigorous police attention in high-crime areas. In sum, neighborhood context influences the way the police exercise their authority.

It is conceivable that neighborhood contextual variables might moderate the relationship between procedural justice and legitimacy. For example, citizens residing in high crime areas might expect the police to focus on a different set of priorities than those residing in low crime areas. While most studies have considered neighborhood contextual variables as mediating variables (e.g., Gau et al., 2012; Nix et al., 2014), it is important to consider whether *the police* believe such variables *moderate* the strength of the procedural justice-legitimacy relationship, given that research suggests neighborhood context is a real concern among the police (Bayley & Mendelsohn, 1969; Klinger, 1997; Smith, 1986; Whyte, 1943). It bears repeating that regardless of what citizens *truly believe*, what is important in terms of the dialogic approach to legitimacy is what the police *think* citizens *believe*. Each of three components of neighborhood context—level of crime (i.e., high or low), perceived collective efficacy, and perceived disorder—will be considered here as they might apply to the dialogic model.

High vs. low crime areas. Bottoms and Tankebe (2012) suggest that the police must often consider their legitimacy in relation to multiple audiences—specifically when "different groups have conflicting interests" (p. 122). Thus, the factors that shape

individuals' perceptions of police legitimacy might vary according to the level of perceived danger or threat of victimization in an area. Jonathan-Zamir and Weisburd (2013), for example, 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. Still, 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. For that reason, Jonathan-Zamir and Harpaz (2014, p. 15) encourage researchers to "distinguish between different sectors of society when asking officers to evaluate their public image." It is therefore important to test whether the police associate their legitimacy with different factors depending on the specific audience (i.e., neighborhood) with whom they are dealing. Tyler (1990) suggests that procedural justice is the primary antecedent of legitimacy regardless of contextual

differences such as level of crime in a neighborhood. Yet if the police do not believe this to be the case, they may fail to take advantage of process-based policing in certain areas of the community.

Perceived collective efficacy. Perceived collective efficacy is another aspect of neighborhood context which might shape citizens' normative evaluations of the police. Sampson, Raudenbush, and Earls (1997) define collective efficacy as "social cohesion among neighbors combined with their willingness to intervene on behalf of the common good" (p. 918). Gau et al. (2012) demonstrate that individuals' perceptions of neighborhood social cohesion played a key role in their evaluations of police legitimacy. In fact, perceived social cohesion remained a significant correlate of perceived legitimacy even after accounting for procedural and distributive fairness. Nix et al. (2014) found that individuals who perceived lower levels of collective efficacy were less likely to view police actions as procedurally fair. Furthermore, perceived collective efficacy exerted a significant effect on trust in the police net of procedural justice. These findings have important implications for the dialogic approach to legitimacy. The authors suggest that a perceived lack of collective efficacy is essentially "an anomic cognitive orientation about one's ecological environment," which may ultimately result in cynical attitudes toward the police (p. 8). As such, those who perceive a lack of collective efficacy in their community might be less trusting of or feel less obligated to obey the police. In terms of the dialogic model of legitimacy, it remains to be seen whether the police believe collective efficacy is associated with their legitimacy in the eyes of the public. Accounting for perceived collective efficacy is thus essential as researchers begin moving the literature concerning the dialogic model of legitimacy forward.

Perceived disorder. Another variable which might moderate the relationship between procedural justice and legitimacy is perceived disorder. The idea that the police consciously alter their behavior according to perceived disorder (Klinger, 1997) has important implications for the dialogic approach to legitimacy. It is conceivable that one of the reasons police officers alter their behavior in certain neighborhoods is that they might believe citizens' views of the police partially hinge on peoples' perception of the area in which they reside. For example, the police might believe performance in fighting crime is more important to citizens who believe there to be less disorder in their neighborhood while fair distribution of outcomes is more important to those who perceive greater disorder in their area of residence. Perhaps they believe that residents who perceive less disorder pay closer attention to crime trends and expect more from the police when crimes do occur. At the same time, it is conceivable that police officers might think those who perceive greater levels of disorder have come to accept it as a part of their everyday life. As such, they might feel that treating everyone equally is more important than performance in an area that everyone understands is plagued by crime and disorder. It is therefore important to consider whether officers believe citizens' perceived levels of disorder are correlated with their evaluations of the police (i.e., legitimacy).

Perceived risk of apprehension. Given that the criminal justice system is predicated on the concept of deterrence—it is important to consider whether the police associate their legitimacy more so with their ability to create and sustain a credible risk of apprehension for law-breaking than with fair procedures. For example, part of the logic behind randomized "high visibility" patrol is that the police can deter would-be offenders from committing crime simply by maintaining a visible presence in the community

(Bayley, 1994). As another example, the classic Minneapolis Domestic Violence Experiment found that men who committed misdemeanor assaults against their spouses were less likely to recidivate if they were arrested rather than counseled or separated (Sherman & Berk, 1984). As a result of this study, mandatory arrest laws were passed in jurisdictions across the country as a means of deterring domestic violence. Scholars have subsequently disputed the findings and called for the repeal of mandatory arrest policies (e.g., Sherman, 1992) but many jurisdictions still use them. Given practices such as these that are firmly rooted in deterrence theory, research is needed that considers whether the police associate their legitimacy more so with deterrence (i.e., perceived risk) than with procedural fairness. Simply put, the police may believe the public views them as a legitimate authority simply because they do a good job of deterring crime rather than maintaining procedural fairness during interactions with citizens.

Legal cynicism. In addition to the aforementioned variables, legal cynicism might moderate the effect of procedural justice on legitimacy. Tyler and Huo (2002) refer to legal cynicism as a view that the law is "an extension of the power of other groups or the state over them, rather than…rules created or enacted to advance their own interests" (p. 105). Those who are cynical of the law (and by extension, legal authorities such as the police who are sworn to uphold the law) are thus less likely to feel obligated to obey the law. In other words, they view the law and legal authorities as less legitimate (Gau, 2014; Kirk & Papachristos, 2011) and less trustworthy (Carr, Napolitano, & Keating, 2007). It appears that levels of cynicism vary across neighborhoods. Sampson and Jeglum-Bartusch (1998), for example, suggest that in neighborhoods characterized by disorder, residential instability, and concentrated disadvantage, there is "an ecological structuring

to normative orientations—'cognitive landscapes' where crime and deviance are more or less expected and institutions of criminal justice are mistrusted" (p. 800). Residents living in neighborhoods such as these tend to be less satisfied with the police and more cynical of the law and the police than those living in more affluent areas.

Recall that part of Klinger's (1997) theory which suggests the police are less vigorous in high crime areas because they are cynical of residents in those areas. Their own cynicism thus shapes their behavior to a certain extent. It stands to reason that if police officers perceive residents of the community as being cynical toward the law and the police, they might also believe residents feel less obligated to obey their directives. After all, their own cynicism seems to make them less inclined to work diligently in high crime areas. In terms of the dialogic approach, it is important to consider the possibility that the police believe legal cynicism is as important or a potentially more powerful predictor of legitimacy than procedural justice in the eyes of the community. In other words, for police officers who view higher levels of citizen legal cynicism, procedural justice may not seem effective in terms of increasing their own legitimacy.

The Current Study

In order to move the procedural justice and legitimacy literatures forward the present study uses the dialogic model proposed by Bottoms and Tankebe (2012) to explore how officers believe they are evaluated by the public in terms of legitimacy. A complete test of the model would require a longitudinal design that includes both officer and citizen surveys. Nevertheless, understanding how law enforcement executives feel they are judged by the public is an important step as it has been largely ignored up to this point by procedural justice research—the majority of studies have involved citizen surveys (e.g., Tyler, 1990; Tyler & Huo, 2002). This is the first study of its kind using a

U.S. sample, but research conducted in Israel suggests that police leaders associate their legitimacy more so with their agency's effectiveness in reducing crime than with procedural fairness on the part of their officers (Jonathan-Zamir & Harpaz, 2014). Should the same finding emerge with the present sample, it would be an indication that the police cannot exploit the process-based model to their advantage as suggested by Tyler and Huo (2002) until they understand how the public evaluates them. An abundance of research suggesting that citizens view the police as a more legitimate authority when they are procedurally fair is of little value if the police themselves do not share the same beliefs regarding what makes them legitimate.

As a first step toward advancing the literature, the present study will replicate Jonathan-Zamir and Harpaz's (2014) work by comparing the effects of procedural justice and police performance on legitimacy in a U.S. law enforcement context. Beyond this initial inquiry, the present study adds to the limited literature on the dialogic model of legitimacy in several ways. Whereas Jonathan-Zamir and Harpaz (2014) used only measures of *trust*, here both *trust* in the police and *obligation to obey* will be used to measure police legitimacy (Gau, 2011, 2013; Reisig et al., 2007; Sunshine & Tyler, 2003; Tyler, 1990; Tyler & Huo, 2002). While scholars have recently questioned this two-pronged operationalization of legitimacy (e.g., Bottoms & Tankebe, 2012; Jackson et al., 2012b), the purpose of the current study is to compare how the police believe citizens evaluate their legitimacy within the current body of knowledge pertaining to citizens' actual evaluations of police legitimacy. Because this is the first study to ask this question in the U.S., it is necessary to measure legitimacy the way it has predominantly been measured with citizen surveys in order to make more direct comparisons.

Distributive justice and performance will be considered in addition to procedural justice as potential antecedents of police legitimacy. A critical outcome of process-based policing—cooperation—will then be examined in order to determine whether the police believe legitimacy is associated with this desirable citizen behavior. Furthermore, the current study will examine whether the effects of procedural justice, distributive justice, and performance are invariant across different groups of responding officers (i.e., different individual respondent or agency characteristics). Finally, other potential moderating variables which might alter the relationships between procedural justice, performance, distributive justice, trust in the police, and obligation to obey the police will be considered. These include level of crime (i.e., high or low), perceived collective efficacy, perceived social disorder, perceived risk of apprehension, and legal cynicism.

CHAPTER 3

METHODOLOGY

Data and Sample

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. This database lists information for 16,492 law enforcement agencies in the U.S. Included in the database are the name and address of the chief executive for each agency, the population served by the agency, the agency type (e.g., county or municipal police, sheriff's department, state police/highway patrol), the number of officers, and the region of the U.S. in which the agency is located. All municipal and county police departments as well as sheriff's departments in the U.S. were included in the sampling frame. State police and highway patrol agencies (n=1,015) were excluded because they cover large jurisdictions and tend not to have routine patrol duties like municipal police or sheriff's departments. In addition, a total of 79 sheriff's departments were excluded from the sampling frame because the sheriff's primary role was that of a county coroner. Finally, 24 duplicates were identified and removed, leaving a total of 15,374 agencies in the sampling frame.

Stratification

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 four groups:

- Less than 10,000
- 10,000 to 49,999
- 50,000 to 99,999
- 100,000 or more

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. (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.

In terms of region, agencies were placed into one of four U.S. census categories—Northeast, Midwest, South, or West. These are the same regions used by the Uniform Crime Reporting (UCR) program to compile national crime data (see Appendix A for a complete listing of all 50 states and Washington, D. C.). It is also possible that law enforcement executives in different regions of the U.S. might have different perspectives about the foundations of their legitimacy in the eyes of their communities. Finally, with regard to agency type, agencies were categorized as either police departments (whether county or municipal) or sheriff's departments. It is conceivable that a sheriff—who is elected by the public—might have a different perception of how the community views his/her department than a police chief at a municipal agency. As such, it was deemed necessary to ensure an adequate number of sheriffs received the survey in order to make comparisons between their perceptions and those of municipal police chiefs.

Sample Size and Selection

After removing certain agencies as outlined above, 12,315 county or city/municipal police agencies and 3,059 sheriff's departments remained in the sampling frame. Appendix B presents the strata used for sample selection along with the number of executives available to be surveyed in each group. 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.

All executives in the six strata with fewer than forty law enforcement agencies were sampled (46 agencies altogether). The remainder of the sample (n=1,095) was drawn from agencies in the other 26 strata. This required 42.12 law enforcement executives per stratum. As such, 42 executives were randomly selected from each stratum with fewer than 1,000 agencies, and 43 executives were randomly selected from each stratum with more than 1,000 agencies. These steps resulted in the selection of 2,000 law enforcement executives to receive the survey.

Data Collection

Before finalizing the survey, two nearby deputy chiefs pilot tested it and provided feedback on the wording of questions, available answer choices, and other components of the survey. Their input was considered and necessary changes were made. A modified Dillman method was used to elicit participation in the survey. Two thousand survey

packets were mailed on August 1, 2014, which included a cover letter from the researcher, a letter of support from a well-recognized chief of police (Art Acevedo, Austin, Texas Police Department), the survey instrument, and a self-addressed, stamped return envelope. A follow-up letter was mailed to all 2,000 executives two weeks later. Finally, additional surveys were mailed to all remaining non-respondents on September 1, 2014. In addition to the mail survey, executives were given the option to complete the survey online at a password protected website. Research suggests that mixed data collection methods such as this can improve response rates (Dillman et al., 2009; Shettle & Mooney, 1999).

After mailing the surveys, a few issues were discovered that resulted in the removal of 18 agencies from the sampling frame. Nine additional duplicates were identified (i.e., the executive at the agency received two surveys), one agency identified itself as a Tribal Police Department on a Native American Reservation, another as a military police department, and another as a park police department. These agencies were removed from the sampling frame because they serve communities much different from the other agencies in its stratum and the sampling frame more generally. In addition, six executives called and stated that their agencies do not perform patrol duties. As such, these agencies were removed, and collectively, the sampling frame was reduced from 2,000 to 1,982. Thus 1,982 serves as the denominator in the calculation of response rate. Note that the removal of these 18 agencies also reduced the sampling frame from 15,374 to 15,356. This reduction in the sampling frame is an important consideration for the weighting procedure (discussed below).

A total of 663 executives returned completed surveys representing a 33.5% response rate (72.4% of respondents completed the mail version). 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). As is common in survey research, a small proportion of respondents did not provide answers to all of the questions (roughly two percent of cells were missing in the dataset). Imputation of missing data was completed using the Stata 13 *hotdeck* suite (Andridge & Little, 2010; Fuller & Kim, 2005; Gmel, 2001; McKnight, McKnight, Sidani, & Figueredo, 2007).

Table 3.1 presents descriptive statistics for the sample. Roughly 48 percent of respondents were indeed the chief executive officer of their agency. The sample was 94.2 percent male, and over four-fifths of the respondents were White (87.7 percent). Experience in law enforcement ranged from 4.5 to 50 years with a mean and median of about 27 years. Three-fourths of the respondents had been employed at their current *agency* for at least 10 years, while about 14 percent of the respondents had been in their current *position* for at least 10 years at the time of the survey. Just over half of the respondents (55.2 percent) were employed by a municipal or county police department. In terms of region, 15 percent of respondents worked in the Northeast, 24 percent in the Midwest, 35 percent in the South, and 26 percent in the West. Finally, agencies employed on average 372 full-time sworn officers/deputies (median = 100) and provided services to jurisdictions with an average of 218,860 citizens (median = 100,000).

Table 3.1. Sample descriptive statistics.

	M	S.D.	Min	Max
Chief executive	.477	--	0	1
Male	.942	--	0	1
Racial minority	.123	--	0	1
Years in law enforcement	26.9	8.2	4.5	50
10 years at agency	.765	--	0	1
10 years in position	.137	--	0	1
Police department	.552	--	0	1
Northeast	.148	--	0	1
Midwest	.243	--	0	1
South	.350	--	0	1
West	.260	--	0	1
Number sworn[a]	372	1571.9	0	34,979
Population served[b]	218,860	497,825.3	118	8,175,136

[a] Median number sworn = 100; [b] Median population served = 100,000

Measures

High versus Low Crime Areas

In order to account for potential variation in the understanding of their legitimacy in the eyes of citizens from different areas of the community, 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 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 the sake of simplicity, each of the variables of interest discussed below is presented only once in general terms. In actuality, there are two of each variable (or scale)—one for high crime areas and one

for low crime areas. This allows for a comparison of how officers feel they are evaluated in terms of their legitimacy in each area.

Dependent Variables

Trust. Similar to Jonathan-Zamir and Harpaz (2014), the primary outcome of interest in the present study is *police legitimacy in the eyes of the public* as perceived by the respondents. Consistent with Tyler's (1990, 2003) conceptualization of legitimacy, respondents were asked questions intended to capture *perceived levels of citizens' trust* in and *obligation to obey* the police. However, *trust* and *obligation to obey* are treated as distinct concepts in order to allow for a more direct comparison to Jonathan-Zamir and Harpaz (2014) which used *trust* as the dependent variable. 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*). Principal-axis factor analysis (PAF) revealed that the six items loaded onto two factors (high crime $\lambda = 2.80$, factor loadings > 0.57; low crime $\lambda = 1.39$, factor loadings > 0.59) and demonstrated strong internal consistency (high crime $\alpha = .79$; low crime $\alpha = .77$; see, e.g., Cortina, 1993). The six items were thus 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. The distribution of the two trust scales indicates that the sample believes citizens have moderate levels of trust in

the police, with citizens in low crime areas (M = 9.875, SD = 1.461) thought to have slightly higher levels of trust than citizens in high crime areas (M = 8.662, SD = 1.657). Table 3.2 provides descriptive statistics for each of the variables used in the analyses.

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. PAF revealed that the eight items loaded onto two factors (high crime $\lambda = 3.75$, factor loadings > 0.55; low crime $\lambda = 1.70$, factor loadings > 0.64) and demonstrated strong internal consistency (high crime $\alpha = 0.86$; low crime $\alpha = 0.82$). The eight items were thus 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.[2] The distribution of the two *obligation to obey* scales suggests that the sample believes citizens feel somewhat obligated to obey the police, with citizens in low crime areas (M = 10.495, SD = 2.152) again thought to feel slightly more obligated than citizens in high crime areas (M = 8.923, SD = 2.438).

[2] Because *trust* and *obligation to obey* are central concepts in the present study, and because there is empirical evidence that officers in this sample distinguish between high and low crime areas with regards to these concepts, the remaining dependent and independent variables are treated in a similar manner (i.e., separate high and low crime scales are created).

Table 3.2. Descriptive statistics for variables used in analyses.

	High crime areas				*Low crime areas*			
	M	S.D.	Min	Max	M	S.D.	Min	Max
Trust	8.662	1.657	3	12	9.875	1.461	3	12
Obligation to obey	8.923	2.438	4	16	10.459	2.152	4	16
Cooperation	5.811	1.392	2	8	6.675	1.302	2	8
Procedural justice	14.222	2.998	5	20	16.274	2.184	9	20
Distributive justice	5.269	1.512	2	8	6.295	1.059	2	8
Police performance	17.425	3.229	6	24	19.255	2.555	9	24
Collective efficacy	25.222	4.442	11	36	27.837	3.957	18	36
Disorder	11.294	3.862	5	20	11.601	4.157	5	20
Perceived risk	14.431	2.796	5	20	14.227	2.835	5	20
Legal cynicism	13.199	3.474	6	24	11.478	2.646	6	24

Cooperation. The process-based model of policing suggests that one of the desirable outcomes of police legitimacy is citizen cooperation with police in the form of reporting crimes and/or providing information to help with a case (Tyler, 1990; Tyler & Huo, 2002). As such, respondents were presented with four 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). 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 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.

Independent Variables

Procedural justice. Procedural justice in the eyes of the public (as perceived by the police) was measured using the two components of the concept: (1) quality of treatment and (2) quality of decision making. To capture *quality of treatment*, respondents were asked the extent to which they agreed or disagreed (1 = *strongly disagree* to 4 = *strongly agree*) that "residents believe officers treat those they encounter with politeness and dignity" and "residents believe officers respect the rights of the citizens they come in contact with" (Jonathan-Zamir & Harpaz, 2014; Reisig et al., 2007; Sunshine & Tyler, 2003). To capture *quality of decision making*, respondents were asked

how much they agreed or disagreed (1 = *strongly disagree* to 4 = *strongly agree*) with the following statements: "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; Nix et al., 2014; Reisig et al., 2007; Sunshine & Tyler, 2003). PAF revealed that for both high and low crime areas, the *quality of treatment* and *quality of decision making* items loaded onto a single factor (high crime $\lambda = 3.05$, factor loadings > 0.70; low crime $\lambda = 2.62$, factor loadings > 0.59). The items also demonstrated strong internal consistency (high crime $\alpha = 0.89$; low crime $\alpha = 0.85$) and were therefore summed into 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. Perceptions that community members believe the police enforce the law consistently across societal groups were 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). The items were used to construct two distinct 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 respondents) 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 for both high and low crime areas, the performance items loaded onto a single factor (high crime $\lambda = 3.13$, factor loadings > 0.67; low crime $\lambda = 2.87$, factor loadings > 0.59). 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 believe the police are effective and efficient in dealing with crime.

Collective efficacy. Citizens' perceived collective efficacy (as understood by the police) is conceptualized as the social-psychological cognitive orientation respondents believe citizens have toward their community (see Nix et al., 2014). Consistent with Sampson et al. (1997), measures of (perceived) *informal social control* and *social cohesion/trust* constitute collective efficacy in the present study. *Informal social control* was measured by asking respondents how likely (1 = *very unlikely* to 4 = *very likely*) citizens think it is that someone in their community would do something if (a) teenagers were skipping school and hanging out on a street corner, (b) teenagers were spray-

painting graffiti on a local building, (c) teenagers were showing disrespect to an adult, and (d) a fight broke out near their home. *Social cohesion/trust* was captured by asking respondents to indicate their level of agreement with the following statements: "Residents believe people in this area are willing to help their neighbors," "Residents believe this is a close-knit community," "Residents believe people in this area can be trusted," "Residents believe people in this area generally get along with each other," and "Residents believe people in this area share the same values." PAF demonstrated that the items loaded on their respective informal social control (high crime $\lambda = 1.25$, factor loadings > 0.62; low crime $\lambda = 1.69$, factor loadings > 0.47) and social/cohesion trust (high crime $\lambda = 3.09$, factor loadings > 0.61; low crime $\lambda = 2.88$, factor loadings > 0.56) factors. However, consistent with Sampson et al. (1997), the four subscales were combined into two additive indexes ranging from 9 to 36, which represent citizens' perceived collective efficacy in high and low crime areas as understood by police (high crime $\alpha = 0.82$; low crime $\alpha = 0.79$).

Disorder. Five items were used to measure *disorder in the eyes of the public* (as perceived by the police). Respondents were asked to indicate the extent that they agreed or disagreed (1 = *strongly disagree* to 4 = *strongly agree*) that the following five issues are perceived as problems by the community: (1) garbage along the streets, (2) graffiti in public spaces, (3) gangs hanging out on the streets, (4) people buying/selling drugs on the street, and (5) people drinking alcohol on the street (Gau & Pratt, 2008; Nix et al., 2014). PAF showed that for both high and low crime areas, the disorder items loaded onto a single factor (high crime $\lambda = 2.83$, factor loadings > 0.70; low crime $\lambda = 3.26$, factor loadings > 0.71). Furthermore, the items demonstrated strong internal consistency (high

crime α = 0.87; low crime α = 0.91) and were thus summed into two *perceived disorder* scales ranging from 5 to 25, with higher scores indicating a belief on the part of responding officers that the community perceives greater disorder.

Perceived risk of apprehension. It is possible that the police associate their legitimacy more so with their ability to create and sustain a credible risk of being caught breaking the law (i.e., deterrence). In order to measure *perceived risk*, respondents were asked how likely it is that citizens feel they would be caught and punished for each of the following criminal offenses: illegally parking, littering, making too much noise at night, breaking traffic laws, and using illegal drugs in public places (Reisig et al., 2007; Sunshine & Tyler, 2003). PAF revealed that for both high and low crime areas, the perceived risk items loaded onto a single factor (high crime λ = 1.95, factor loadings > 0.54; low crime λ = 1.75, factor loadings > 0.54). The items also demonstrated strong internal consistency (high crime α = 0.77; low crime α = 0.74), and were thus used to construct two distinct additive *perceived risk* scales ranging from 5 to 20, with higher scores indicating a greater perceived likelihood of being caught and punished for breaking the law.[3] The distribution of the two perceived risk scales indicates that the sample believes citizens in both high and low crime areas perceive similar probabilities of being caught and punished for law-breaking behaviors (high crime M = 14.431, SD = 2.696; low crime M = 14.227, SD = 2.835).

[3] An argument could be made that *perceived risk of apprehension* is a component of *performance*. However, for both high and low crime areas, PAF revealed that the items loaded onto separate factors. In addition, the correlation between the *perceived risk* and *performance* scales is low for both high (b = .18) and low crime areas (b = .17). Perhaps as the responding officers read the performance questions, they were more apt to consider law-abiding citizens, whereas when reading the perceived risk questions, they pictured offenders. In any event, the concepts are empirically distinct in the present data and as such, separate scales were created.

Legal cynicism. Cynicism toward the law on the part of citizens (as perceived by the police) is measured via six items. Respondents were asked to indicate their level of agreement (1 = *strongly disagree* to 4 = *strongly agree*) with each of the following statements: "Residents believe the law *does not* protect their interests," "Residents believe laws were made to be broken," "Residents believe it is okay to break laws as long as they believe they aren't hurting anyone," "Residents believe that there are no right and wrong ways to make money," "Residents believe that fighting between friends or within families is nobody else's business," and "Residents believe that nowadays a person has to live pretty much for today and let tomorrow take care of itself" (Sampson & Jeglum-Bartusch, 1998; Tyler & Huo, 2002). PAF revealed that for both high and low crime areas, the legal cynicism items loaded onto a single factor (high crime $\lambda = 2.93$, factor loadings > 0.52; low crime $\lambda = 2.26$, factor loadings > 0.43). Because the items also demonstrated strong internal consistency (high crime $\alpha = 0.85$; low crime $\alpha = 0.78$), they were summed to create two *legal cynicism* indexes ranging from 5 to 20, with higher scores indicating the responding officers believe citizens are more cynical of the law.

Control Variables

In addition to the abovementioned variables, several demographic control variables are included in the analyses in order to provide unbiased estimates of key predictor variables on respondents' perceptions of *trust, obligation to obey,* and the likelihood of *cooperation* from the public. *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), r*ace* (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; see Appendix B for a complete listing of states that fall into each region). *Large city* is defined as those agencies in the 75th percentile of the sample in terms of population served (1 = agencies serving 210,000 or more citizens).

Analytic Strategy

Four primary research questions will be addressed in the present study. They are as follows:

1. *What do the police see as the foundation of their legitimacy in the eyes of the public?*
2. *Do the police believe that citizen feelings of trust and obligation to obey are associated with cooperation?*
3. *Are the effects of key predictor variables (i.e., procedural justice, distributive justice, and performance) on trust and obligation to obey as perceived by the police invariant across different types of responding officers (i.e., across various individual and agency characteristics)?*
4. *Do contextual variables moderate the relationship between key predictor variables and trust and obligation to obey as perceived by the police?*

Police Perceptions of the Foundation of their Legitimacy in the Eyes of the Public

In order to first replicate Jonathan-Zamir and Harpaz's (2014) findings, a series of four regression models are used to determine what respondents see as the foundation of citizen levels of trust in the police. Each of these four regression models are performed twice—once for high crime areas and again for low crime areas. Model 1 examines the degree to which respondents believe procedural justice is associated with citizens' levels of trust in the police, net of statistical controls. Models 2 and 3 estimate the effects of distributive justice and police performance, respectively, on perceived levels of citizen trust, net of statistical controls. Finally, Model 4 simultaneously includes procedural

justice, distributive justice, and performance as predictors of perceived levels of trust in order to determine which variable exerts the strongest effect, holding all else constant. Analyzing the data in this fashion will make it possible to determine which variable is more important in terms of its effect on perceived trust and if any of the effects are partially confounded by other variables.

In addition to perceived levels of citizen trust, perceived obligation to obey the police is also examined using a series of four regression models. The first model examines the effect of procedural justice on perceived obligation to obey net of statistical controls. Models 2 and 3 examine the effect of distributive justice and police performance on perceived obligation to obey net of statistical controls. The fourth and final model simultaneously examines the effect of procedural justice, distributive justice, and police performance on perceived obligation to obey, net of statistical controls, in order to determine which theoretical construct has the strongest impact on perceived obligation to obey according to the respondent officers.

Police Perceptions of the Effects of Trust and Obligation to Obey

The next step of the analysis is to determine whether respondents' perceived levels of trust and obligation to obey are associated with higher levels of perceived cooperation from the public. A series of six regression models will be used to address this question. In the first model, the effect of procedural justice on cooperation will be examined, net of statistical controls. The second and third models examine the effects of distributive justice and performance, respectively, on cooperation net of statistical controls. The fourth model examines the extent to which respondents believe trust is associated with cooperation, net of statistical controls, while the fifth model will examine

the relationship between obligation to obey and cooperation, net of statistical controls. The sixth and final model simultaneously examines the effect of procedural justice, distributive justice, performance, trust, and obligation to obey on cooperation, net of statistical controls.

Invariance across Individual and Agency Characteristics

As Tyler (1990. p. 121) suggests, research is needed which tests the universality or invariance of procedural justice theory. In terms of the dialogic approach to legitimacy, this means the extent to which individual- (e.g., rank, gender, race, and experience) and agency-level variables (e.g., population served and agency type) moderate the relationship between procedural justice and perceived trust and obligation to obey in the eyes of the public. First, the effects of the key predictor variables (i.e., procedural justice, distributive justice, and performance) on perceived trust and obligation to obey in the eyes of the public are tested across respondent *rank, gender, race* and *experience*. To do so, mean-centered, multiplicative interaction terms are created between each key predictor variable and rank, gender, race, and experience, respectively. Statistically significant interaction effects would suggest that the influence of key predictor variables on trust and obligation to obey are moderated by these individual-level variables. The *margins* command available in Stata 13 is used to further explore any statistically significant interaction effects. Next, the effects of the key predictor variables on perceived trust and obligation to obey in the eyes of the public are tested across *agency type* and *population*. Again, interaction terms are created which, if significant, suggest that the influence of key predictor variables on legitimacy are moderated by the respective agency-level variable.

Invariance across Potentially Moderating Variables

In addition to testing for invariance across individual- and agency-level characteristics, the possibility that the four previously mentioned contextual variables condition the influence of key predictor variables on perceived legitimacy in the eyes of the public will also be considered. That is, do respondents feel that citizen perceptions of collective efficacy, disorder, risk, and cynicism toward the law moderate the procedural justice-trust and/or procedural justice-obligation to obey relationships? To test for the invariance of procedural justice across these potentially moderating variables, interaction terms are created between each key predictor variable and each confounding variable, respectively. Thus a total of 12 interaction terms will be created—four each for the procedural justice, distributive justice, and performance scales. Again, the *margins* command available in Stata 13 is used to further explore any statistically significant interaction effects.

Weighting Procedure

Because agencies within various strata had different probabilities of being selected, and because the strata produced variable 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 the population of agencies in each stratum is represented by the survey respondents that belong 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 would ultimately result in biased estimates). Appendix C 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 (see Smith et al., 2010 for a similar discussion).

Collinearity

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 0.77 for the high crime area variables and .69 for the low crime area variables (see Appendix D). Typically 0.80 is used as a threshold indicative of harmful collinearity (Mason & Perreault, 1991). Furthermore, all variance inflation factors fell below the 4.0 threshold (Tabachnick & Fidell 2007).

CHAPTER 4

RESULTS

Police Perceptions of the Foundations of Their Legitimacy in the Eyes of the Public

Table 4.1 uses Ordinary Least Squares regression (OLS) to explore the perceived independent and additive effects of procedural justice, distributive justice, and performance on trust in the police among citizens in high crime areas. In Model 1, the *trust in high crime areas* scale is regressed onto the five-item *procedural justice in high crime areas* scale along with fourteen control variables. The joint association test reveals that the model provides more explanatory power than would be expected by chance alone ($F = 19.85$, $p < .01$) and the coefficient of multiple determination is large ($R^2 = .59$). The unstandardized partial regression coefficient (b) suggests that the procedural justice estimate is associated with trust in the expected direction ($b = .362$, $p < .01$). This implies that respondents in the sample who think citizens residing in high crime areas perceive greater procedural justice on the part of police believe citizens are more trusting of the police than their counterparts. Finally, two control variables exert significant effects: disorder and legal cynicism. Respondents who feel citizens in high crime areas perceive a greater amount of disorder tend to believe they are more trusting of the police ($b = .051$, $p < .05$). This finding conflicts with prior research using citizen surveys which suggests that those who perceive greater levels of disorder tend to afford less trust to the police (Jackson et al., 2012a; Nix et al., 2014). Conversely, respondents who believe citizens in these areas are more cynical towards the law tend to think they are less trusting of the

police (b = -.121, p < .01). This finding is in line with prior citizen research which suggests citizens who are more cynical towards the law and legal authorities view these entities as less trustworthy (Carr et al., 2007; Sampson & Jeglum-Bartusch, 1998).

In Model 2, the *trust* scale is regressed onto a two-item *distributive justice in high crime areas* scale along with each of the control variables. This results in a slight reduction in the explanatory power of the model when compared to Model 1 (R^2 is reduced by 5 percent). The unstandardized partial regression coefficient indicates that the distributive justice estimate (b = .579, p < .01) is significantly and positively related to perceived trust in the police. This suggests that respondents who believe citizens in high crime areas perceive greater distributive justice on the part of the police are more likely to believe citizens bestow trust in the police (Tyler & Wakslak, 2004). In Model 3, the trust scale is regressed onto a six item police *performance* scale. Although the model as a whole is statistically significant, it has 15 percent less explanatory power than Model 1. The statistically significant performance estimate (b = .258, p < .01) implies that respondents believe when citizens in high crime areas positively evaluate police performance, they are more likely to trust the police. This finding reinforces those of Jonathan-Zamir and Harpaz (2014), who found that performance was significantly associated with perceived trust among their sample of Israeli National Police officers.

In Model 4, the trust scale is regressed simultaneously onto the procedural justice, distributive justice, and performance scales along with each of the fourteen control variables. The R^2 value improves to .64, an 8 percent increase from Model 1. Three findings warrant attention. First, each of the three theoretical variables of interest—procedural justice (b = .227, p < .01), distributive justice (b = .260, p < .05), and

Table 4.1. The perceived effect of key predictor variables on trust in the police in high crime areas.

	Trust in the police—High crime areas[a]							
	Model 1		Model 2		Model 3		Model 4	
Variable	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β
Procedural justice	.362** (.045)	.655	--	--	--	--	.227** (.059)	.411
Distributive justice	--	--	.579** (.092)	.527	--	--	.260* (.107)	.237
Performance	--	--	--	--	.258** (.032)	.504	.085* (.037)	.166
Executive	-.180 (.178)	-.046	-.383 (.218)	-.097	-.295 (.188)	-.075	-.251 (.168)	-.064
Male	.368 (.280)	.046	-.279 (.396)	-.035	-.016 (.315)	-.002	.136 (.258)	.017
Racial minority	.239 (.166)	.052	.227 (.215)	.049	.426 (.233)	.093	.237 (.164)	.052
10 years at agency	-.022 (.202)	-.006	.005 (.217)	.001	-.005 (.200)	-.001	-.034 (.188)	-.010
10 years in position	.009 (.234)	.002	-.312 (.222)	-.076	-.323 (.298)	-.078	-.084 (.210)	-.020
Police department[b]	.064 (.196)	.015	-.149 (.203)	-.036	-.015 (.210)	-.004	.078 (.178)	.019
Midwest	-.055 (.245)	-.016	.100 (.285)	.029	.265 (.316)	.076	-.061 (.244)	-.018
South	-.245 (.219)	-.071	-.095 (.297)	-.027	.165 (.300)	.048	-.278 (.238)	-.080
West	.260 (.249)	.049	.508 (.287)	.096	.454 (.340)	.086	.257 (.244)	.049
Large city	-.119 (.179)	-.012	-.276 (.204)	-.028	-.139 (.188)	-.014	-.069 (.173)	-.007

Table 4.1 (continued). The perceived effect of key predictor variables on trust in the police in high crime areas.

	Trust in the police—High crime areas[a]							
	Model 1		Model 2		Model 3		Model 4	
Variable	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β
Collective efficacy	-.023 (.032)	-.061	.040 (.032)	.107	-.014 (.031)	-.038	-.020 (.029)	-.055
Disorder	.051* (.024)	.119	.042 (.022)	.097	.084** (.024)	.196	.062** (.020)	.145
Perceived risk	.027 (.026)	.046	.002 (.033)	.004	.035 (.032)	.059	.018 (.026)	.030
Legal cynicism	-.121** (.034)	-.254	-.141** (.037)	-.295	-.171** (.035)	-.359	-.090** (.032)	-.189
Intercept	4.510** (1.178)	--	6.625** (1.298)	--	5.381** (1.254)	--	3.415** (1.202)	--
F test	19.85**		14.70**		18.56**		23.27**	
R^2	.59		.56		.50		.64	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05; **p < .01

performance (b = .085, p < .05)—are statistically significant, which suggests the respondents believe each of these concepts are important to establishing trust in the eyes of the community. Second, procedural justice dominates the model, as evidenced by the size of the standardized partial regression coefficient (β = .411, p < .01) and the reduction in magnitude of both distributive justice (down 55 percent from Model 2) and performance (down 67 percent from Model 3) coefficients. The Difference in Coefficients Test (Clogg, Petkova, & Shihadeh, 1992) reveals that each of these reductions are statistically significant at the p < .05 level, which is evidence that the effects of distributive justice and performance on trust are partially confounded by procedural justice. Finally, disorder and legal cynicism retain statistical significance in Model 4, which is an indication that the police believe these concepts to be closely connected to levels of citizen trust in high crime areas. Collectively, the findings suggest that the respondents in this sample believe that among citizens residing in high crime areas, procedural justice is strongly correlated with trust in the police (Tyler & Huo, 2002).

In Table 4.2, *obligation to obey* in high crime areas is regressed onto each of the procedural justice, distributive justice, and performance scales along with the control variables in the same manner discussed above. While each of the four models provide more explanatory power than could be expected by chance alone, the coefficients of multiple determination are much lower than those in Table 4.1 (e.g., Model 4, Table 4.2 R^2 = .39; Model 4, Table 4.1 R^2 = .64). The procedural justice estimate in Model 4 (β = .224, p < .05) is much smaller than the estimate in Model 4 of Table 4.1, which suggests respondents believe perceived procedural fairness of the police is more closely associated

with citizen trust than with their feeling obligated to obey the police. In addition, the size of the performance estimate (β = .236, $p < .05$) indicates that respondents believe performance is equally as important as procedural fairness in terms of fostering an obligation to obey the police among citizens in high crime areas. Finally, the data reveal that respondents who work for agencies in the West (b= .846, $p < .05$) are more apt to believe citizens in high crime areas feel obligated to obey the police (relative to respondents working for agencies in the Northeast).

Table 4.3 regresses *trust in low crime areas* onto the procedural justice, distributive justice, and performance in low crime areas scales, along with each of the aforementioned control variables. Several points are worthy of discussion. First, although the four models are statistically significant, they explain less of the variation in trust in low crime areas than the models in Table 4.1 which involve trust in high crime areas. This is an indication that respondents feel procedural justice, distributive justice, and performance are less important in terms of generating trust among citizens residing in low crime areas. At the same time, Model 4 in Table 4.3 reveals that respondents believe procedural (β = .276, $p < .01$) and distributive fairness (β = .267, $p < .01$)—and to a lesser extent, performance (β = .174, $p < .01$)—are associated with trust among citizens residing in low crime areas.

Secondly, it appears that in low crime areas, procedural justice partially confounds the effect of legal cynicism on trust in the police. Legal cynicism has a statistically significant, negative relationship with trust in Models 2 and 3, which do not include procedural justice. In Models 1 and 4, which do account for procedural justice, legal cynicism is rendered non-significant. Finally, perceived risk emerges as a

Table 4.2. The perceived effect of key predictor variables on obligation to obey in high crime areas.

	Obligation to obey—High crime areas[a]							
	Model 1		Model 2		Model 3		Model 4	
Variable	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β
Procedural justice	.391** (.077)	.481	--	--	--	--	.182* (.072)	.224
Distributive justice	--	--	.694** (.159)	.431	--	--	.333 (.181)	.207
Performance	--	--	--	--	.351** (.083)	.465	.178* (.088)	.236
Executive	.026 (.482)	.004	-.201 (.464)	-.035	-.091 (.443)	-.016	-.073 (.418)	-.013
Male	.724 (.453)	.062	.002 (.512)	.000	.331 (.758)	.028	.402 (.729)	.034
Racial minority	-.704 (.453)	-.104	-.736 (.472)	-.109	-.490 (.428)	-.072	-.681 (.446)	-.100
10 years at agency	.663 (.410)	.131	.686 (.412)	.135	.666 (.378)	.131	.640 (.387)	.126
10 years in position	-.450 (.496)	-.074	-.787 (.488)	-.130	-.790 (.578)	-.130	-.591 (.498)	-.097
Police department[b]	-.328 (.349)	-.054	-.543 (.316)	-.089	-.343 (.366)	-.056	-.276 (.344)	-.045
Midwest	.400 (.470)	.078	.532 (.541)	.104	.710 (.465)	.139	.403 (.457)	.079
South	.603 (.474)	.118	.714 (.526)	.140	1.000* (.485)	.196	.576 (.496)	.113
West	.872* (.388)	.112	1.115* (.439)	.144	1.013* (.418)	.130	.846* (.392)	.109
Large city	-.542 (.337)	-.037	-.693* (.303)	-.047	-.482 (.351)	-.033	-.431 (.338)	-.029

Table 4.2 (continued). The perceived effect of key predictor variables on obligation to obey in high crime areas.

	Obligation to obey—High crime areas[a]							
	Model 1		Model 2		Model 3		Model 4	
Variable	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β
Collective efficacy	-.039 (.057)	-.070	.028 (.054)	.051	-.046 (.059)	-.085	-.045 (.056)	-.082
Disorder	.018 (.041)	.029	.009 (.039)	.014	.066 (.039)	.105	.044 (.034)	.069
Perceived risk	-.003 (.089)	-.003	-.033 (.091)	-.038	.007 (.091)	.008	-.014 (.087)	-.016
Legal cynicism	-.092 (.064)	-.131	-.099 (.061)	-.140	-.121* (.061)	-.173	-.042 (.057)	-.060
Intercept	4.281* (2.145)	--	6.122** (1.961)	--	3.862 (2.564)	--	2.156 (2.460)	--
F test	7.29**		6.67**		6.54**		8.14**	
R^2	.33		.34		.33		.39	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05; **p < .01

Table 4.3. The perceived effect of key predictor variables on trust in the police in low crime areas.

	Trust in the police—Low crime areas[a]							
	Model 1		Model 2		Model 3		Model 4	
Variable	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β
Procedural justice	.362** (.061)	.541	--	--	--	--	.185** (.051)	.276
Distributive justice	--	--	.649** (.126)	.470	--	--	.368** (.125)	.267
Performance	--	--	--	--	.259** (.048)	.453	.099** (.038)	.174
Executive	.403 (.389)	.116	.166 (.364)	.048	.359 (.408)	.103	.282 (.344)	.081
Male	-.246 (.320)	-.035	-.351 (.358)	-.050	-.283 (.391)	-.040	-.387 (.327)	-.055
Racial minority	-.469 (.399)	-.116	-.401 (.360)	-.099	-.394 (.424)	-.097	-.415 (.349)	-.102
10 years at agency	.008 (.244)	.003	-.096 (.232)	-.031	-.210 (.236)	-.069	-.108 (.214)	-.035
10 years in position	-.249 (.393)	-.069	-.349 (.379)	-.096	-.474 (.417)	-.130	-.376 (.366)	-.103
Police department[b]	-.209 (.185)	-.057	-.180 (.181)	-.049	-.333 (.189)	-.091	-.148 (.172)	-.040
Midwest	.281 (.324)	.092	.341 (.301)	.111	.208 (.325)	.068	.173 (.275)	.056
South	.429 (.377)	.141	.489 (.355)	.160	.427 (.380)	.140	.318 (.332)	.104
West	.525 (.333)	.113	.626* (.316)	.135	.543 (.345)	.117	.465 (.299)	.100
Large city	-.035 (.276)	-.004	-.082 (.211)	-.009	-.107 (.273)	-.012	.000 (.245)	.000

Table 4.3 (continued). The perceived effect of key predictor variables on trust in the police in low crime areas.

	Trust in the police—Low crime areas[a]							
	Model 1		Model 2		Model 3		Model 4	
Variable	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β
Collective efficacy	.008 (.025)	.022	.029 (.027)	.078	.016 (.026)	.044	-.002 (.025)	-.006
Disorder	.034 (.024)	.096	.023 (.021)	.066	.050* (.021)	.141	.034 (.021)	.096
Perceived risk	-.083* (.038)	-.161	-.060 (.040)	-.117	-.080* (.034)	-.155	-.076* (.034)	-.147
Legal cynicism	-.054 (.043)	-.098	-.110** (.037)	-.198	-.099** (.033)	-.180	-.035 (.038)	-.064
Intercept	5.084** (1.457)	--	7.027** (1.267)	--	6.415** (1.273)	--	4.055** (1.374)	--
F test	9.36**		9.24**		11.16**		12.16**	
R^2	.46		.47		.42		.52	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05; **p < .01

statistically significant predictor of trust (b = -.076, p < .05) in Table 4.3. In other words, respondents perceive that in low crime areas, citizens who believe the police create and sustain a credible risk for law-breaking behavior are less likely to trust the police.

In Table 4.4, *obligation to obey in low crime areas* is regressed onto each of the aforementioned independent and control variables. Several findings merit discussion. First, joint association tests reveal that each model explains more of the variation in obligation to obey than could be expected by chance alone, yet the coefficients of multiple determination are smaller than those presented in Table 4.2 (i.e., R^2 ranges from .17 to .23). This is an indication that the sample believes this set of variables is less associated with obligation to obey among citizens in low crime areas than in high crime areas. Second, performance (b = .216, p < .01) retains statistical significance in Model 4 while procedural justice and distributive justice do not. That is, respondents believe that in low crime areas, citizens are more likely to feel obligated to obey the police when they feel the police are performing well than when they feel the police are procedurally fair or fairly distribute outcomes. Third, performance appears to partially account for the relationship between both (1) procedural justice and obligation to obey and (2) distributive justice and obligation to obey. The procedural justice coefficient is reduced by 113 percent from Model 1 to Model 4, while the distributive justice coefficient is reduced by 32 percent from Model 2 to Model 4 (the differences are not statistically significant). These findings indicate that respondents believe that in the eyes of the public, performance is the key to generating feelings of obligation to obey the police. Finally, respondents working in the West (b = .974, p < .05) tend to believe citizens feel more obligated to obey the police relative to officers working in the Northeast.

Table 4.4. The perceived effect of key predictor variables on obligation to obey in low crime areas.

	Obligation to obey—Low crime areas[a]							
	Model 1		Model 2		Model 3		Model 4	
Variable	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β
Procedural justice	.228* (.109)	.231	--	--	--	--	-.030 (.159)	-.031
Distributive justice	--	--	.591** (.191)	.291	--	--	.402 (.278)	.198
Performance	--	--	--	--	.295** (.084)	.350	.216* (.097)	.257
Executive	.645 (.400)	.126	.447 (.387)	.087	.628 (.386)	.123	.509 (.378)	.100
Male	-.635 (.543)	-.062	-.772 (.701)	-.075	-.752 (.507)	-.073	-.840 (.623)	.082
Racial minority	-.729 (.399)	-.122	-.675 (.384)	-.113	-.658 (.363)	-.110	-.645 (.356)	-.108
10 years at agency	.608 (.382)	.136	.529 (.357)	.118	.388 (.356)	.087	.404 (.347)	.090
10 years in position	-.419 (.536)	-.078	-.500 (.499)	-.093	-.656 (.465)	-.123	-.642 (.433)	-.120
Police department[b]	.034 (.331)	.006	.116 (.322)	.022	-.005 (.322)	-.001	.097 (.303)	.018
Midwest	.562 (.528)	.124	.547 (.521)	.121	.353 (.491)	.078	.354 (.487)	.078
South	.993* (.440)	.221	.960* (.421)	.214	.831* (.425)	.185	.796 (.420)	.177
West	1.097* (.487)	.160	1.113* (.479)	.162	.979* (.452)	.143	.974* (.464)	.142
Large city	-.150 (.429)	-.012	-.138 (.375)	-.011	-.132 (.430)	-.010	-.094 (.401)	-.007

Table 4.4 (continued). The perceived effect of key predictor variables on obligation to obey in low crime areas.

	Obligation to obey—Low crime areas[a]							
	Model 1		Model 2		Model 3		Model 4	
Variable	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β
Collective efficacy	.033 (.048)	.061	.037 (.054)	.067	.015 (.051)	.027	.012 (.050)	.023
Disorder	.053 (.051)	.103	.044 (.047)	.084	.071 (.047)	.138	.060 (.046)	.116
Perceived risk	.116 (.091)	.152	.132 (.087)	.174	.112 (.080)	.147	.122 (.082)	.160
Legal cynicism	.079 (.073)	.097	.069 (.070)	.085	.102 (.060)	.126	.116 (.065)	.142
Intercept	1.887 (2.395)	--	2.052 (2.047)	--	.479 (1.801)	--	-.051 (2.058)	--
F test	3.05**		3.02**		3.44**		3.22**	
R^2	.17		.20		.21		.23	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05; **p < .01

Police Perceptions of the Effects of Trust and Obligation to Obey

The analyses in Table 4.5 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. The process-based model of regulation suggests that the effect of procedural justice on cooperation operates through trust and obligation to obey (Tyler & Huo, 2002). The analyses in Table 4.5 explore whether the police believe this to be the case in high crime areas of their communities. 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 47 percent of the variation in perceived likelihood of cooperation (i.e., reporting crimes and providing information to the police to help find a suspected criminal or solve a case) in high crime areas ($F = 18.28$, $p < .01$). Procedural justice has a positive and significant relationship with perceived cooperation ($b = .164$, $p < .01$), which suggests the police believe citizens in high crime areas are more likely to cooperate with the police when they also evaluate police actions as being procedurally fair. However, several other variables in the model are statistically significant. Those respondents with ten or more years of experience in their current position are more inclined to believe citizens in high crime areas are willing to cooperate with the police, relative to their counterparts with less than ten years in their current position ($b = .548$, $p < .05$). Collective efficacy is also significant ($b = .058$, $p < .05$), which suggests respondents believe that citizens in high crime areas are more willing to cooperate with the police when there is a greater degree of collective efficacy (i.e., informal social control and social cohesion) present among residents. Respondents from

county and municipal police departments believe citizens in high crime areas are less likely to cooperate, relative to respondents from sheriff's departments (b = -.390, p < .05). Finally, respondents tend to believe greater cynicism toward the law among citizens in high crime areas is associated with less cooperation (b = -.099, p < .01).

Model 2 regresses cooperation onto the distributive justice index along with each of the control variables. The model is statistically significant and explains an amount of variation equal to that of Model 1 in the perceived likelihood of citizen cooperation (F = 16.70, p < .01; R^2 = .47). The effect of distributive justice is moderately strong (b = .278, 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. The effect of having held the current position for ten or more years is no longer significant, while the effects of collective efficacy, legal cynicism, and employment at a county or municipal police department remain largely unchanged from Model 1 to Model 2. Finally, perceived risk is negatively associated with cooperation (b = -.059, p < .05), which indicates that respondents believe that when citizens feel there is a greater risk of being caught and punished for law-breaking behavior, they are less likely to cooperate.

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 = 15.71, p < .01; R^2 = .50) than Models 1 or 2. The performance estimate is significantly and positively related to cooperation (b = .187, p < .01), which indicates that respondents believe police performance (e.g., responding quickly when called for help and effectively dealing with crime in the community) is

Table 4.5. The perceived effect of key predictor variables, trust, and obligation to obey on cooperation in high crime areas.

	Cooperation—High crime areas[a]											
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
Variable	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β
Procedural justice	.164** (.050)	.354	--	--	--	--	--	--	--	--	.052 (.054)	.112
Distributive justice	--	--	.278** (.071)	.302	--	--	--	--	--	--	.060 (.064)	.065
Performance	--	--	--	--	.187** (.037)	.434	--	--	--	--	.129** (.045)	.300
Trust	--	--	--	--	--	--	.252** (.077)	.300	--	--	.056 (.073)	.066
Obligation to obey	--	--	--	--	--	--	--	--	.114* (.048)	.200	.010 (.039)	.018
Executive	.154 (.199)	.046	.060 (.199)	.018	.109 (.185)	.033	.170 (.206)	.051	.103 (.203)	.031	.136 (.183)	.041
Male	.074 (.282)	.011	-.225 (.274)	-.034	-.080 (.266)	-.012	-.111 (.258)	-.017	-.160 (.306)	-.024	-.048 (.277)	-.007
Racial minority	-.275 (.189)	-.071	-.284 (.182)	-.074	-.178 (.170)	-.046	-.306 (.186)	-.079	-.147 (.196)	-.038	-.240 (.169)	-.062
10 years at agency	-.313 (.214)	-.108	-.302 (.219)	-.104	-.321 (.200)	-.111	-.293 (.219)	-.101	-.365 (.213)	-.126	-.334 (.192)	-.115
10 years in position	.548* (.234)	.158	.405 (.222)	.117	.415* (.208)	.120	.466* (.234)	.135	.469* (.230)	.135	.496* (.213)	.143
Police department[b]	-.390* (.165)	-.112	-.484** (.156)	-.139	-.358* (.149)	-.103	-.474** (.154)	-.136	-.464** (.162)	-.133	-.332* (.146)	-.095
Midwest	.024 (.246)	.008	.087 (.289)	.030	.136 (.247)	.046	.128 (.284)	.044	.126 (.274)	.043	.039 (.260)	.013
South	.057 (.216)	.020	.113 (.237)	.039	.199 (.196)	.068	.235 (.225)	.081	.179 (.219)	.062	.078 (.193)	.027
West	.274 (.241)	.062	.381 (.255)	.086	.297 (.242)	.067	.297 (.247)	.067	.320 (.248)	.072	.216 (.234)	.049
Large city	-.233 (.192)	-.028	-.300 (.178)	-.036	-.163 (.175)	-.020	-.266 (.181)	-.032	-.275 (.188)	-.033	-.135 (.172)	-.016

Table 4.5 (continued). The perceived effect of key predictor variables, trust, and obligation to obey on cooperation in high crime areas.

	Cooperation—High crime areas[a]											
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
Variable	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β
Collective efficacy	.058* (.027)	.186	.087** (.023)	.276	.046* (.021)	.146	.078** (.022)	.250	.086** (.022)	.274	.046* (.022)	.146
Disorder	-.004 (.030)	-.010	-.008 (.029)	-.021	.023 (.031)	.065	-.019 (.028)	-.052	-.009 (.030)	-.026	.013 (.029)	.036
Perceived risk	-.047 (.024)	-.095	-.059* (.027)	-.119	-.042 (.025)	-.085	-.053* (.026)	-.107	-.046 (.028)	-.092	-.048* (.024)	-.097
Legal cynicism	-.099** (.028)	-.246	-.104** (.028)	-.260	-.098** (.025)	-.244	-.096** (.029)	-.240	-.134** (.028)	-.334	-.068* (.027)	-.170
Intercept	4.229** (1.280)	--	5.089** (1.126)	--	3.316* (1.324)	--	4.248** (1.249)	--	5.638** (1.159)	--	2.528 (1.360)	--
F test	18.28**		16.70**		15.71**		16.15**		13.18**		16.07**	
R^2	.47		.47		.50		.46		.43		.52	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05; **p < .01

important to citizens in terms of their willingness to cooperate with police. Again, ten or more years in the current position, employment at a county or municipal police department, collective efficacy, and legal cynicism are each statistically significant and the relationships are all in the same direction as in Model 1.

Model 4 regresses cooperation onto the trust scale and each of the control variables. The model is statistically significant and accounts for about 46 percent of the variation in perceived cooperation ($F = 16.15$, $p < .01$). The trust estimate is moderately strong ($b = .252$, $p < .01$), which is evidence that respondents who believe citizens trust the police are more likely to cooperate. This finding parallels prior research with citizen samples which suggests that trust promotes cooperation with police (Sargeant et al., 2013). Years in current position, employment at a county or municipal police department, collective efficacy, perceived risk, and legal cynicism are also statistically significant in Model 4. In Model 5, cooperation is regressed onto the obligation to obey index along with each of the controls. The model accounts for slightly less variation than Model 4 ($R^2 = .43$) but is still statistically significant ($F = 13.18$, $p < .01$). Similarly, the obligation to obey estimate ($\beta = .200$, $p < .05$) is weaker than the trust estimate in Model 4 ($\beta = .300$, $p < .01$), but statistically significant nonetheless. This suggests respondents believe citizens in high crime areas are more likely to cooperate with police when they also feel obligated to obey the police. Jackson et al. (2012a) report similar findings using METPAS data. The perceived risk estimate does not retain statistical significance from Model 4 to Model 5; otherwise, the effects of each of the control variables remain largely unchanged.

Model 6 regresses cooperation onto each of the procedural justice, distributive justice, performance, trust, and obligation to obey scales along with all of the control variables. Two findings are worthy of discussion. First, performance dominates the model, as evidenced by the fact that it is the only key theoretical variable that is statistically significant (b = .129, p < .01). The procedural justice, distributive justice, trust, and obligation to obey coefficients are each reduced in magnitude by roughly 68, 78, 78, and 91 percent, respectively (the reduction in the magnitude of the distributive justice coefficient is statistically significant at p < .05). Moreover, the model as a whole only accounts for slightly more of the variation in cooperation (R^2 = .52) than any of the previous models. That is, accounting for procedural justice, distributive justice, trust, and obligation to obey in addition to performance only yields a 2 percent increase in the amount of explained variation in perceived cooperation (Model 3 R^2 = .50). 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). Second, a number of control variables remain statistically significant even after accounting for each of the theoretical variables of interest. Table 4.5 reveals that: (1) respondents believe that in high crime areas, performance is the key to generating cooperation from the public, and (2) respondents also believe that collective efficacy, perceived risk, and legal cynicism each exert an important effect on the likelihood of cooperation with police.

Table 4.6 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 ($F = 7.39$, $p < .01$) and accounts for roughly 37 percent of the variation in perceived likelihood of public cooperation. The procedural justice estimate ($b = .290$, $p < .01$) 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 ($\beta = .487$) is larger in Model 1 of Table 4.6 than in Model 1 of Table 4.5 ($\beta = .354$). This suggests that respondents believe procedural justice is more closely associated with citizen cooperation in low crime areas than in high crime areas. Finally, the only other variable that emerges as statistically significant is collective efficacy ($b = .060$, $p < .01$), which is an indication that respondents believe those citizens who perceive greater collective efficacy among residents are more likely to cooperate.

Similar findings emerge in Models 2 through 5. In Model 2, both distributive justice ($\beta = .415$, $p < .01$) and collective efficacy ($\beta = .234$, $p < .01$) are positively associated with perceived likelihood of cooperation from the public. In Model 3, performance ($\beta = .513$, $p < .01$) and collective efficacy ($\beta = .173$, $p < .05$) are positively associated with cooperation. And in Model 4, trust ($\beta = .470$, $p < .01$) and collective efficacy ($\beta = .235$, $p < .01$) emerge as the only statistically significant variables. In addition, each of the coefficients for the independent variables in these models are larger than their respective coefficients from the models in Table 4.5—again indicating that respondents feel these concepts are more closely associated with citizen cooperation in low crime areas than in high crime areas. In Model 5, obligation to obey ($\beta = .254$,

Table 4.6. The perceived effect of key predictor variables, trust, and obligation to obey on cooperation in low crime areas.

	Cooperation—Low crime areas[a]											
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
Variable	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β
Procedural justice	.290** (.067)	.487	--	--	--	--	--	--	--	--	.083 (.066)	.139
Distributive justice	--	--	.510** (.139)	.415	--	--	--	--	--	--	.130 (.113)	.106
Performance	--	--	--	--	.262** (.053)	.513	--	--	--	--	.127** (.048)	.248
Trust	--	--	--	--	--	--	.419** (.107)	.470	--	--	.214 (.111)	.240
Obligation to obey	--	--	--	--	--	--	--	--	.153* (.067)	.254	.054 (.041)	.089
Executive	.223 (.307)	.072	.035 (.277)	.011	.192 (.305)	.062	.029 (.188)	.009	.078 (.297)	.025	.056 (.195)	.018
Male	-.286 (.268)	-.046	-.367 (.245)	-.059	-.354 (.313)	-.057	-.127 (.253)	-.020	-.085 (.331)	-.014	-.292 (.247)	-.047
Racial minority	-.183 (.321)	-.051	-.128 (.299)	-.035	-.113 (.326)	-.031	.025 (.222)	.007	-.050 (.317)	-.014	-.003 (.216)	-.001
10 years at agency	.428 (.230)	.158	.345 (.242)	.127	.219 (.208)	.081	.402 (.218)	.148	.293 (.234)	.108	.287 (.196)	.106
10 years in position	-.259 (.346)	-.080	-.338 (.321)	-.104	-.478 (.322)	-.148	-.168 (.248)	-.052	-.219 (.313)	-.068	-.300 (.221)	-.093
Police department[b]	.086 (.155)	.026	.105 (.151)	.032	.002 (.158)	.001	.093 (.146)	.030	-.061 (.167)	-.019	.147 (.133)	.045
Midwest	.249 (.342)	.091	.300 (.339)	.110	.123 (.314)	.045	.226 (.317)	.083	.338 (.339)	.123	.044 (.309)	.016
South	.293 (.323)	.108	.345 (.342)	.127	.226 (.311)	.083	.233 (.282)	.086	.362 (.320)	.133	.045 (.296)	.016
West	.123 (.311)	.030	.207 (.302)	.050	.084 (.292)	.020	.007 (.307)	.002	.146 (.303)	.035	-.118 (.298)	-.028
Large city	.149 (.197)	.019	.108 (.167)	.014	.117 (.194)	.015	.089 (.153)	.011	.034 (.176)	.004	.191 (.149)	.024

Table 4.6 (continued). The perceived effect of key predictor variables, trust, and obligation to obey on cooperation in low crime areas.

	Cooperation—Low crime areas[a]											
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
Variable	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β	*b* (SE)	β
Collective efficacy	.060** (.023)	.182	.077** (.026)	.234	.057* (.026)	.173	.077** (.027)	.235	.093** (.028)	.284	.045* (.023)	.136
Disorder	.020 (.025)	.064	.012 (.025)	.038	.036 (.025)	.115	.006 (.023)	.019	.012 (.024)	.038	.016 (.022)	.050
Perceived risk	-.033 (.036)	-.072	-.015 (.034)	-.033	-.033 (.030)	-.072	.007 (.032)	.015	-.041 (.033)	-.089	-.021 (.031)	-.045
Legal cynicism	-.007 (.046)	-.014	-.053 (.042)	-.107	-.022 (.043)	-.044	-.040 (.044)	-.082	-.122** (.043)	-.249	.021 (.045)	.042
Intercept	.234 (1.786)	--	1.856 (1.535)	--	.383 (1.694)	--	.300 (1.672)	--	3.992** (1.362)	--	-2.007 (1.778)	--
F test	7.39**		4.70**		7.38**		7.48**		4.17**		6.51**	
R^2	.37		.38		.40		.40		.30		.49	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05; **p < .01

$p < .05$) is positively correlated with cooperation, along with collective efficacy ($\beta = .284$, $p < .05$). In addition, legal cynicism ($\beta = -.249$, $p < .01$) is negatively associated with perceived cooperation. Finally, Model 5 explains somewhat less of the variation in perceived cooperation (about 30 percent) than Models 1 through 4 (between 37 and 40 percent).

Model 6 simultaneously regresses cooperation onto all of the independent and control variables. The model is statistically significant ($F = 6.51$, $p < .01$) and explains nearly half of the variation in perceived cooperation. Four key findings emerge from Model 6 and Table 4.6, more generally. First, and consistent with the findings from Table 4.5, performance ($b = .127$, $p < .01$) dominates the model. The magnitude of the procedural and distributive justice coefficients are reduced by 71 and 75 percent, respectively (each reduction is statistically significant at $p < .05$). The trust and obligation to obey coefficients are also reduced by 49 and 65 percent, respectively, though the reductions are not statistically significant. This suggests that respondents from the sample believe citizens are most likely to cooperate with the police when they believe the police are performing well (see Tankebe, 2009). Second, collective efficacy is also statistically significant ($b = .045$, $p < .05$), which again indicates that respondents believe perceived collective efficacy among citizens in low crime areas is connected to their likelihood of cooperating with the police. Third, the larger standardized partial regression coefficients in Models 1 through 4 of Table 4.6 suggest that respondents feel these concepts are more closely tied to cooperation among citizens residing in low crime areas than their counterparts living in high crime areas. However, there is not as much of a disparity between the standardized partial regression coefficients for performance in Models 6 of

Tables 4.5 and 4.6. This implies that, all else considered, respondents believe performance to be equally correlated with cooperation among citizens in both high and low crime areas. If anything, respondents believe performance is slightly more associated with cooperation in high crime areas. Finally, neither years in the current position nor employment at a county or municipal police department emerge as statistically significant in any of the models in Table 4.6. This implies that—at least among the individual characteristics measured—there is less variation among respondents in terms of their perceptions regarding the likelihood of citizen cooperation in low crime areas than high crime areas. That is, respondents with more years in their current position tend to believe citizens in high crime areas are more willing to cooperate, while respondents employed at county or municipal agencies tend to believe cooperation is less likely in high crime areas (relative to those working at a sheriff's office). These individual characteristics do not appear to influence the perceived likelihood of cooperation among citizens living in low crime areas. This finding will be further explored in subsequent analyses.

Invariance across Individual and Agency Characteristics

Individual Characteristics

Table 4.7 tests whether respondent characteristics moderate the relationship between the key predictor variables and perceived trust from residents in high crime areas. A separate OLS regression equation was estimated for each of five respondent characteristics: *executive, male, racial minority, 10 years at agency,* and *10 years in position.* For each equation, a mean-centered, multiplicative interaction term between each of the key predictor variables and the respondent characteristic under consideration was created. For example, the first column, ("Executive") and the first row ("Procedural

justice x [Var]") presents the unstandardized regression coefficient and standard error for the interaction effect between *executive* and *procedural justice* on trust in high crime areas. Hence, each model estimates the effects of three interaction effects while controlling for agency characteristics and perceived context (i.e., collective efficacy, disorder, perceived risk, and legal cynicism).

Three key findings emerge from Table 4.7. First, the *executive*distributive justice* interaction is statistically significant ($b = .547$, $p < .01$). This indicates that in this sample, executives in particular are more likely to believe that citizens in high crime areas trust the police when they believe the police distribute their services and enforce the law equally throughout the community. Using the *margins* command in Stata, the effect of distributive fairness on trust in high crime areas was estimated along each value of the moderator variable (i.e., *executive*). Figure 4.1 graphically depicts the results of the marginal analysis for the interaction effect by plotting the slope of distributive justice on trust in high crime areas for executives and non-executives. The graph indicates that the effect of distributive justice on trust in the police in high crime areas is stronger for executives than non-executives. In other words, executives tend to believe distributive fairness is more closely associated with trust in the eyes of the public than officers holding other ranks.

Second, two other interaction effects are statistically significant: *10 years in position*distributive justice* ($b = .733$, $p < .01$) and *10 years in position*performance* ($b = -.282$, $p < .01$). Again using the *margins* command in Stata, Figures 4.2 and 4.3 provide graphical depictions of each of these interaction effects, respectively. Figure 4.2 plots the slope of distributive justice on trust in high crime areas for respondents with 10 years in

Table 4.7. The perceived effect of key predictor variables on trust in high crime areas across respondent characteristics.

Variable	Trust in the police—High crime areas[a]									
	[Executive]		[Male]		[Racial minority]		[10 years at agency]		[10 years in position]	
	b	SE	*b*	SE	*b*	SE	*b*	SE	*b*	SE
Procedural justice x [Var]	-.057	.101	-.070	.111	.071	.096	-.197	.104	-.086	.080
Distributive justice x [Var]	.547**	.189	-.009	.400	-.173	.168	.065	.201	.733**	.195
Performance x [Var]	-.122	.076	-.061	.139	.029	.072	.050	.091	-.282**	.049
Procedural justice	.271**	.085	.295**	.091	.213**	.068	.354**	.076	.260**	.050
Distributive justice	-.195	.158	.271	.369	.295*	.132	.227	.160	.140	.099
Performance	.196**	.063	.146	.134	.079	.042	.068	.071	.151**	.039
Executive	-.225	.156	-.259	.174	-.265	.167	-.251	.171	-.222	.161
Male	.157	.254	.272	.345	.257	.288	.019	.279	.188	.239
Racial minority	.231	.170	.234	.173	.280	.166	.283	.163	.270	.159
10 years at agency	-.046	.188	-.037	.192	-.045	.191	-.044	.193	-.026	.183
10 years in position	-.083	.211	-.085	.211	-.099	.203	-.148	.208	-.107	.179
Police department[b]	.037	.173	.075	.178	.078	.179	.023	.171	-.033	.160
Midwest	-.009	.247	-.058	.247	-.029	.244	.002	.234	-.305	.224
South	-.198	.240	-.277	.240	-.271	.245	.297	.237	-.433	.225
West	.303	.243	.252	.241	.303	.243	.341	.232	.008	.229
Large city	-.009	.158	-.059	.173	-.071	.176	-.081	.171	.021	.174
Collective efficacy	-.017	.028	-.021	.029	-.020	.030	-.031	.028	-.014	.025
Disorder	.059**	.020	.062**	.020	.060**	.020	.065**	.020	.059**	.019
Perceived risk	.023	.029	.018	.026	.017	.026	.027	.025	.012	.026
Legal cynicism	-.087**	.031	-.090**	.033	-.091**	.033	-.074*	.030	-.064*	.032
Intercept	9.135**	.985	9.248**	1.017	9.305**	1.027	9.366**	.960	9.131**	.928
F test	22.08**		20.56**		20.09**		20.22**		64.85**	
R^2	.65		.64		.64		.65		.68	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05, **p < .01

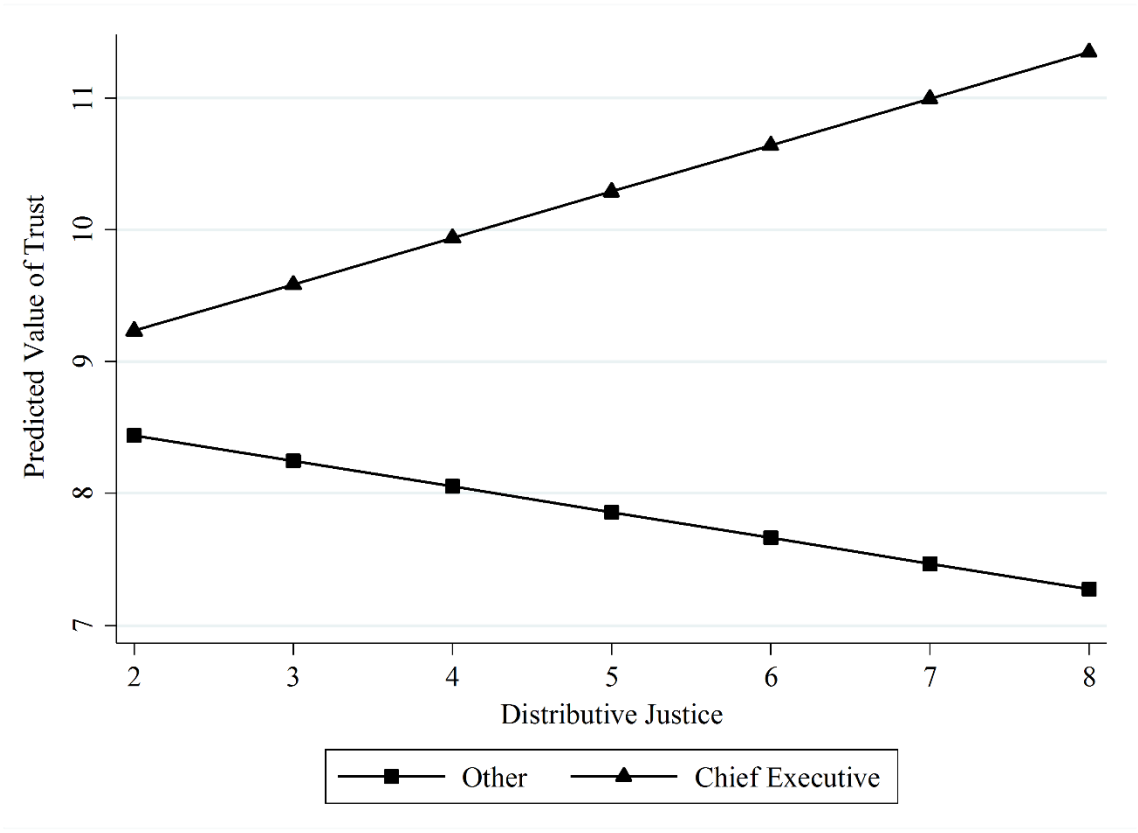

Figure 4.1. Interaction between distributive justice and executive on perceived trust in high crime areas.

their current position and respondents with fewer than 10 years in their current position. As shown in the graph, the effect of distributive justice on trust in the police in high crime areas is stronger for respondents with 10 or more years than those with fewer than 10 years. That is, respondents in this sample with 10 or more years in their current position believe distributive justice is more closely correlated with trust in the eyes of citizens living in high crime areas (relative to their counterparts with fewer than 10 years in their current position). Figure 4.3 plots the slope of performance onto trust in high crime areas for respondents with 10 or more years in their current position and those with fewer than 10 years, respectively. Among those with 10 or more years, the slope of

performance is negative, indicating that this subgroup of respondents believes performance to be inversely linked to trust. Put differently, those with 10 or more years of experience in their current position tend to believe better performance yields less trust in the eyes of citizens residing in high crime areas. Perhaps this is due to a belief among these officers that individuals living in high crime areas are guilty of committing the very crimes they believe the police are controlling (e.g., property, drug, and/or violent crimes; see Klinger, 1997). If so, this would perhaps imply that officers with 10 or more years in their current position are more cynical and believe that citizens in high crime areas are less trusting of the police when they are performing well because they believe the police are harassing them. Finally, Table 4.7 reveals the perceived effect of procedural justice on trust in the eyes of citizens residing in high crime areas is invariant across rank, gender, race, and experience (both at the current agency and in the current position) in this sample. Similarly, the perceived effects of distributive justice and performance on trust in the eyes of citizens living in high crime areas appears to be invariant across gender, race, and years of experience at the current agency.

Table 4.8 tests whether respondent characteristics moderate the relationship between the key predictor variables and perceived obligation to obey among residents in high crime areas. Two key findings warrant discussion. First, the *racial minority*procedural justice* interaction is significantly and negatively associated with perceived obligation to obey among citizens in high crime areas (b = -.602, p < .01). Figure 4.4 plots the slope of procedural justice on obligation to obey for minority respondents and white respondents, respectively. As seen in the figure, increasing levels of perceived procedural justice are accompanied by diminishing perceptions of feelings

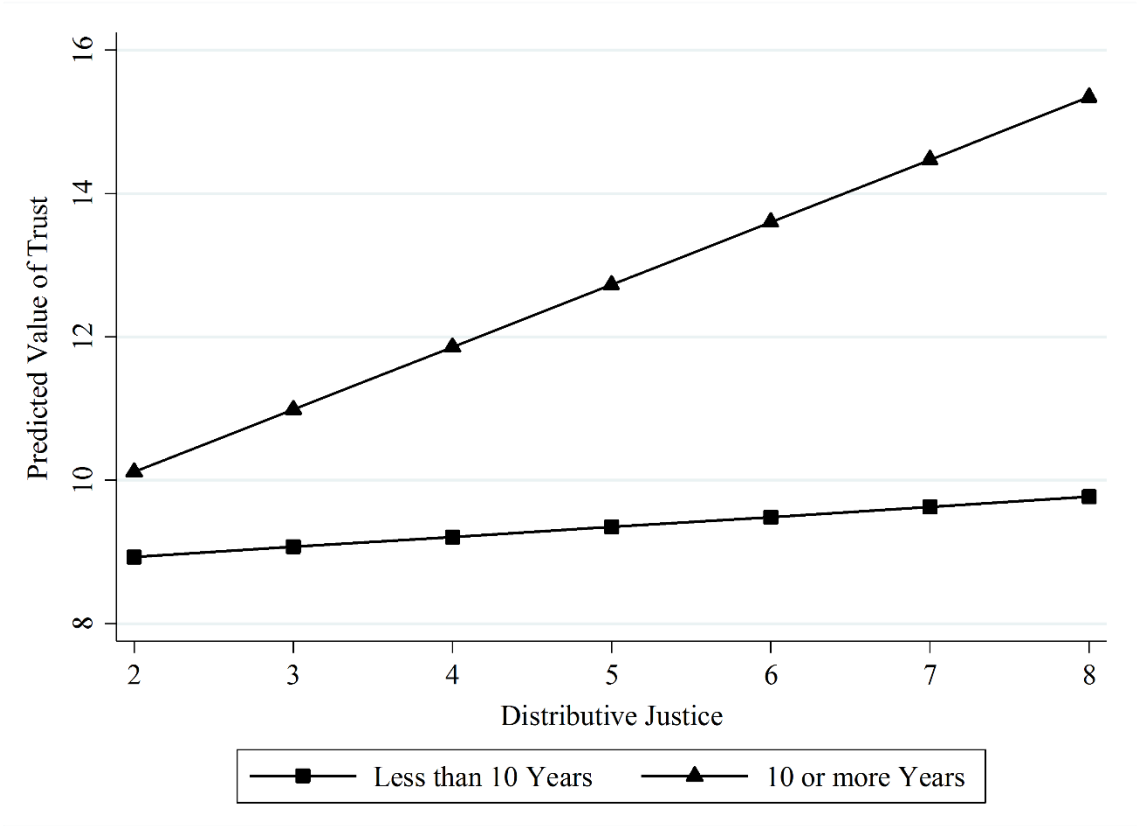

Figure 4.2. Interaction between distributive justice and 10 years in position on perceived trust in high crime areas.

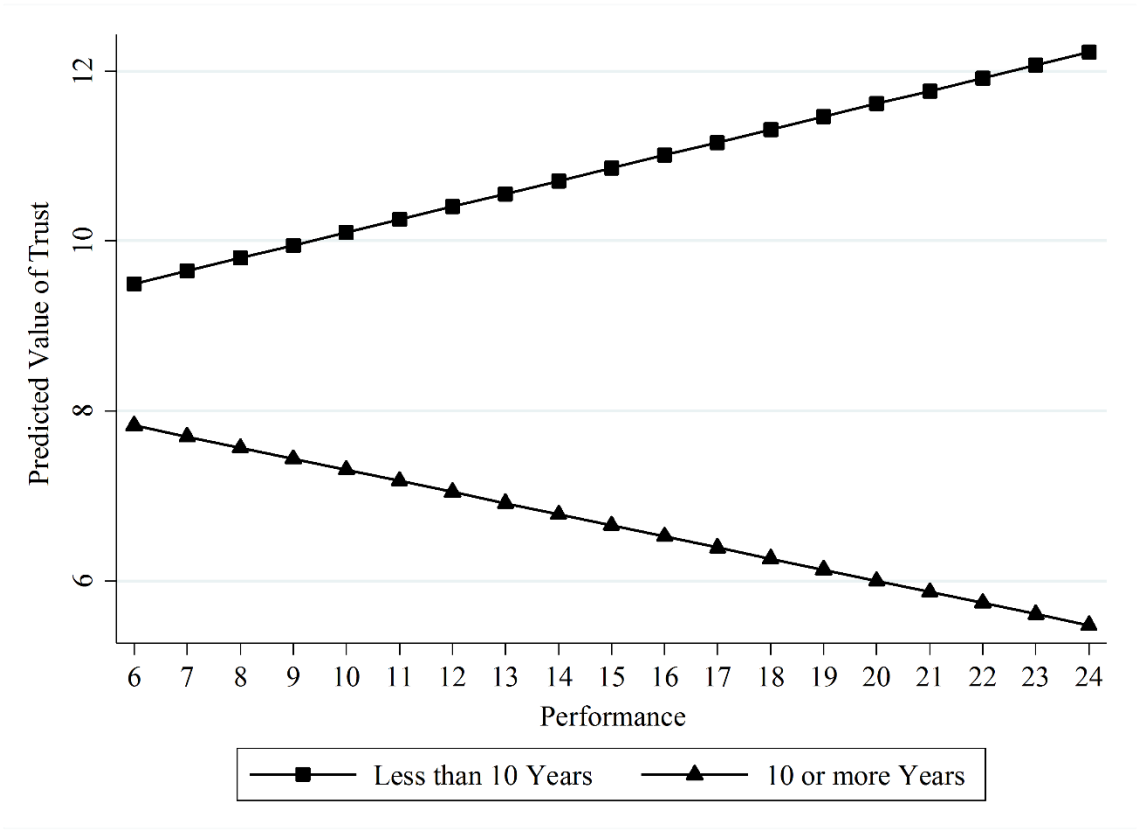

Figure 4.3. Interaction between performance and 10 years in position on perceived trust in high crime areas.

of obligation to obey the police for minority respondents. Conversely, white respondents tend to believe greater perceived procedural justice is associated with an increased obligation to obey among citizens in high crime areas.

Second, the *10 years in position*performance* interaction is significantly and negatively associated with perceived obligation to obey among citizens residing in high crime areas (b = -.408, p < .05). Figure 4.5 plots the slope of performance on obligation to obey for those with 10 or more years in their current position and those with less than 10 years in their current position. As the figure illustrates, respondents who have been in their position for 10 or more years believe the better citizens in high crime areas believe

Table 4.8. The perceived effect of key predictor variables on obligation to obey in high crime areas across respondent characteristics.

Variable	Obligation to obey—High crime areas[a]									
	[Executive]		[Male]		[Racial minority]		[10 years at agency]		[10 years in position]	
	b	SE	*b*	SE	*b*	SE	*b*	SE	*b*	SE
Procedural justice x [Var]	.067	.152	.460	.268	-.602**	.171	-.022	.157	.304	.168
Distributive justice x [Var]	-.334	.345	-1.077	.727	-.057	.309	.415	.379	.209	.322
Performance x [Var]	-.173	.151	.134	.295	.306	.166	.152	.192	-.408*	.205
Procedural justice	.136	.131	-.224	.258	.266**	.068	.187	.113	.113	.090
Distributive justice	.580*	.272	1.330	.698	.340	.189	.104	.349	.301	.205
Performance	.291*	.131	.042	.300	.147	.094	.043	.153	.279**	.077
Executive	-.033	.360	.053	.424	-.030	.402	-.079	.381	.016	.415
Male	.460	.739	-.326	.610	-.193	.564	.284	.668	.436	.680
Racial minority	-.774	.422	-.550	.448	-.621	.355	-.728	.424	-.700	.427
10 years at agency	.671	.387	.718	.389	.655	.366	.480	.358	.686	.384
10 years in position	-.584	.481	-.635	.502	-.546	.503	-.573	.491	-.362	.403
Police department[b]	-.235	.328	-.236	.346	-.209	.326	-.222	.336	-.268	.335
Midwest	.310	.430	.417	.452	.444	.442	.248	.388	.208	.441
South	.579	.461	.612	.492	.668	.491	.668	.469	.502	.481
West	.811*	.389	.803*	.372	.787*	.367	.851*	.404	.574	.401
Large city	-.407	.356	-.441	.351	-.376	.325	-.479	.336	-.308	.320
Collective efficacy	-.033	.050	-.047	.055	-.036	.054	-.043	.051	-.040	.055
Disorder	.048	.036	.053	.034	.053	.033	.038	.035	.049	.033
Perceived risk	-.045	.082	-.004	.087	-.026	.086	-.017	.084	-.018	.089
Legal cynicism	-.040	.057	-.027	.058	-.017	.056	-.059	.057	-.025	.059
Intercept	9.431**	1.756	9.550**	1.868	9.366**	1.758	9.939**	1.686	9.018**	1.706
F test	8.00**		7.64**		8.36**		11.06**		6.28**	
R^2	.41		.40		.42		.42		.42	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05, **p < .01

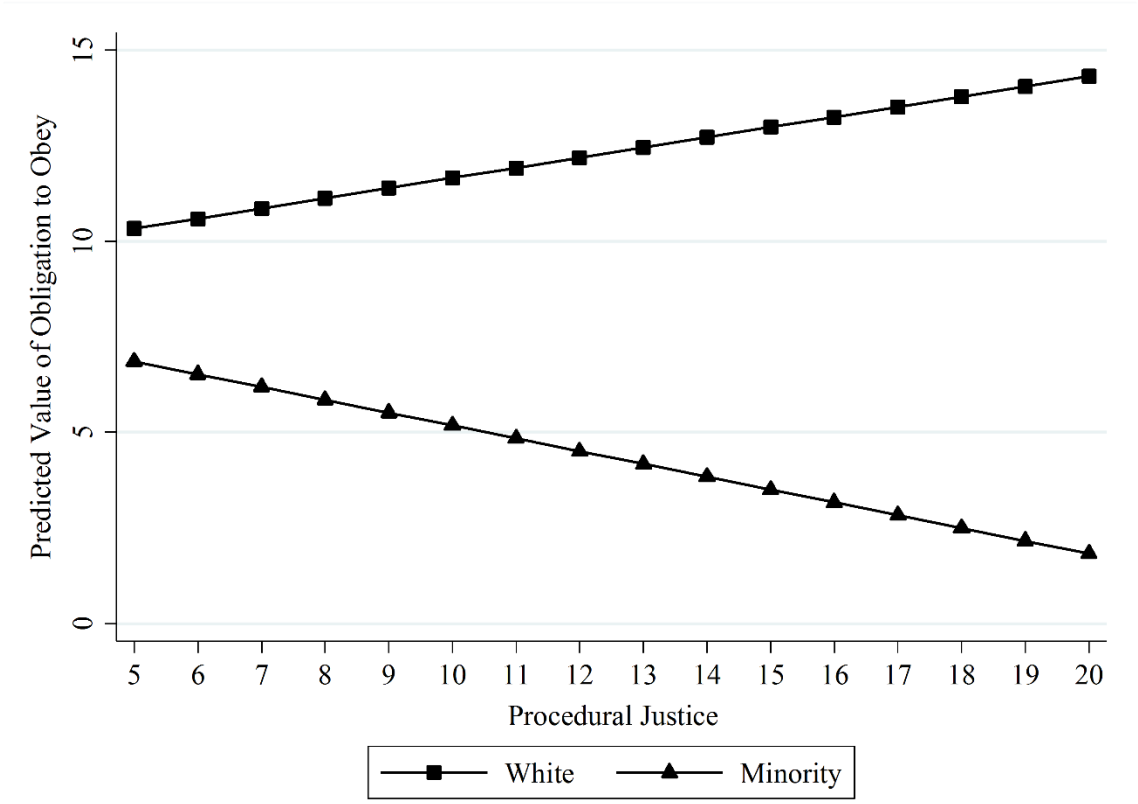

Figure 4.4. Interaction between procedural justice and race on perceived obligation to obey in high crime areas.

police are performing, the less they feel obligated to obey the police. On the other hand, those with less than 10 years in their current position tend to believe citizens feel more obligated to obey the police as their evaluation of police performance increases. Again, this might be an indication that officers who have held their position for a longer period of time are more cynical of residents living in high crime areas, and believe that at least for these citizens, "better performance" is akin to overly aggressive policing. Finally, the effect of distributive justice on citizens' obligation to obey in high crime areas is invariant across all respondent characteristics while the effects of procedural justice and performance are invariant across rank, gender, and experience at current agency.

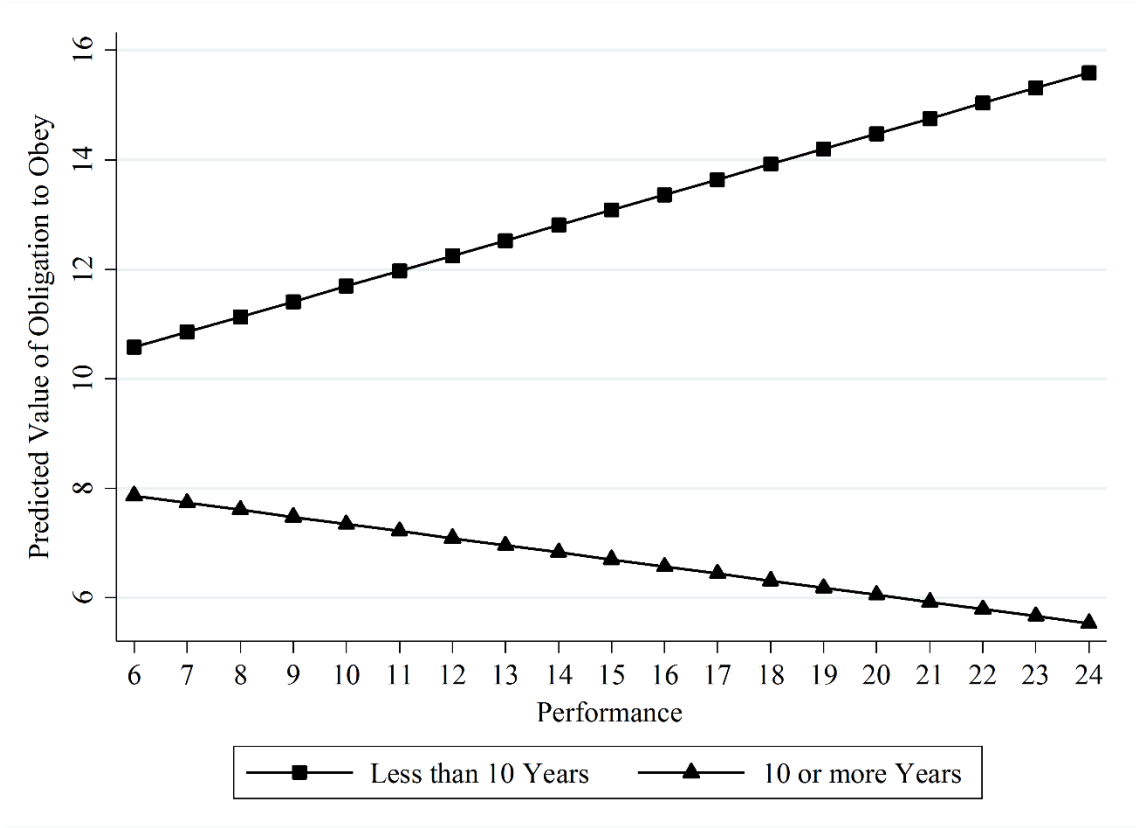

Figure 4.5. Interaction between performance and 10 years in position on perceived obligation to obey in low crime areas.

Table 4.9 provides a test of whether respondent characteristics moderate the relationship between the key predictor variables and perceived trust among residents of low crime areas. None of the interaction effects have a statistically significant relationship with perceived level of trust among citizens of these areas. That is, regardless of rank, gender, race, or experience (at the agency or in the current position), respondents tend to hold similar views about the relationship between perceived procedural justice, distributive justice, and performance and trust among citizens living in low crime areas. Put differently, none of these individual respondent characteristics moderate the perceived relationship between the key predictor variables and trust among these citizens.

Table 4.9. The perceived effect of key predictor variables on trust in low crime areas across respondent characteristics.

Variable	Trust in the police—Low crime areas[a]									
	[Executive]		[Male]		[Racial minority]		[10 years at agency]		[10 years in position]	
	b	SE	*b*	SE	*b*	SE	*b*	SE	*b*	SE
Procedural justice x [Var]	-.202	.107	.099	.275	.111	.164	-.041	.095	.106	.152
Distributive justice x [Var]	-.094	.277	-.099	.295	.798	.411	-.190	.235	.930	.504
Performance x [Var]	.015	.082	.049	.177	-.148	.107	.049	.082	-.158	.093
Procedural justice	.321**	.090	.088	.268	.171**	.052	.209**	.076	.216**	.052
Distributive justice	.424	.247	.384	.262	.192	.117	.489**	.166	.234*	.108
Performance	.085	.070	.049	.172	.123**	.041	.062	.065	.116**	.040
Executive	.232	.273	.270	.348	-.309	.277	.286	.340	.246	.258
Male	-.329	.281	-.249	.285	-.842	.486	-.384	.332	-.247	.261
Racial minority	-.389	.305	-.436	.359	-.354	.243	-.451	.337	-.311	.243
10 years at agency	-.153	.195	-.113	.216	-.056	.206	-.094	.219	-.166	.180
10 years in position	-.343	.308	-.365	.367	-.367	.295	-.384	.380	-.312	.294
Police department[b]	-.136	.163	-.141	.173	-.130	.162	-.162	.170	-.187	.178
Midwest	.147	.265	.168	.274	.113	.243	.189	.270	.134	.246
South	.269	.303	.315	.333	.245	.282	.323	.334	.211	.264
West	.436	.295	.470	.299	.371	.259	.486	.13	.381	.268
Large city	.024	.237	.013	.249	.001	.216	.013	.244	.007	.242
Collective efficacy	.011	.023	-.002	.025	.008	.024	.001	.026	-.013	.025
Disorder	.040*	.018	.033	.021	.045*	.019	.029	.021	.037	.019
Perceived risk	-.085**	.033	-.076*	.034	-.066*	.033	-.075*	.033	-.068*	.032
Legal cynicism	-.054	.033	-.034	.038	-.041	.035	-.033	.038	-.037	.036
Intercept	11.218**	1.013	11.170**	1.070	11.236**	1.072	11.225**	1.044	11.455**	1.035
F test	10.66**		16.13**		13.50**		14.01**		17.77**	
R^2	.54		.52		.57		.53		.55	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05, **p < .01

Table 4.10 tests whether respondent characteristics moderate the relationship between the key predictor variables and perceived obligation to obey among residents of low crime areas. Two important findings emerge. First, the *executive*procedural justice* interaction is statistically significant (b = -.503, $p < .05$). This relationship is depicted graphically in Figure 4.6, which plots the slope of procedural justice on obligation to obey among citizens in low crime areas among executives and non-executives, respectively. Executives in this sample believe that greater perceived procedural justice is associated with less obligation to obey among citizens of low crime areas. Non-executives, on the other hand, believe greater perceived procedural justice is met with increased obligation to obey among citizens of low crime areas. Perhaps executives in this sample believe citizens in these areas associate procedurally just policing as being too soft on lawbreakers. As such, they might believe that citizens are less likely to feel obligated to obey a police department that is too soft or lenient with criminals.

Second, the *male*distributive justice* interaction is also statistically significant (b = 1.224, $p < .01$). This suggests that male respondents in this sample are more likely to believe greater perceived distributive fairness is associated with citizens' obligation to obey the police in low crime areas relative to female respondents. Figure 4.7 plots the slope of distributive justice on obligation to obey in low crime areas among male and female respondents, respectively. Indeed, the slope is positive for males, which indicates that male respondents tend to believe that the more citizens of low crime areas believe police fairly distribute outcomes and services, the more likely they will feel obligated to obey the police. The reverse is true of female respondents, who believe that among

Table 4.10. The perceived effect of key predictor variables on obligation to obey in low crime areas across respondent characteristics.

Variable	Obligation to obey—Low crime areas[a]									
	[Executive]		[Male]		[Racial minority]		[10 years at agency]		[10 years in position]	
	b	SE	*b*	SE	*b*	SE	*b*	SE	*b*	SE
Procedural justice x [Var]	-.503*	.242	-.213	.269	.150	.290	.159	.308	-.391	.313
Distributive justice x [Var]	.130	.460	1.224**	.388	-.097	.548	-.463	.605	.926	.631
Performance x [Var]	.097	.119	.264	.199	-.034	.195	.231	.193	.076	.208
Procedural justice	.325**	.122	.170	.216	-.042	.170	-.122	.287	.066	.179
Distributive justice	.279	.283	-.691**	.267	.402	.300	.697	.555	.250	.316
Performance	.137*	.067	-.068	.202	.219*	.101	.048	.168	.169	.088
Executive	.485	.359	.317	.377	.502	.380	.580	.369	.442	.333
Male	-.829	.629	-.003	.450	-.877	.660	-.926	.615	-.758	.587
Racial minority	-.609*	.307	-.786*	.359	-.620	.348	-.760*	.339	-.504	.295
10 years at agency	.317	.343	.331	.339	.387	.343	.487	.359	.390	.347
10 years in position	-.633	.386	-.533	.429	-.645	.429	-.647	.422	-.788*	.358
Police department[b]	.076	.311	.115	.301	.090	.305	.143	.299	.012	.291
Midwest	.281	.465	.341	.490	.357	.488	.263	.489	.356	.463
South	.714	.404	.735	.416	.777	.415	.749	.411	.782*	.390
West	.889*	.448	.979*	.470	.971*	.469	1.000*	.456	1.011*	.448
Large city	-.032	.396	-.090	.380	-.126	.406	-.100	.425	-.115	.403
Collective efficacy	.040	.048	.012	.051	.012	.051	.033	.047	.009	.048
Disorder	.068	.044	.051	.045	.061	.045	.058	.045	.053	.042
Perceived risk	.102	.076	.125	.082	.126	.084	.101	.072	.135	.072
Legal cynicism	.089	.064	.116	.065	.114	.065	.107	.066	.114	.065
Intercept	6.000**	1.623	5.582**	1.696	6.174**	1.686	5.981**	1.695	6.167**	1.565
F test	3.69**		6.58**		2.90**		3.02**		3.57**	
R^2	.25		.24		.23		.24		.25	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05, **p < .01

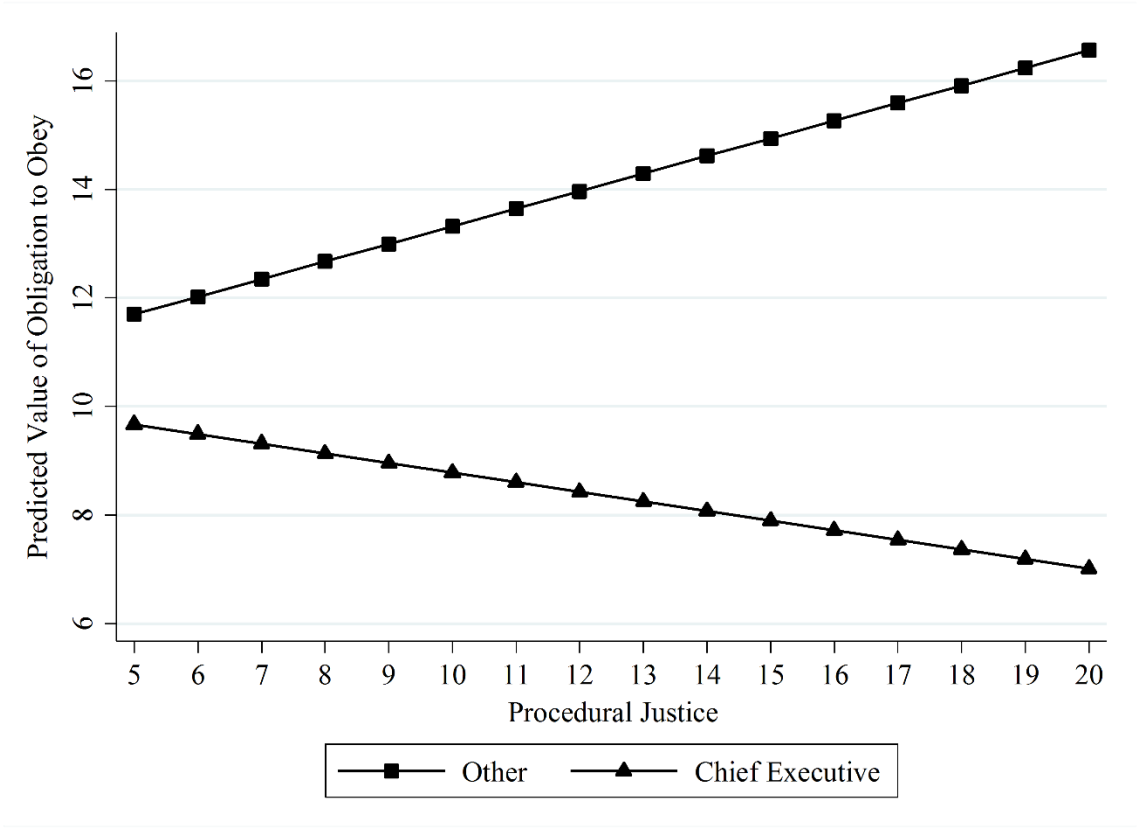

Figure 4.6. Interaction between procedural justice and chief executive on perceived obligation to obey in low crime areas.

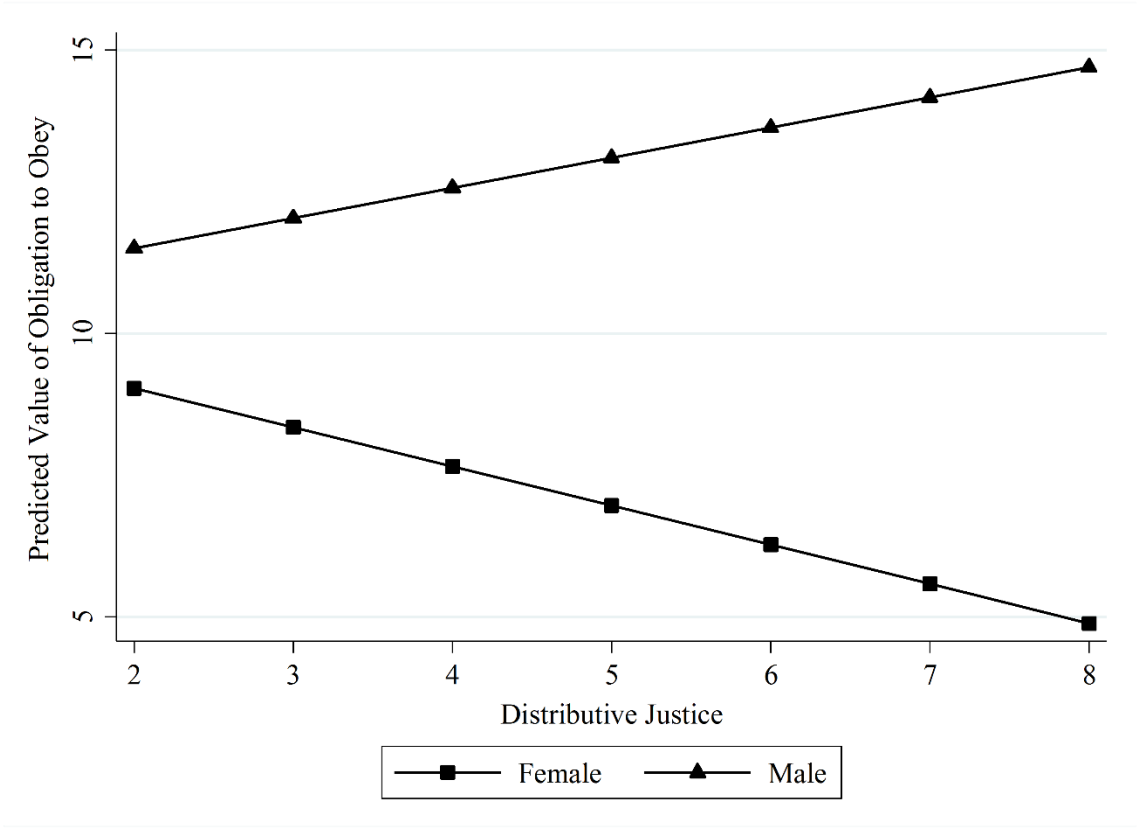

Figure 4.7. Interaction between distributive justice and gender on perceived obligation to obey in low crime areas.

citizens in low crime areas, increasing levels of distributive justice are met with waning feelings of obligation to obey the police.

Agency Characteristics

Table 4.11 tests whether agency characteristics moderate the relationship between the key predictor variables and: (1) trust, and (2) perceived obligation to obey among residents of high crime areas. A separate OLS regression equation was estimated for two agency characteristics: *police department* (1 = municipal or county police department, 0 = sheriff's agency) and *large city* (1 = jurisdiction with population of 210,000 or more, 0 = jurisdiction with less than 210,000 residents). For each equation, a mean-centered,

multiplicative interaction term between each of the key predictor variables and the agency characteristic under consideration was created. The analyses show that none of the interaction terms are statistically significant. This indicates that the perceived effect of key predictor variables on both trust and obligation to obey among citizens of high crime areas are invariant across the two agency characteristics being considered. Regardless of whether the respondent worked for a police department or a sheriff's agency, and regardless of whether the respondent worked at an agency in a large city, the key predictor variables are believed to be associated with trust and obligation to obey among citizens of high crime areas to a similar degree.

Table 4.12 tests whether agency characteristics moderate the relationship between the key predictor variables and: (1) trust, and (2) perceived obligation to obey among residents of low crime areas. Only one interaction term emerges as statistically significant: the effect of *police department*procedural justice* on obligation to obey in low crime areas (b = -.591, $p < .01$). This relationship is depicted in Figure 4.8, which plots the slope of procedural justice onto obligation to obey for respondents from police departments and sheriff's departments, respectively. As shown in the figure, respondents in this sample who work for county or municipal police departments believe that greater perceived procedural justice is negatively related to obligation to obey among residents of low crime areas. On the flipside, respondents from sheriff's departments believe greater procedural justice is associated with an increasing obligation to obey among these citizens.

Table 4.11. The perceived effect of key predictor variables on trust and obligation to obey in high crime areas across agency characteristics.

Variable	Trust in the police—High crime areas[a]				Obligation to obey—High crime areas[a]			
	[Police department[b]]		[Large city]		[Police department[b]]		[Large city]	
	b	SE	*b*	SE	*b*	SE	*b*	SE
Procedural justice x [Var]	.051	.134	-.088	.080	-.056	.121	.052	.138
Distributive justice x [Var]	-.087	.240	-.048	.149	.029	.306	-.277	.279
Performance x [Var]	.017	.087	.049	.065	.034	.122	-.093	.126
Procedural justice	.188	.130	.230**	.060	.227**	.081	.182*	.074
Distributive justice	.329	.229	.261*	.110	.312	.175	.338	.185
Performance	.072	.072	.085*	.039	.150*	.075	.183*	.092
Executive	-.242	.164	-.248	.168	-.074	.422	-.074	.416
Male	.145	.258	.140	.259	.385	.725	.400	.729
Racial minority	.243	.169	.239	.164	-.672	.444	-.685	.450
10 years at agency	-.023	.190	-.034	.188	.634	.391	.640	.387
10 years in position	-.059	.194	-.081	.211	-.602	.520	-.583	.503
Police department[b]	.063	.183	.083	.178	-.278	.326	-.263	.349
Midwest	-.069	.246	-.059	.171	.412	.461	.404	.458
South	-.289	.240	-.062	.245	.584	.493	.574	.499
West	.243	.240	-.278	.239	.849*	.393	.847*	.394
Large city	-.086	.179	.256	.244	-.434	.330	-.521	.321
Collective efficacy	-.023	.027	-.020	.029	-.044	.057	-.046	.056
Disorder	.061**	.019	.063**	.020	.045	.035	.045	.035
Perceived risk	.018	.026	.017	.026	-.014	.086	-.013	.08
Legal cynicism	-.088**	.032	-.090**	.032	-.043	.060	-.042	.057
Intercept	9.409**	.973	9.349**	1.017	9.385**	1.893	9.377**	1.837
F test	19.97**		27.78**		9.41**		7.68**	
R^2	.64		.64		.39		.39	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05, **p < .01

Table 4.12. The perceived effect of key predictor variables on trust and obligation to obey in low crime areas across agency characteristics.

Variable	Trust in the police—Low crime areas[a]				Obligation to obey—Low crime areas[a]			
	[Police department[b]]		[Large city]		[Police department[b]]		[Large city]	
	b	SE	*b*	SE	*b*	SE	*b*	SE
Procedural justice x [Var]	-.063	.172	-.061	.145	-.591**	.229	.013	.264
Distributive justice x [Var]	.265	.262	.010	.268	.316	.437	.261	.479
Performance x [Var]	-.008	.078	-.024	.068	.076	.147	-.231	.146
Procedural justice	.239	.156	.187**	.052	.454**	.149	-.029	.165
Distributive justice	.144	.205	.366**	.130	.108	.278	.384	.293
Performance	.110	.068	.101*	.040	.143	.097	.229*	.102
Executive	.272	.340	.287	.345	.486	.376	.524	.381
Male	-.394	.331	-.389	.328	-.924	.606	-.845	.618
Racial minority	-.404	.342	-.412	.349	-.654	.351	-.637	.354
10 years at agency	-.110	.216	-.106	.214	.342	.342	.403	.347
10 years in position	-.390	.368	-.376	.367	-.659	.418	-.647	.432
Police department[b]	-.171	.172	-.147	.172	.116	.281	.096	.302
Midwest	.152	.271	.168	.275	.474	.494	.339	.487
South	.317	.329	.314	.331	.829*	.420	.790	.420
West	.452	.296	.460	.299	1.014*	.469	.954*	.468
Large city	-.019	.240	.001	.219	-.038	.388	-.083	.363
Collective efficacy	-.001	.025	-.002	.025	.004	.049	.012	.050
Disorder	.034	.020	.034	.021	.056	.044	.061	.046
Perceived risk	-.077*	.034	-.076*	.034	.121	.080	.119	.083
Legal cynicism	-.034	.040	-.035	.038	.076	.063	.116	.065
Intercept	11.330**	1.090	11.303**	1.065	6.932**	1.668	6.175**	1.679
F test	11.33**		14.18**		5.27**		3.30**	
R^2	.53		.52		.25		.23	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05, **p < .01

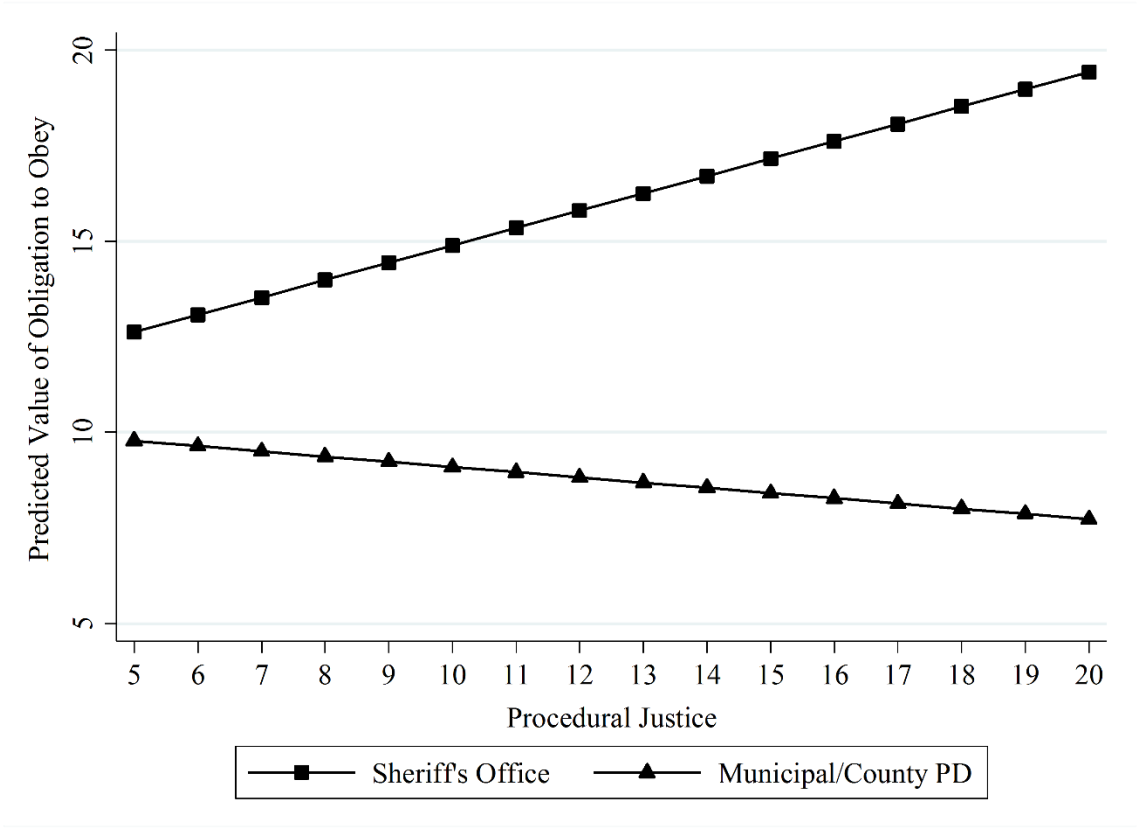

Figure 4.8. Interaction between procedural justice and police department on perceived obligation to obey in low crime areas.

Invariance across Other Potentially Moderating Variables

The final step of the analysis seeks to determine whether four contextual variables—collective efficacy, disorder, perceived risk, and legal cynicism—moderate the perceived relationship between the key predictor variables and trust and obligation to obey in high and low crime areas, respectively. Table 4.13 displays the results of this test with regard to perceived trust in the police among citizens in high crime areas. A separate OLS regression equation was estimated for each of four perceived contextual variables: *collective efficacy, disorder, perceived risk,* and *legal cynicism.* For each equation, a mean-centered, multiplicative interaction term between each of the key predictor

variables and the perceived contextual variable under consideration was created. None of the interaction terms are significant, which suggests that respondents believe the effects of key predictor variables on trust among citizens in these areas are invariant across perceptions of collective efficacy, levels of disorder, and perceived risk associated with breaking the law, as well as their cynicism toward the law. In other words, respondents feel citizens' perceptions of procedural justice, distributive justice, and performance shape their trust in the police to a similar degree regardless of their beliefs concerning the amount of collective efficacy present in their area, the level of disorder in their area, their perceived risk of being caught and punished for breaking the law, and their cynicism (or lack thereof) toward the law.

Table 4.14 tests whether the same contextual variables moderate the perceived relationship between the key predictor variables and obligation to obey among citizens residing in high crime areas. The *disorder*procedural justice* interaction is significantly and negatively associated with obligation to obey (b = -.042, $p < .05$). Figure 4.9 plots the slope of procedural justice on obligation to obey for three levels of perceived disorder: minimum, average, and maximum. The graph demonstrates that respondents believe when citizens who live in high crime areas perceive minimal levels of disorder, procedural justice has almost no effect on their feelings of obligation to obey the police. On the other hand, respondents feel that when citizens in high crime areas perceive average to maximal levels of disorder, procedural justice has an inverse relationship with their feelings of obligation to obey. Thus, among such citizens in particular, respondents feel that greater perceived procedural justice is met with less obligation to obey the police. Perhaps the respondents believe that citizens who perceive a greater amount of

Table 4.13. The perceived effect of key predictor variables on trust in high crime areas across perceived context.

Variable	Trust in the police—High crime areas[a]							
	[Collective efficacy]		[Disorder]		[Perceived risk]		[Legal cynicism]	
	b	SE	*b*	SE	*b*	SE	*b*	SE
Procedural justice x [Var]	.003	.012	-.015	.014	.011	.011	-.005	.012
Distributive justice x [Var]	.030	.022	.005	.030	-.040	.032	.020	.029
Performance x [Var]	-.001	.009	-.001	.011	.006	.012	-.016	.011
Procedural justice	.213**	.056	.217**	.057	.222**	.061	.241**	.055
Distributive justice	.238**	.091	.241*	.105	.285**	.110	.249*	.106
Performance	.103**	.034	.089**	.033	.078*	.037	.082*	.035
Executive	-.224	.165	-.194	.171	-.273	.173	-.200	.173
Male	.050	.256	.059	.266	.254	.282	.073	.267
Racial minority	.215	.166	.259	.160	.221	.164	.245	.167
10 years at agency	-.051	.183	-.006	.191	-.049	.188	-.060	.193
10 years in position	-.086	.200	-.146	.201	.069	.205	.001	.201
Police department[b]	.129	.171	.078	.181	.076	.175	.025	.172
Midwest	-.057	.216	-.095	.220	-.098	.240	-.163	.212
South	-.341	.217	-.271	.235	-.308	.233	-.365	.220
West	.181	.232	.227	.240	.268	.241	.241	.230
Large city	-.036	.161	-.047	.179	-.082	.168	-.098	.169
Collective efficacy	-.029	.027	-.018	.028	-.023	.029	-.026	.028
Disorder	.063**	.018	.072**	.018	.058**	.019	.067**	.019
Perceived risk	.031	.028	.024	.025	.015	.026	.021	.025
Legal cynicism	-.077**	.030	-.081**	.031	-.096**	.032	-.078*	.031
Intercept	8.508**	.685	9.884**	.918	9.755**	1.067	8.280**	.813
F test	31.06**		26.35**		20.99**		24.97**	
R^2	.65		.64		.64		.65	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05, **p < .01

disorder think procedural fairness is too merciful, and instead prefer the police to be more authoritarian when dealing with lawbreakers. None of the other interaction terms are statistically significant, which suggests the police feel that collective efficacy, perceived risk, and legal cynicism have no discernable effect on the relationship between the key predictor variables and citizens' obligation to obey the police (in high crime areas).

Table 4.15 tests whether the aforementioned contextual variables moderate the perceived relationship between the key predictor variables and trust in the police among citizens residing in low crime areas. The findings suggest that respondents feel these contextual variables have little effect on the relationship between key predictor variables and trust—with one exception. *Perceived risk*procedural justice* is the only statistically significant interaction term (b = .034, p < .05), which suggests that respondents in this sample feel that among citizens residing in low crime areas, their perceived risk of being caught and punished for breaking the law moderates the relationship between procedural justice and trust in the police. Figure 4.10 plots the slope of procedural justice on trust in the police for three levels of perceived risk: minimum, average, and maximum. The graph reveals that respondents in this sample feel the relationship between procedural justice and trust in the police among citizens residing in low crime areas is strongest among those who perceive a greater risk of being caught and punished for law-breaking behavior. Thus, respondents believe that in low crime areas, procedurally fair policing is most likely to enhance trust in the eyes of those citizens who view the police as a deterrent.

Table 4.16 tests whether the aforementioned contextual variables moderate the perceived relationship between the key predictor variables and obligation to obey the

Table 4.14. The perceived effect of key predictor variables on obligation to obey in high crime areas across perceived context.

Variable	Obligation to obey—High crime areas[a]							
	[Collective efficacy]		[Disorder]		[Perceived risk]		[Legal cynicism]	
	b	SE	*b*	SE	*b*	SE	*b*	SE
Procedural justice x [Var]	.008	.014	-.042*	.021	.026	.043	.033	.021
Distributive justice x [Var]	.015	.045	.023	.057	-.015	.071	.053	.062
Performance x [Var]	-.020	.017	.018	.018	.017	.031	.018	.021
Procedural justice	.142	.073	.164*	.064	.149*	.063	.207**	.072
Distributive justice	.336	.180	.283	.156	.337	.182	.307	.178
Performance	.188*	.089	.200*	.089	.123	.075	.187*	.090
Executive	-.079	.414	-.005	.405	.032	.399	-.068	.389
Male	.438	.700	.233	.603	.465	.710	.249	.609
Racial minority	-.651	.451	-.609	.453	-.707	.454	-.667	.445
10 years at agency	.684	.392	.717	.392	.617	.369	.761	.393
10 years in position	-.619	.504	-.723	.499	-.471	.473	-.692	.487
Police department[b]	-.302	.357	-.224	.351	-.365	.330	-.243	.352
Midwest	.518	.454	.388	.403	.401	.443	.362	.390
South	.594	.477	.569	.491	.707	.504	.574	.473
West	.878*	.384	.809*	.387	.952*	.388	.793*	.368
Large city	-.430	.340	-.348	.347	-.502	.316	-.407	.357
Collective efficacy	-.033	.054	-.040	.051	-.031	.051	-.052	.055
Disorder	.035	.035	.052	.034	.029	.035	.036	.034
Perceived risk	-.009	.087	.012	.085	-.017	.081	.000	.088
Legal cynicism	-.061	.057	-.036	.058	-.060	.056	-.046	.054
Intercept	8.585**	1.923	9.440**	1.735	9.150**	1.785	9.042**	1.361
F test	9.78**		7.51**		8.42**		9.65**	
R^2	.40		.40		.41		.40	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05, **p < .01

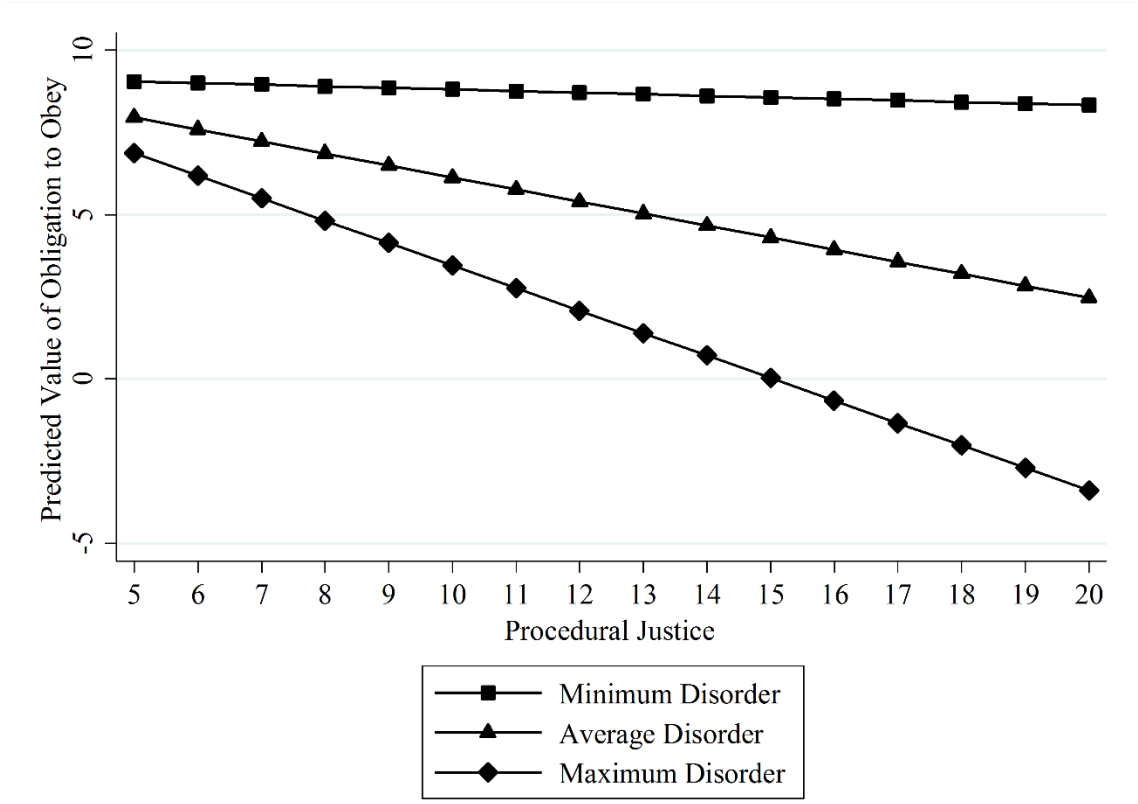

Figure 4.9. Interaction between procedural justice and disorder on perceived obligation to obey in high crime areas.

Table 4.15. The perceived effect of key predictor variables on trust in low crime areas across perceived context.

Variable	Trust in the police—Low crime areas[a]							
	[Collective efficacy]		[Disorder]		[Perceived risk]		[Legal cynicism]	
	b	SE	*b*	SE	*b*	SE	*b*	SE
Procedural justice x [Var]	-.002	.011	-.002	.012	.034*	.014	.012	.014
Distributive justice x [Var]	-.011	.021	-.010	.025	-.053	.040	-.010	.041
Performance x [Var]	-.012	.009	.008	.009	-.013	.014	.013	.014
Procedural justice	.181**	.049	.187**	.051	.172**	.051	.180**	.051
Distributive justice	.385**	.121	.355**	.129	.405**	.117	.357**	.120
Performance	.087*	.037	.105**	.039	.088**	.033	.095*	.039
Executive	.327	.345	.281	.339	.322	.350	.300	.348
Male	-.412	.330	-.363	.345	-.423	.313	-.367	.339
Racial minority	-.437	.350	-.419	.340	-.427	.336	-.409	.342
10 years at agency	-.082	.208	-.116	.227	-.075	.216	-.122	.213
10 years in position	-.391	.358	-.401	.367	-.395	.360	-.397	.369
Police department[b]	-.176	.171	-.167	.161	-.126	.162	-.120	.177
Midwest	.183	.268	.173	.267	.095	.270	.225	.276
South	.371	.317	.295	.332	.343	.323	.346	.333
West	.462	.293	.457	.301	.464	.287	.491	.306
Large city	-.001	.253	.003	.242	.088	.216	.025	.236
Collective efficacy	.017	.023	-.002	.025	.010	.024	.001	.025
Disorder	.031	.020	.031	.022	.020	.020	.031	.021
Perceived risk	-.076*	.030	-.073*	.033	-.065*	.032	-.073*	.035
Legal cynicism	-.045	.037	-.035	.038	-.021	.038	-.055	.034
Intercept	11.451**	.695	11.706**	1.045	9.908**	1.006	10.822**	.933
F test	15.10**		13.07**		14.34**		14.24**	
R^2	.54		.52		.54		.53	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05, **p < .01

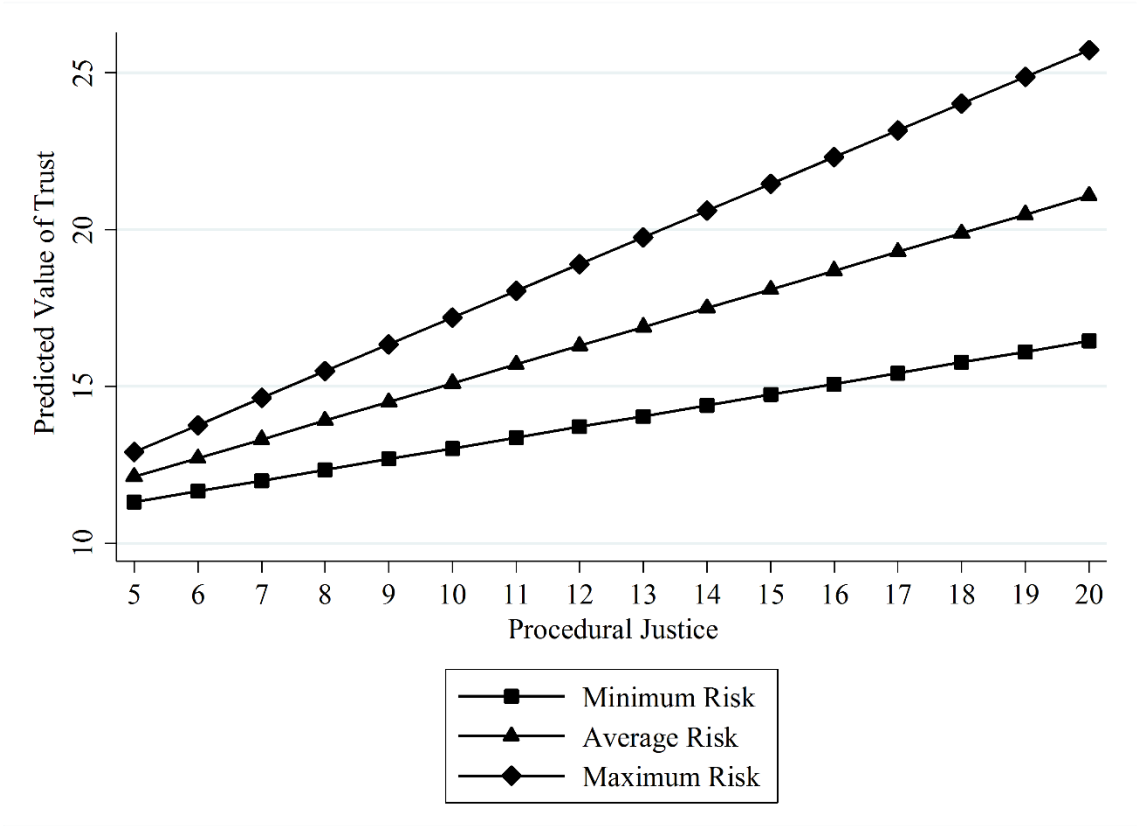

Figure 4.10. Interaction between procedural justice and perceived risk on perceived trust in low crime areas.

police among citizens residing in low crime areas. Two key findings warrant discussion. First, the *collective efficacy*performance* interaction term is significantly and negatively associated with obligation to obey (b = -.051, $p < .05$). Thus, respondents feel that in low crime areas, the strength of the performance-obligation to obey relationship hinges at least in part on the amount of collective efficacy citizens feel is present in the area. Figure 4.11 plots the slope of performance on obligation to obey for three levels of perceived collective efficacy: minimum, average, and maximum. The graph indicates that respondents believe the relationship between performance and obligation to obey is strongest among those who perceive greater levels of collective efficacy. More

specifically, respondents feel that among citizens who perceive average to maximal levels of collective efficacy, greater perceived performance is associated with less obligation to obey the police. This could perhaps be attributed to a belief on the part of respondents that citizens who perceive a greater amount of collective efficacy prefer the police allow the community to enforce societal norms informally. Indeed, perhaps the police believe these citizens are more likely to perceive the police as overly aggressive, and as such, feel less obligated to obey them.

Second, the *perceived risk*procedural justice* interaction term is significantly and positively associated with obligation to obey ($b = .114$, $p < .05$). This suggests that respondents believe that among citizens living in low crime areas, the extent to which procedural justice is associated with their feelings of obligation to obey is contingent upon how likely it is they believe they would be caught and punished if they engage in crime. Figure 4.12 plots the slope of procedural justice on obligation to obey for three levels of perceived risk: minimum, average, and maximum. As shown in the graph, respondents feel the procedural justice-obligation to obey relationship is strongest among those citizens who view the police as a stronger deterrent. Thus it is these individuals whose feelings of obligation to obey the respondents believe can be enhanced by exercising authority in a procedurally fair manner. Finally, the results indicate that disorder and legal cynicism do not appear to moderate the relationship between any of the key predictor variables and obligation to obey the police among citizens living in low crime areas.

Table 4.16. The perceived effect of key predictor variables on obligation to obey in low crime areas across perceived context.

Variable	Obligation to obey—Low crime areas[a]							
	[Collective efficacy]		[Disorder]		[Perceived risk]		[Legal cynicism]	
	b	SE	*b*	SE	*b*	SE	*b*	SE
Procedural justice x [Var]	-.006	.034	.032	.040	.114*	.049	.045	.042
Distributive justice x [Var]	.071	.070	-.101	.064	-.098	.074	-.067	.111
Performance x [Var]	-.051*	.022	.013	.021	-.023	.028	.043	.033
Procedural justice	-.024	.138	.004	.134	-.093	.159	-.037	.146
Distributive justice	.431	.247	.301	.226	.489	.271	.379	.284
Performance	.190*	.091	.248*	.103	.177*	.086	.203*	.101
Executive	.660	.386	.522	.379	.657	.367	.551	.380
Male	-.775	.626	-.711	.580	-.842	.608	-.756	.660
Racial minority	-.625	.346	-.706*	.359	-.606	.346	-.638	.343
10 years at agency	.394	.316	.338	.339	.500	.357	.339	.325
10 years in position	-.708	.415	-.653	.423	-.671	.396	-.696	.435
Police department[b]	.040	.295	.069	.285	.171	.280	.190	.297
Midwest	.261	.457	.423	.465	.087	.542	.533	.487
South	.781*	.379	.714	.416	.851*	.426	.888*	.427
West	.909*	.464	.913*	.451	.900*	.458	1.047*	.481
Large city	-.012	.432	-.111	.421	.144	.341	.009	.389
Collective efficacy	.047	.051	.004	.052	.050	.046	.017	.053
Disorder	.052	.041	.054	.046	.023	.033	.050	.042
Perceived risk	.110	.066	.104	.070	.112	.058	.135	.086
Legal cynicism	.105	.065	.099	.064	.157*	.063	.059	.066
Intercept	6.982**	1.341	7.586**	1.788	6.518**	1.566	7.225**	1.431
F test	4.09**		3.26**		3.87**		3.52**	
R^2	.26		.25		.28		.25	

[a] Ordinary Least Squares regression; [b] "Sheriff's Department" is the reference category; *p < .05, **p < .01

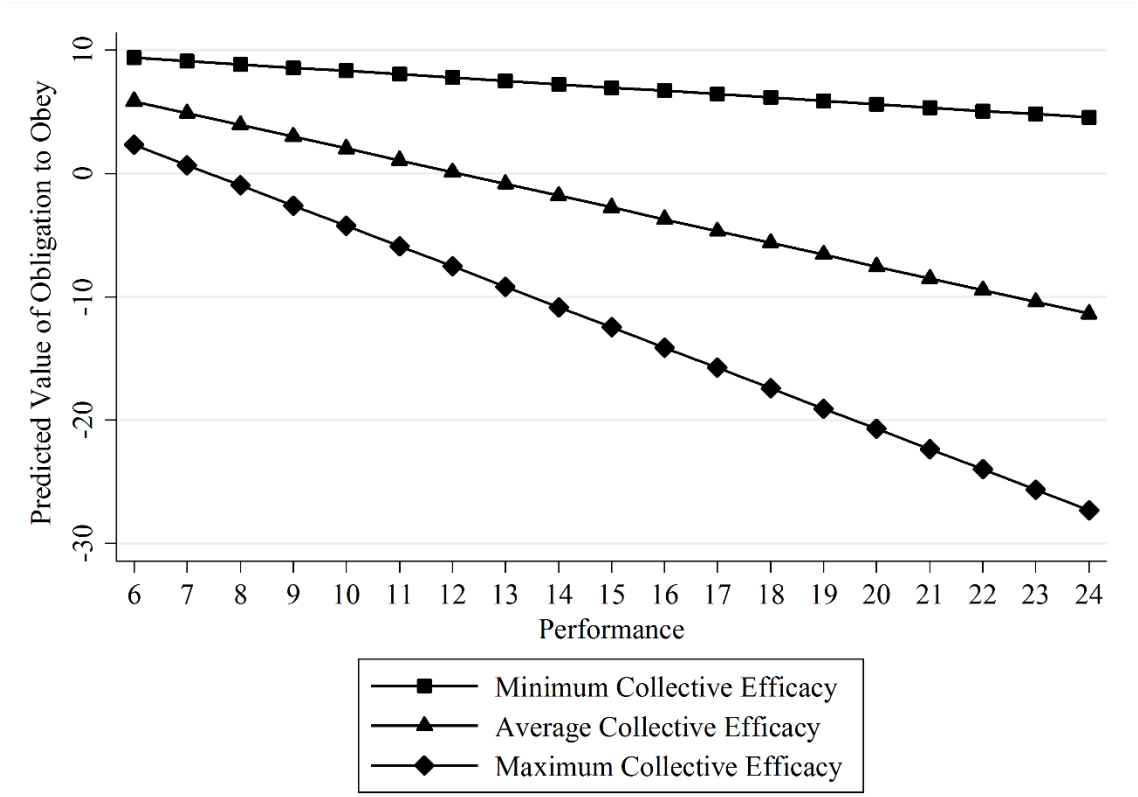

Figure 4.11. Interaction between performance and perceived collective efficacy on perceived obligation to obey in low crime areas.

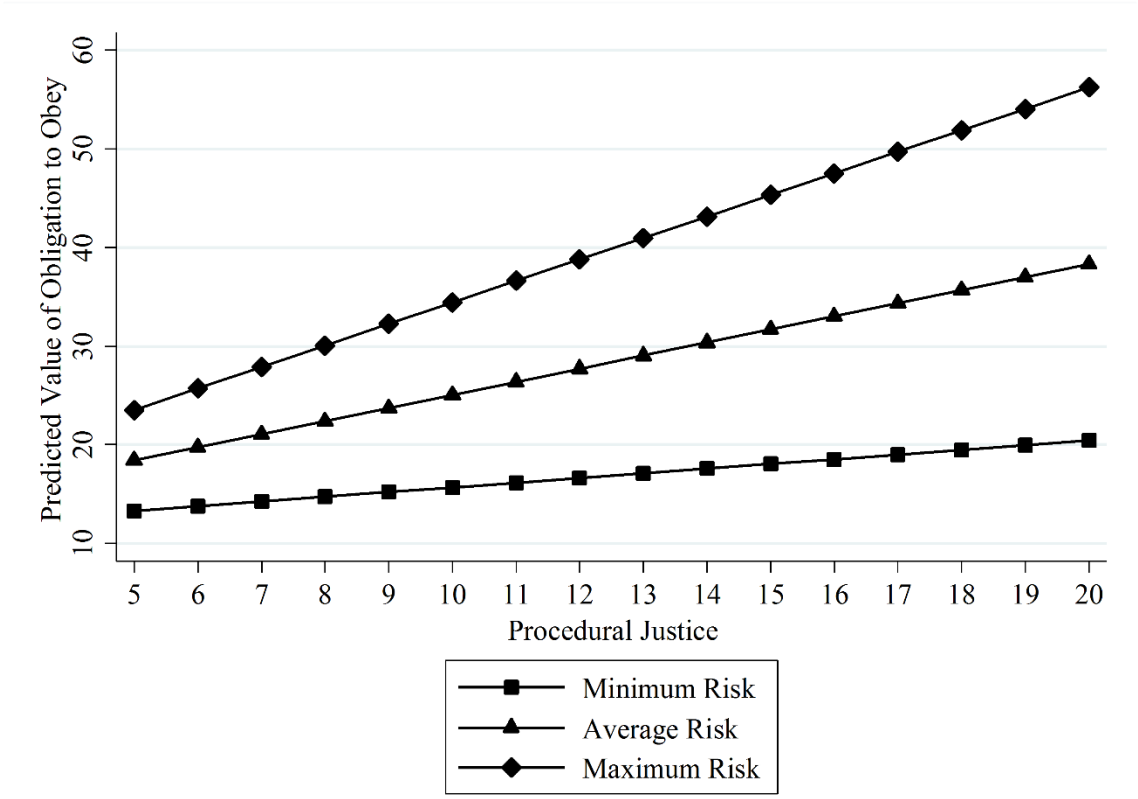

Figure 4.12. Interaction between procedural justice and perceived risk on perceived obligation to obey in low crime areas.

CHAPTER 5

DISCUSSION AND CONCLUSION

The process-based model of policing hypothesizes that when citizens perceive authority figures such as the police as legitimate, they are more likely to comply and 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, they have neglected the perspectives of the other party involved in police-citizen interactions: the police. 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. Indeed, early findings from Israel suggest that police believe their legitimacy in the eyes of the public lies more so with their performance in fighting crime than with procedural fairness concerns (Jonathan-Zamir & Harpaz, 2014). 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.

Table 5.1 summarizes the findings with respect to the first two research questions. That is, (1) what do the police see as the foundation of their legitimacy in the eyes of the

public, and (2) do the police believe being perceived as legitimate increases cooperation from the public? With respect to the first question, the data reveal that officers in this sample believe procedural justice, distributive justice, and performance are all positively associated with citizens' levels of trust in both high and low crime areas of the community. In high crime areas, procedural justice is more closely connected to perceived levels of trust than either distributive justice or performance. That is, officers in this sample believe the best way to go about instilling trust in residents of high crime areas is to handle interactions in a procedurally fair manner (i.e., quality of decision-making and quality of interpersonal treatment). The same cannot be said of low crime areas: the procedural justice estimate is smaller and closer in magnitude to the distributive justice and performance estimates. This suggests that officers in the sample believe procedural justice to be a more effective means of garnering trust from residents of high crime areas than residents of low crime areas.

Contrary to Jonathan-Zamir and Harpaz (2014), officers did not believe performance was more important than procedural fairness in terms of its role in generating citizen trust. This is an important finding given this is only the second study of its kind and the first to be carried out with a U.S. sample. There are striking differences between policing in the U.S. context and the Israeli context which might account for this discrepancy. For example, Jonathan-Zamir and Harpaz (2014) surveyed officers from one centralized, national police force. The present study utilized surveys from executive officers at 643 local police/sheriff's departments all across the United States. These local police departments are undoubtedly less concerned with homeland security than the Israeli National Police (INP)—although terrorism preparedness is much more

Table 5.1. Summary of main effects.[a]

Variable:	Trust		Obligation to obey		Cooperation	
	High crime	Low crime	High crime	Low crime	High crime	Low crime
Procedural justice	+	+	+	ns	ns	ns
Distributive justice	+	+	ns	ns	ns	ns
Performance	+	+	+	+	+	+
Trust	---	---	---	---	ns	ns
Obligation to obey	---	---	---	---	ns	ns
Executive	ns	ns	ns	ns	ns	ns
Male	ns	ns	ns	ns	ns	ns
Racial minority	ns	ns	ns	ns	ns	ns
10 years at agency	ns	ns	ns	ns	ns	ns
10 years in position	ns	ns	ns	ns	+	ns
Police department	ns	ns	ns	ns	-	ns
Midwest	ns	ns	ns	ns	ns	ns
South	ns	ns	ns	ns	ns	ns
West	ns	ns	+	+	ns	ns
Large city	ns	ns	ns	ns	ns	ns
Collective efficacy	ns	ns	ns	ns	+	+
Disorder	+	ns	ns	ns	ns	ns
Perceived risk	ns	-	ns	ns	-	ns
Legal cynicism	-	ns	ns	ns	-	ns

[a] Note: "ns" = nonsignificant relationship.

salient in the U.S. post 9/11 (McGarrell, Freilich, & Shermack, 2007). Given the uncertainty surrounding national security in Israel, and the constantly looming threat of terrorist attacks, it is perhaps not surprising that the INP would believe Israeli citizens are more concerned with performance than procedural fairness. On the other hand, the 643 agencies represented in the present data each serve a unique community that has its own unique expectations of a police force. Policing is much more localized in the U.S.—and this is reflected in the data. Finally, concerns about fair treatment may be more germane

to the U.S. context, given that it is a nation founded on ideas such as fairness, equal treatment, and protection against a tyrannical government.

Although officers in the present sample do not believe performance is *most* important to citizens in terms of generating trust, they do recognize that it is important nonetheless—regardless of the amount of crime in an area. A slightly different set of findings emerge with regard to perceived feelings of obligation to obey. In high crime areas, officers in the sample believe procedural justice and performance are positively associated with citizens' feelings of obligation to obey the police. Yet in low crime areas, only performance is significantly associated with obligation to obey. This indicates that officers in the sample believe citizens obey the police for different reasons in part depending on the level of crime in their area. Whereas in high crime areas, officers feel procedural justice can be an effective means of generating feelings of obligation to obey the police, the same is not true of low crime areas. Perhaps officers are aware that citizens residing in high crime areas interact with the police more regularly than citizens residing in low crime areas. Consequently, they understand that these citizens are especially likely to be concerned with how the police treat people during those interactions. On the other hand, officers may believe citizens in low crime areas place importance on performance because they interact with the police less frequently and, as such, are less concerned about treatment. As a result, officers reason that these citizens feel more obligated to obey the police simply because the police are effectively suppressing crime (Tyler, 2005; Wilson & Kelling, 1982).

Collectively, the present findings are partially supportive of Tyler and Huo's (2002) process-based model of regulation. Officers in this sample believe that citizens

focus on procedural fairness when assessing the trustworthiness of the police. However, strict adherence to the process-based model would suggest that procedural justice should outweigh citizens' concerns regarding distributive fairness or the performance of the police. Yet in both high and low crime areas, distributive fairness and performance remain significantly associated with perceived levels of citizen trust after accounting for variations in procedural justice. Furthermore, in low crime areas, the procedural justice estimate is equal in magnitude to the distributive justice estimate—meaning officers believe the two concepts to be equally important in the minds of citizens. With regard to obligation to obey, officers in the present sample indicate that performance is just as important as procedural justice in high crime areas, whereas in low crime areas, procedural justice is not significant. Thus, the present data suggest that the police are not aware that procedural justice is the primary antecedent of legitimacy. While they recognize its importance in the eyes of the public, they still tend to believe distributive fairness and performance are important in terms of being perceived as legitimate by the public.

With respect to the second research question, the data reveal that officers in the present sample believe performance to be the primary means of attaining cooperation from citizens in both high and low crime areas. This finding contradicts Tyler's process-based model of regulation, 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.

Although procedural justice was significantly associated with trust (in both high and low crime areas) and obligation to obey (in high crime areas), it was not significantly associated with cooperation in either high or low crime areas. Trust and obligation to obey also failed to exert a significant effect on cooperation. Instead, officers believe citizens are most likely to cooperate with the police when they believe the police are effectively dealing with crime in the community (Tankebe, 2009). At the same time, officers also believe that context matters. In both high and low crime areas, officers believe greater perceived collective efficacy on the part of citizens is associated with higher levels of cooperation. Furthermore, in high crime areas specifically, officers believe that perceived risk and legal cynicism are each associated with lower levels of cooperation. Future studies should continue to explore the possibility that police believe contextual variables such as these influence their legitimacy in the eyes of the public.

The fact that the present sample believes performance is the key to generating cooperation from the public has important theoretical implications. One of the main appeals of Tyler's process-based model of regulation 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., 2012a; 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. It is conceivable that 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 due to fewer crimes being brought to the attention of the police.

The third and fourth research questions explored the possibility that situational and/or contextual variables could moderate the perceived relationship between key theoretical variables and legitimacy (i.e., trust and obligation to obey). Table 5.2 provides a summary of the findings with respect to the third and fourth research questions. The table shows that for the most part, the relationships between these key theoretical variables and trust and obligation to obey are invariant. Each of the four outcome variables (i.e., trust and obligation to obey in both high and low crime areas) were regressed onto 33 different interaction terms. Only 12 emerged as statistically significant.[4] However, these 12 interaction effects provide evidence that some characteristics of the officer—or the agency he/she is employed at—may condition the way the officer believes citizens evaluate police. Along similar lines, the findings suggest that officers believe certain contextual variables (i.e., collective efficacy, disorder, perceived risk, legal cynicism) can moderate the strength of the relationship between, for example, procedural justice and trust in the police. It will be important for researchers to consider the possibility of moderation effects such as these moving forward.

[4] The greater the number of tests performed on a set of data, the greater the odds of committing a Type I error (i.e., rejecting the null hypothesis when it is true). In the present case, each theoretical variable of interest was interacted with 11 potentially moderating variables. One common practice is to use a *Bonferonni* approximation, whereby alpha levels (i.e., *p* values) are adjusted to account for the probability of making at least one Type I error for the family of tests (Abdi, 2007). In the present case, this shifts the .05 *p* value of statistical significance to 0.003. As a result of using this more conservative significance test, only 4 interaction terms retain statistical significance. This is further evidence that the effects of key predictor variables on *trust* and *obligation to obey* are invariant.

Table 5.2. Summary of interaction effects.[a]

Variable:		Trust		Obligation to obey	
		High crime	Low crime	High crime	Low crime
Procedural justice	Executive	ns	ns	ns	-
	Male	ns	ns	ns	ns
	Racial minority	ns	ns	-*	ns
	10 years at agency	ns	ns	ns	ns
	10 years in position	ns	ns	ns	ns
	Police department	ns	ns	ns	-
	Large city	ns	ns	ns	ns
	Collective efficacy	ns	ns	ns	ns
	Disorder	ns	ns	-	ns
	Perceived risk	ns	+	ns	+
	Legal cynicism	ns	ns	ns	ns
Distributive justice	Executive	+	ns	ns	ns
	Male	ns	ns	ns	+*
	Racial minority	ns	ns	ns	ns
	10 years at agency	ns	ns	ns	ns
	10 years in position	+*	ns	ns	ns
	Police department	ns	ns	ns	ns
	Large city	ns	ns	ns	ns
	Collective efficacy	ns	ns	ns	ns
	Disorder	ns	ns	ns	ns
	Perceived risk	ns	ns	ns	ns
	Legal cynicism	ns	ns	ns	ns
Performance	Executive	ns	ns	ns	ns
	Male	ns	ns	ns	ns
	Racial minority	ns	ns	ns	ns
	10 years at agency	ns	ns	ns	ns
	10 years in position	-*	ns	-	ns
	Police department	ns	ns	ns	ns
	Large city	ns	ns	ns	ns
	Collective efficacy	ns	ns	ns	-
	Disorder	ns	ns	ns	ns
	Perceived risk	ns	ns	ns	ns
	Legal cynicism	ns	ns	ns	ns

[a] Note: "ns" = nonsignificant relationship; * remains statistically significant upon using the Bonferonni correction.

Bottoms and Tankebe (2012, p. 122-23) suggest that legal officials such as the police "must consider their legitimacy in relation to more than one audience and…these audiences might have significantly different priorities." Officers in the present sample appear to be aware of this point. The challenge for researchers moving forward will be to test these complex relationships with citizen samples. For example, is procedural justice less associated with feelings of obligation to obey among citizens residing in high crime areas who perceive a greater amount of disorder? Is procedural justice more closely connected to trust among citizens residing in low crime areas who perceive a greater risk of being caught and punished for breaking the law? To date, few studies have attempted to answer questions such as these (Jackson et al., 2012a; Wolfe et al., 2015), making it difficult to discern whether the present sample's perceptions are in line with the literature. Future research should also continue to explore the extent to which individual/situational characteristics of the *officer* shape his/her interpretations of police legitimacy in the eyes of the public. This is an especially important consideration moving forward with the dialogic model of legitimacy in the U.S. context because there are so many diverse law enforcement agencies which are themselves composed of individuals with different characteristics. The present study offers preliminary evidence that variables such as gender, race, rank, experience, and agency type moderate some of the perceived relationships between key theoretical variables and legitimacy.

This study is not without limitations. For starters, the data is cross-sectional and it is therefore 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 more 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." 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 suggests that officers are aware of the connection between procedural justice and their legitimacy in the eyes of the public. At the same time, they do not appear to fully understand its importance with respect to increasing citizen cooperation. Rather, they believe performance is the key. In this respect, there appears to be a breakdown in the legitimacy "dialogue." What good is research demonstrating that citizens cooperate with the police more so when they perceive them as legitimate if the police themselves do not see it that way? Of course the police believe performing their job well is important to citizens—but they should be made aware of the power of procedural justice. It bears repeating: "the police have more control over how they treat people than they do over the crime rate" (Sunshine & Tyler, 2003, pp. 535-36).

Moving forward it is incumbent upon researchers to relay this message to the police, especially in light of recent events in the U.S. that have sparked tension between minorities and the police (such as the shooting of Michael Brown in Ferguson, Missouri

or the death of Eric Garner in Staten Island, New York). Researchers could take a variety of approaches when "marketing" the process-based model to the police: it can enhance officer safety, it can improve police-community relations, and it can expand their crime fighting ability. In any event, this will likely be a difficult task as 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). At the same time, the present data suggest that police perceptions are fairly in line with the evidence regarding the social-psychological process that guides citizens' evaluations of police legitimacy. Still, publishing findings with respect to the process-based model in more practitioner-oriented magazines such as *The Police Chief* and *Translational Criminology* would be a good starting point. Perhaps during the course of establishing research-practitioner partnerships, agencies should periodically survey their own communities to gauge their opinions about police fairness, effectiveness, and legitimacy. Practitioners might be more apt to trust results generated from a sample of their own citizens than results of other studies conducted elsewhere by other researchers. Whatever approach researchers decide to take, it is imperative that the police understand the long-term benefits of process-based policing: voluntary compliance and cooperation from the public.

REFERENCES

Abdi, H. (2007). The Bonferonni and Sidak corrections for multiple comparisons. In N. Salkind (Ed.), *Encyclopedia of Measurement and Statistics.* Thousand Oaks, CA: Sage.

Alexander, S. & Ruderman, M. (1987). The role of procedural and distributive justice in organizational behavior. *Social Justice Research,* 1(2), 177-198.

Alpert, G. P. & Dunham, R. G. (2004). *Understanding police use of force: Officers, suspects, and reciprocity*. Cambridge, MA: Cambridge University Press.

Andridge, R. R., & Little, R. J. (2010). A review of hot deck imputation for survey non-response. *International Statistical Review*, 78, 40-64.

Bayley, D. H. (1994). *Police for the future*. New York: Oxford University Press.

Bayley, D. H. & Mendelsohn, H. (1969). *Minorities and the police: Confrontation in America*. New York: Free Press.

Beccaria, C. (1983). *An essay on crimes and punishments*. Brookline Village, MA: Branden Press.

Becker, G. S. (1968). Crime and punishment: An economic approach. *Journal of Political Economy*, 76, 169-217.

Beetham, D. (1991). *The legitimation of power*. London: Macmillan.

Blumstein, A., Cohen, J., & Nagin, D. (1978). *Deterrence and incapacitation: Estimating the effects of criminal sanctions on crime rates*. Washington, DC: National Academy of Sciences.

Bottoms, A. & Tankebe, J. (2012). Beyond procedural justice: A dialogic approach to legitimacy in criminal justice. *Journal of Criminal Law and Criminology*, 102, 119-170.

Bradford, B., Huq, A., Jackson, J., & Roberts, B. (2014). What price fairness when security is at stake? Police legitimacy in South Africa. *Regulation & Governance*, 8(2), 246-268.

Brandl, S. G., Frank, J., Worden, R. E., & Bynum, T. S. (1994). Global and specific attitudes toward the police: Disentangling the relationship. *Justice Quarterly*, 11(1), 119-134.

Bratton, W. J. (1997). Crime is down in New York City: Blame the police. In W. Bratton, N. Dennis, R. Mallon, J. Orr, & C. Pollad (Eds.), *Zero tolerance policing in a free society* (pp. 29-42). London: IEA Health and Welfare Unit.

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

Carrabine, E. (2004). *Power, resistance, and discourse: A genealogy of the Strangeways Prison Riot.* Aldershot, UK: Ashgate.

Clogg, C. C., Petkova, E., & Shihadeh, E. S. (1992). Statistical methods for analyzing collapsibility in regression models. *Journal of Educational Statistics*, 17(1), 51-74.

Coicaud, J. (2002). *Legitimacy and politics: A contribution to the study of political right and political responsibility*. Cambridge, MA: Cambridge University Press.

Cornish, D. B. & Clarke, R. V. (1986). *The reasoning criminal*. New York, NY: Springer-Verlag.

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78, 98-104.

Dillman, D. A., Phelps, G., Tortora, R., Swift, K., Kohrell, J., Berck, J., & Messer, B. L. (2009). Response rate and measurement differences in mixed-mode surveys using mail, telephone, interactive voice response (IVR) and the Internet. *Social Science Research, 38*, 1-18.

Engel, R. S. (2005). Citizens' perceptions of injustice during traffic stops with police. *Journal of Research in Crime & Delinquency*, 42, 445-481.

Fuller, W. A., & Kim, J. K. (2005). Hot deck imputation for the response model. *Survey Methodology*, 31, 139-149.

Gau, J. M. (2011). The convergent and discriminant validity of procedural justice and police legitimacy: An empirical test of core theoretical propositions. *Journal of Criminal Justice*, 39, 489-498.

Gau, J. M. (2013). Procedural justice and police legitimacy: A test of measurement and structure. *American Journal of Criminal Justice*, 1-19, doi: 10.1007/s12103-013-9220-8.

Gau, J. M. (2014). Procedural justice, police legitimacy, and legal cynicism: A test for mediation effects. *Police Practice and Research*: *An International Journal*, doi: 10.1080/15614263.2014.927766.

Gau, J. M., Corsaro, N., Stewart, E. A., & Brunson, R. K. (2012). Examining macro-level impacts on procedural justice and police legitimacy. *Journal of Criminal Justice*, 40, 333-343.

Gau, J. M. & Pratt, T. C. (2008). Broken windows or window dressing? Citizens' (in)ability to tell the difference between disorder and crime. *Criminology & Public Policy*, 7, 163-194.

Gmel, G. (2001). Imputation of missing values in the case of a multiple item instrument measuring alcohol consumption. *Statistics in Medicine*, 20, 2369-2381.

Gottfredson, M. R. & Hirschi, T. (1990). *A general theory of crime*. Stanford, CA: Stanford University Press.

Hawdon, J. (2008). Legitimacy, trust, social capital, and policing styles: A theoretical statement. *Police Quarterly*, 11, 182-201.

Herbert, S. (2006). Tangled up in blue: Conflicting paths to police legitimacy. *Theoretical Criminology*, 10(4), 481-504.

Hindelang, M. J. (1974). Public opinion regarding crime, criminal justice, and related topics. *Journal of Research in Crime & Delinquency*, 11, 101-116.

Hinds, L. & Murphy, K. (2007). Public satisfaction with police: Using procedural justice to improve police legitimacy. *Australian & New Zealand Journal of Criminology*, 40, 27-42.

Hough, M., Jackson, J., Bradford, B., Myhill, A., & Quinton, P. (2010). Procedural justice, trust and institutional legitimacy. *Policing: A Journal of Policy and Practice*, 4(3), 203-210.

Hutson, H., Anglin, D., Rice, P., Kyriacou, D., Guirguis, M., & Strote, J. (2009). Excessive use of force by police: A survey of academic emergency physicians. *Emergency Medical Journal*, 26, 20-22.

Jackson, J., Bradford, B., Hough, M., Myhill, A., Quinton, P., & Tyler, T. R. (2012b). Why do people comply with the law? Legitimacy and the influence of legal institutions. *British Journal of Criminology*, 52, 1051-1071.

Jackson, J., Bradford, B., Stanko, B., & Hohl, K. (2012a). *Just authority? Trust in the police in England and Wales*. London: Routledge.

Jackson, J., Huq, A. Z., Bradford, B., & Tyler, T. R. (2013b) Monopolizing force? Police legitimacy and public attitudes towards the acceptability of violence. *Psychology, Public Policy and Law*, 19(4), 479-497.

Jackson, J., Kuha, J., Hough, M., Bradford, B., Hohl, K., & Gerber, M. (2013a). Trust and legitimacy across Europe: A FIDUCIA report on comparative public attitudes towards legal authority.

Jonathan-Zamir, T. & Harpaz, A. (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*. Advance online publication. doi: 10.1093/bjc/azu001.

Jonathan-Zamir, T. & Weisburd, D. (2013). The effects of security threats on antecedents of police legitimacy: Findings from a quasi-experiment in Israel. *Journal of Research in Crime and Delinquency*, 50(1), 3-32.

Kelling, G. L. & Moore, M. H. (1988). The evolving strategy of policing. *Perspectives on policing, No. 4*. Washington, DC: U. S. Government Printing Office.

Kirk, D. S. & Papachristos, A. V. (2011). Cultural mechanisms and the persistence of neighborhood violence. *American Journal of Sociology*, 116(4), 1190-1233.

Klinger, D. A. (1997). Negotiating order in patrol work: An ecological theory of police response to deviance. *Criminology*, 35(2), 277-306.

Leventhal, G. S. (1980). What should be done with equity theory? In K. Gergen, M. Greenberg & R. Weiss (Eds.), *Social exchange: Advances in theory and research* (pp. 27-55). New York, NY: Academic.

Lum, C., Telep, C. W., Koper, C. S., & Grieco, J. (2012). Receptivity to research in policing. *Justice Research and Policy*, 14(1), 61-96.

Mason, C. H. & Perreault, W. D. (1991). Collinearity, power, and interpretation of multiple regression analysis. *Journal of Marketing Research*, 28, 268-280.

Mastrofski, S. D., Snipes, J. B., & Supina, A. E. (1996). Compliance on demand: The public's response to specific police requests. *Journal of Research in Crime and Delinquency*, 33, 269-305.

Mazerolle, L., Antrobus, E., Bennett, S., & Tyler, T. (2013). Shaping citizen perceptions of police legitimacy: A randomized field trial of procedural justice. *Criminology*, 51(1), 33-64.

Mazerolle, L., Bennett, S., Antrobus, E., & Eggins, E. (2012). Procedural justice, routine encounters and citizen perceptions of police: Main findings from the Queensland Community Engagement Trial (QCET). *Journal of Experimental Criminology*, 8, 343-367.

McGarrell, E. F., Frelich, J. D., & Chermak, S. (2007). Intelligence-led policing as a framework for responding to terrorism. *Journal of Contemporary Criminal Justice*, 23(2), 142-158.

McKnight, P. E., McKnight, K. M., Sidani, S., & Figueredo, A. J. (2007). *Missing data: A gentle introduction*. New York, NY: The Guilford Press.

Murphy, K. & Cherney, A. (2012). Understanding cooperation with police in a diverse society. *British Journal of Criminology*, 52, 181-201.

Murphy, K., Hinds, L., & Fleming, J. (2008). Encouraging public cooperation and support for police. *Policing and Society: An International Journal of Research and Policy*, 18(2), 136-155.

Murphy, K., Tyler, T. R., & Curtis, A. (2009). Nurturing regulatory compliance: Is procedural justice effective when people question the legitimacy of the law? *Regulation and Governance*, 3, 1-26.

Nagin, D. S. (1998). Criminal deterrence research at the outset of the twenty-first century. In M. Tonry (Ed.), *Crime and justice: A review of research* (vol. 23, pp. 1-42). Chicago: University Press.

Nagin, D. S. (2013). Deterrence in the twenty-first century. In M. Tonry (Ed.), *Crime and justice: A review of research* (vol. 42, pp. 199-263). Chicago: University Press.

Napier, J. L. & Tyler, T. R. (2008). Does moral conviction really override concerns about procedural justice? A reexamination of the value protection model. *Social Justice Research*, 21, 509-528.

Nix, J., Wolfe, S. E., Rojek, J., & Kaminski, R. J. (2014). Trust in the police: The influence of procedural justice and perceived collective efficacy. *Crime & Delinquency*. Advanced online publication. doi: 10.1177/0011128714530548.

Papachristos, A. V., Meares, T. L., & Fagan, J. (2012). Why do criminals obey the law? The influence of legitimacy and social networks on active gun offenders. *Journal of Criminal Law & Criminology*, 102(2), 397-440.

Paternoster, R., Brame, R., Bachman, R., & Sherman, L. W. (1997). Do fair procedures matter? The effect of procedural justice on spouse assault. *Law & Society Review*, 31(1), 163-204.

Pearson, K. (1895). Note on regression and inheritance in the case of two parents. *Proceedings of the Royal Society of London*, 58, 240-242.

Pelfrey, W. V., Jr. (2000). Precipitating factors of paradigmatic shift in policing: The origin of the community policing era. In G. Alpert & A. Piquero (Eds.), *Community policing: contemporary readings* (2nd Ed., pp. 79-92). Prospect Heights: Waveland Press, Inc.

Piquero, A. R., Gomez-Smith, Z., & Langton, L. (2004). Discerning unfairness where others may not: Low self-control and unfair sanction perceptions. *Criminology*, 42, 699−733.

Ratcliffe, J. (2008). *Intelligence-led policing*. Portland: Willan Publishing.

Raz, J. (2009). *Between authority and interpretation: On the theory of law and practical reason*. New York, NY: Oxford University Press.

Reisig, M. D., Bratton, J., & Gertz, M. G. (2007). The construct validity and refinement of process-based policing measures. *Criminal Justice and Behavior*, 34, 1005-1028.

Reisig, M. D., Tankebe, J., & Meško, G. (2014a). Compliance with the law in Slovenia: The role of procedural justice and police legitimacy. *European Journal on Criminal Policy and Research*, *20*(2), 259-276.

Reisig, M. D., Tankebe, J., & Meško, G. (2014b). Procedural justice, police legitimacy, and public cooperation with the police among young Slovene adults. *Journal of Criminal Justice and Security*, (2), 147-164.

Reisig, M. D., Wolfe, S. E., & Holtfreter, K. (2011). Legal cynicism, legitimacy, and criminal offending: The nonconfounding effect of low self-control. *Criminal Justice and Behavior*, 38(2), 1265-1279.

Rosenbaum, D. P., Schuck, A. M., Costello, S. K., Hawkins, D. E., & Ring, M. K. (2005). Attitudes toward the police: The effects of direct and vicarious experience. *Police Quarterly*, 8(3), 343-365.

Sampson, R. J. & Jeglum-Bartusch, D. (1998). Legal cynicism and (subcultural?) tolerance of deviance: The neighborhood context of racial differences. *Law & Society Review*, 32, 777-804.

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, 277, 918-924.

Sarat, A. (1977). Studying American legal culture. *Law & Society Review*, 11, 427-488.

Sargeant, E., Murphy, K., & Cherney, A. (2013). Ethnicity, trust and cooperation with police: Testing the dominance of the process-based model. *European Journal of Criminology*. Advance online publication. doi:1477370813511386.

Sherman, L. W. (1992). *Policing domestic violence: Experiments and dilemmas.* New York, NY: The Free Press.

Sherman, L. W. & Berk, R. A. (1984). The specific deterrent effects of arrest for domestic assault. *American Sociological Review*, 28(2), 261-272.

Shettle, C. & Mooney, G. (1999). Monetary incentives in US Government surveys. *Journal of Official Statistics*, 15(2), 231–250.

Smith, D. A. (1986). The neighborhood context of police behavior. In Albert J. Reiss, Jr. and Michael Tonry (Eds.), *Communities and crime*. Chicago: University of Chicago Press.

Smith, M. R., Kaminski, R. J., Alpert, G. P., Fridell, L., MacDonald, J., & Kubu, B. (2010). A multi-method evaluation of police use of force outcomes. Washington, DC: US Department of Justice.

Sudman, S. (1976). *Applied sampling.* New York, NY: Academic Press.

Sunshine, J. & Tyler, T. R. (2003). The role of procedural justice and legitimacy in shaping public support for policing. *Law and Society Review*, 37, 513-548.

Tabachnick, B. G. & Fidell, L. S. (2007). *Using multivariate statistics*. Boston, MA: Allyn & Bacon.

Tankebe, J. (2008). Police effectiveness and police trustworthiness in Ghana: An empirical appraisal. *Criminology and Criminal Justice*, 8(2), 185-202.

Tankebe, J. (2009). Public cooperation with the police in Ghana: Does procedural fairness matter? *Criminology*, 47(4), 1265-1293.

Tankebe, J. (2013). Viewing things differently: The dimensions of public perceptions of police legitimacy. *Criminology*, 51, 103-135.

Thibaut, J. & Walker, L. (1975). *Procedural justice: A psychological analysis.* Hillsdale, NJ: Erlbaum.

Tyler, T. R. (1988). What is procedural justice? Criteria used by citizens to assess the fairness of legal procedures. *Law and Society Review*, 22, 103-135.

Tyler, T. R. (1990). *Why people obey the law*. Princeton, NJ: Princeton University Press.

Tyler, T. R. (1994). Governing amid diversity: The effect of fair decision-making procedures on the legitimacy of government. *Law and Society Review*, 28, 809-831.

Tyler, T. R. (2000). Multiculturalism and the willingness of citizens to defer to law and to legal authorities. *Law and Social Inquiry*, 25, 983-1019.

Tyler, T. R. (2003). Procedural justice, legitimacy, and the effective rule of law. In M. Tonry (Ed.), *Crime and justice* (pp. 283-357). Chicago: University of Chicago Press.

Tyler, T. R. (2004). Enhancing police legitimacy. *Annals of the American Academy of Political and Social Science*, 593, 84-99.

Tyler, T. R. (2005). Policing in black and white: Ethnic group differences in trust and confidence in the police. *Police Quarterly*, 8, 322-342.

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

Tyler, T. R. & Blader, S. L. (2000). *Cooperation in groups: Procedural justice, social identity, and behavioral engagement*. Philadelphia, PA: Psychology Press.

Tyler, T. R. & Huo, Y. J. (2002). *Trust in the law: Encouraging public cooperation with the police and courts*. New York, NY: Russell-Sage.

Tyler, T. R. & Lind, E. A. (1992). A relational model of authority in groups. *Advances in Experimental Social Psychology*, 25, 115-191.

Tyler, T. R., Rasinski, K., & Spodick, N. (1985). The influence of voice on satisfaction with leaders: Exploring the meaning of process control. *Journal of Personality and Social Psychology*, 48, 72-81.

Tyler, T. R. & Wakslak, C. J. (2004). Profiling and police legitimacy: Procedural justice, attributions of motive, and acceptance of authority. *Criminology*, 42, 253-281.

Weber, M. (1978). *Economy and society: An outline of interpretive sociology*. Berkeley and Los Angeles: University of California Press.

Whyte, W. F. (1943). *Street corner society*. Chicago: University of Chicago Press.

Wilson, J. Q. & Kelling, G. L. (1982). Broken windows. *Atlantic Monthly*, 249(3), 29-38.

Wolfe, S. E. (2011). The effect of low self-control on perceived police legitimacy. *Journal of Criminal Justice*, 39, 67-74.

Wolfe, S. E., Nix, J., Kaminski, R. J., & Rojek, J. (2015). Is the effect of procedural justice on police legitimacy invariant? Testing the generality of procedural justice and competing explanations of legitimacy. Manuscript submitted for publication.

Wu, Y., Sun, I. Y., & Triplett, R. A. (2009). Race, class or neighborhood context: Which matters more in measuring satisfaction with police? *Justice Quarterly*, 26(1), 125-156.

APPENDIX A: CLASSIFICATION OF STATES INTO CENSUS REGIONS

Region 1 **Northeast**	**Region 2** **Midwest**	**Region 3** **South**	**Region 4** **West**
Connecticut	Iowa	Alabama	Alaska
Massachusetts	Illinois	Arkansas	Arizona
Maine	Indiana	Delaware	California
New Hampshire	Kansas	Florida	Colorado
New Jersey	Michigan	Georgia	Hawaii
New York	Minnesota	Kentucky	Idaho
Pennsylvania	Missouri	Louisiana	Montana
Rhode Island	North Dakota	Maryland	New Mexico
Vermont	Nebraska	Mississippi	Nevada
	Ohio	North Carolina	Oregon
	South Dakota	Oklahoma	Utah
	Wisconsin	South Carolina	Washington
		Tennessee	Wyoming
		Texas	
		Virginia	
		West Virginia	
		Washington, D. C.	

APPENDIX B: SAMPLE SELECTED BY POPULATION SERVED, REGION, AND DEPARTMENT TYPE

Population Served	Census Region	Agency Type	Population Count	Sample Count
Missing	Northeast	County/Municipal Police	117	42
		County Sheriff	0	0
	Midwest	County/Municipal Police	259	41
		County Sheriff	0	0
	South	County/Municipal Police	281	42
		County Sheriff	3	3
	West	County/Municipal Police	36	36
		County Sheriff	1	1
Less than 10,000	Northeast	County/Municipal Police	1,520	43
		County Sheriff	6	6
	Midwest	County/Municipal Police	3,008	43
		County Sheriff	322	42
	South	County/Municipal Police	2,799	43
		County Sheriff	219	42
	West	County/Municipal Police	661	42
		County Sheriff	129	42
10,000-49,999	Northeast	County/Municipal Police	923	42
		County Sheriff	52	41
	Midwest	County/Municipal Police	837	42
		County Sheriff	497	42
	South	County/Municipal Police	747	41
		County Sheriff	754	42
	West	County/Municipal Police	361	42
		County Sheriff	142	42
50,000-99,999	Northeast	County/Municipal Police	93	42
		County Sheriff	44	41
	Midwest	County/Municipal Police	120	42
		County Sheriff	98	42
	South	County/Municipal Police	119	41
		County Sheriff	183	41
	West	County/Municipal Police	127	42
		County Sheriff	49	40

Population Served	Census Region	Agency Type	Population Count	Sample Count
100,000 or more	Northeast	County/Municipal Police	37	37
		County Sheriff	100	100
	Midwest	County/Municipal Police	49	49
		County Sheriff	136	136
	South	County/Municipal Police	117	117
		County Sheriff	217	217
	West	County/Municipal Police	97	97
		County Sheriff	96	96

APPENDIX C: 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

APPENDIX D: CORRELATION MATRIXES

Table D.1. High Crime Area Variables

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Procedural justice	1.0																			
2	Distributive justice	.77	1.0																		
3	Performance	.70	.65	1.0																	
4	Trust	.71	.65	.63	1.0																
5	Obligation to obey	.52	.49	.48	.47	1.0															
6	Cooperation	.61	.57	.60	.55	.41	1.0														
7	Executive	.13	.12	.21	.14	.08	.16	1.0													
8	Male	-.08	-.02	-.04	-.03	-.02	-.02	.12	1.0												
9	Racial minority	-.01	-.01	-.05	-.03	-.02	-.04	.08	-.03	1.0											
10	10 years at agency	.00	.02	-.03	.01	.00	-.01	-.29	-.03	-.04	1.0										
11	10 years in position	.07	.07	.10	.05	-.02	.10	.21	.02	-.01	.22	1.0									
12	Police department	.01	.02	.08	.05	.05	.00	.10	-.05	.08	-.07	-.09	1.0								
13	Midwest	.01	.03	.03	.01	.03	.02	.12	.05	-.08	.04	.08	-.10	1.0							
14	South	.04	.04	-.02	-.06	.02	-.02	-.14	-.01	.09	-.05	-.03	-.05	-.42	1.0						
15	West	-.01	-.02	.01	.06	.01	.03	-.05	-.05	.02	.01	-.05	.06	-.34	-.43	1.0					
16	Large city	-.05	-.02	-.11	-.03	-.01	-.09	-.29	-.12	.04	.12	-.05	-.07	-.08	.10	.03	1.0				
17	Collective efficacy	.46	.43	.45	.38	.31	.44	.17	.01	.06	-.01	.12	.10	-.02	-.01	.04	-.09	1.0			
18	Disorder	-.13	-.13	-.27	-.07	-.10	-.13	-.09	.00	.07	.12	.04	-.06	-.06	.07	-.04	.20	-.15	1.0		
19	Perceived risk	.15	.17	.19	.12	.12	.08	.13	.01	.03	.01	.06	.03	-.04	.08	-.08	-.13	.25	-.01	1.0	
20	Legal cynicism	-.52	-.48	-.47	-.48	-.37	-.44	-.12	.01	-.04	-.02	-.07	-.14	.00	.06	-.07	-.01	-.38	.14	-.03	1.0

Table D.2. Low Crime Area Variables

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Procedural justice	1.0																			
2	Distributive justice	.69	1.0																		
3	Performance	.66	.57	1.0																	
4	Trust	.62	.54	.55	1.0																
5	Obligation to obey	.38	.35	.31	.31	1.0															
6	Cooperation	.51	.47	.49	.53	.29	1.0														
7	Executive	.09	.10	.12	.10	-.02	.03	1.0													
8	Male	.00	.05	.03	-.01	-.02	-.01	.12	1.0												
9	Racial minority	-.01	-.04	-.02	.00	-.03	.00	.08	-.03	1.0											
10	10 years at agency	.02	.02	.01	-.01	.04	-.01	-.29	-.03	-.04	1.0										
11	10 years in position	.04	.02	.07	.01	-.08	.00	.21	.02	-.01	.22	1.0									
12	Police department	-.05	-.07	.00	-.03	-.01	.00	.10	-.05	.08	-.07	-.09	1.0								
13	Midwest	.02	.06	.03	-.01	.04	.04	.12	.05	-.08	.04	.08	-.10	1.0							
14	South	.00	-.01	.01	.04	-.02	.02	-.14	-.01	.09	-.05	-.03	-.05	-.42	1.0						
15	West	.03	.02	-.03	.02	.05	-.04	-.05	-.05	.02	.01	-.05	.06	-.34	-.43	1.0					
16	Large city	-.06	-.05	-.08	-.02	.00	.02	-.29	-.12	.04	.12	-.05	-.07	-.08	.10	.03	1.0				
17	Collective efficacy	.43	.31	.44	.40	.22	.38	.11	.02	-.04	-.02	.09	.01	.05	-.05	.04	-.02	1.0			
18	Disorder	-.14	-.10	-.21	-.08	-.11	-.04	-.08	.01	.02	.10	.06	-.09	-.04	.10	-.06	.12	-.09	1.0		
19	Perceived risk	.12	.07	.18	.05	.15	.12	.13	.05	-.10	.03	.10	.11	-.04	-.03	-.03	-.06	.23	.01	1.0	
20	Legal cynicism	-.46	-.35	-.42	-.37	-.20	-.40	.02	-.03	.00	-.07	.04	-.06	.02	.04	-.07	-.07	-.30	.18	-.07	1.0

APPENDIX E: SURVEY INSTRUMENT

I. AGENCY & DEMOGRAPHIC INFORMATION

1. Agency Name:
2. City/County, State:
3. Respondent Position:
4. Rank:
5. Which of the following best describes your agency?
   - ☐ Municipal or County Police Department
   - ☐ Department of Public Safety
   - ☐ Sheriff's Office
   - ☐ Other (please specify):
6. How many full-time sworn officers/deputies does your agency employ?
7. About how many people would you say live in the jurisdiction you provide services to?
8. Would you say the crime rate in your jurisdiction is lower, about the same, or higher than other jurisdictions similar to yours?
   - ☐ Lower
   - ☐ About the same
   - ☐ Higher
9. Please indicate your gender:
   - ☐ Male
   - ☐ Female
10. With which of the following race/ethnicities do you most identify?
    - ☐ White/Caucasian
    - ☐ Asian
    - ☐ African American
    - ☐ Other (please specify):
    - ☐ Hispanic or Latino
11. How long have you worked in law enforcement?
12. How long have you worked at this agency?
13. How long have you been in your current position?

*For the remainder of the survey, please think of two areas within your jurisdiction—one that is highest in crime and another that has relatively low criminal activity. The questions then ask you to tell us how you think residents in each area would evaluate your officers/deputies or agency as a whole. Please answer each question separately for each area you are thinking about. Of course, one answer does not fit all situations so please simply think of the **average** citizen in each area.*

II. GENERAL PUBLIC VIEWS

Please tell us how much you think the average citizen in the highest crime area and a lower crime area of your jurisdiction would agree or disagree with the following statements regarding your agency:	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1. Residents feel the police make the right decisions for people in their area of residence.				
Residents in a high crime area→	1	2	3	4
Residents in a low crime area→	1	2	3	4
2. Residents are proud to work with our agency and its officers.				
Residents in a high crime area→	1	2	3	4
Residents in a low crime area→	1	2	3	4
3. Residents are happy to defend our agency in conversations with their friends.				
Residents in a high crime area→	1	2	3	4
Residents in a low crime area→	1	2	3	4

4. Residents agree with the values that guide the work of our agency.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
5. Residents believe the police can be trusted to make decisions that are right for the people in their neighborhood.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
6. Residents would encourage a family member/friend who was a victim of a crime to turn to the police.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
7. Residents believe they should accept decisions made by the police, even if they think the police are wrong.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
8. Residents believe they should do what the police say, even if they do not understand the reason for police actions.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
9. Residents believe they should do what the police say even if they disagree.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
10. Residents believe they should do what the police say even when they do not like the way they are being treated.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
11. Residents believe there are times when it is okay to ignore what the police say.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
III. CITIZEN PERCEPTIONS OF OFFICER DECISION-MAKING					
Please tell us how much you think the average citizen in the highest crime area and a lower crime area of your jurisdiction would agree or disagree with the following statements regarding your agency:		**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1. Residents believe officers make decisions based on facts, not personal interest.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
2. Residents believe officers allow the people involved to express their views before making a decision in a case.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4

3. Residents believe officers treat those they encounter with politeness and dignity.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
4. Residents believe officers respect the rights of the citizens they come in contact with.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
5. Residents believe officers take the time to listen to people.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
6. Residents believe the police enforce the law consistently when dealing with all people.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
7. Residents believe the police provide the same quality of service to all citizens.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
IV. CITIZEN PERCEPTIONS OF POLICE RESPONSE					
Please tell us how much you think the average citizen in the highest crime area and a lower crime area of your jurisdiction would agree or disagree with the following statements regarding your agency:		**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1. Residents believe the police are efficient in handling crime in their area of residence.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
2. Residents believe officers respond quickly when they call for help.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
3. Residents believe the police are effective in handling violent crimes in the community.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
4. Residents believe the police are effective in handling drug crimes in the community.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
5. Residents believe the police deal well with property crimes in the community.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4

6. Residents feel this is a safe community during the evening/night.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
7. Residents believe garbage along the streets is a problem.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
8. Residents believe graffiti in public spaces is a problem.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
9. Residents believe gangs hanging out on the streets are a problem.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
10. Residents believe people buying/selling drugs on the street are a problem.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
11. Residents believe people drinking alcohol on the street is a problem.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
12. Residents believe crime has been increasing in their community in the last year.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
13. Residents believe the crime rate is high in their neighborhood.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
14. Residents are willing to call the police to report a crime.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
15. Residents are willing to provide information to the police to help find a suspected criminal or solve a case.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
V. CITIZEN PERCEPTIONS OF THE LAW					
Please tell us how much you think the average citizen in the highest crime area and a lower crime area of your jurisdiction would agree or disagree with the following statements regarding the law:		**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1. Residents believe the law does not protect their interests.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4

2. Residents believe laws were made to be broken.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
3. Residents believe it is okay to break laws as long as they believe they aren't hurting anyone.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
4. Residents believe that there are no right and wrong ways to make money.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
5. Residents believe that fighting between friends or within families is nobody else's business.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
6. Residents believe that nowadays a person has to live pretty much for today and let tomorrow take care of itself.					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
VI. CITIZEN PERCEPTIONS OF ENFORCEMENT					
How likely do you think the average citizen in the highest crime area and a lower crime area of your jurisdiction feel it is that he/she would be caught and punished for breaking the following laws?		**Very Unlikely**	**Unlikely**	**Likely**	**Very Likely**
1. Parking their vehicle illegally					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
2. Littering					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
3. Making too much noise at night					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
4. Breaking traffic laws					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
5. Shoplifting					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4
6. Using illegal drugs in public places					
	Residents in a high crime area→	1	2	3	4
	Residents in a low crime area→	1	2	3	4

VII. CITIZEN PERCEPTIONS OF THEIR COMMUNITY				
Please indicate the extent to which you think the average citizen in the highest crime area and a lower crime area of your jurisdiction would agree or disagree with the following statements regarding the area in which they reside:	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1. People in this area are willing to help their neighbors.				
Residents in a high crime area→	1	2	3	4
Residents in a low crime area→	1	2	3	4
2. This area is a close-knit community.				
Residents in a high crime area→	1	2	3	4
Residents in a low crime area→	1	2	3	4
3. People in this area can be trusted.				
Residents in a high crime area→	1	2	3	4
Residents in a low crime area→	1	2	3	4
4. People in this area generally get along with each other.				
Residents in a high crime area→	1	2	3	4
Residents in a low crime area→	1	2	3	4
5. People in this area share the same values.				
Residents in a high crime area→	1	2	3	4
Residents in a low crime area→	1	2	3	4
Please indicate how likely you think it is that the average citizen in the highest crime area and a lower crime area of your jurisdiction would do something if:	**Very Unlikely**	**Unlikely**	**Likely**	**Very Likely**
6. Teenagers were skipping school and hanging out on a street corner				
Residents in a high crime area→	1	2	3	4
Residents in a low crime area→	1	2	3	4
7. Teenagers were spray-painting graffiti on a local building				
Residents in a high crime area→	1	2	3	4
Residents in a low crime area→	1	2	3	4
8. Teenagers were showing disrespect to an adult				
Residents in a high crime area→	1	2	3	4
Residents in a low crime area→	1	2	3	4
9. A fight broke out near their home				
Residents in a high crime area→	1	2	3	4
Residents in a low crime area→	1	2	3	4

Thank you for participating in this survey. If you have any additional comments, please provide them in the space below.