Hispanics' and Undocumented Immigrants' Perceptions of Procedural Justice,

Legitimacy, and Willingness to Cooperate with the Police:

An Assessment of the Process-Based Model of Policing

by

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ABSTRACT

The role of the American police is to work for and with the
communities they serve. The relationship between police and community,
however, has not always been a positive one. In recent decades, police
organizations throughout the United States have attempted various
approaches to addressing the problem. Most recently, they have been
focused on improving that relationship by enhancing their legitimacy. This
practice is commonly known as the process-based model of policing:
theoretically, a procedurally just interaction will enhance legitimacy,
which in turn will enhance willingness to cooperate with the police. The
benefit for police agencies in enhancing legitimacy lies in the idea that
when the police are perceived as a legitimate entity, the public will be
more likely to cooperate with them. Enhancing police legitimacy also
offers benefits for the public, as this is preceded by a procedurally just
interaction.

The goal of this dissertation is to assess the applicability of the
process-based model of policing to an under-studied population: Hispanics
and undocumented immigrants residing within Maricopa County, Arizona.
The analysis for this dissertation uses data from two different sources: a
sample of Maricopa County residents (n=854) and a sample of Maricopa
County arrestees (n=2268). These data are used to assess three research
questions. The first research question focuses on assessing the

applicability of the process-based model of regulation as a theoretical framework to study this population. The second research question compares Hispanic and White respondents' views of procedural justice, police legitimacy, and how these perceptions relate to their willingness to cooperate with the police. The last research question examines the differences between undocumented immigrants' and U.S. citizens' perceptions of procedural justice, police legitimacy, and how these perceptions relate to their willingness to cooperate with the police. In doing so, this study examined the convergent and discriminant validity of key theoretical constructs. Among several notable findings, the results show that the process-based model of regulation is a promising framework within which to assess perceptions of the police. However, the framework was only supported by the sample of arrestees. Implications for theory, practice, and suggestions for future research are discussed.

DEDICATION

Con todo el amor del mundo, dedico mi carrera entera a mis padres, Antonia y Adolfo. Ustedes son mi más grande inspiración y por ustedes me levanto y sigo adelante cada día. A mi madre, de quien herede la fuerza para querer y saber perdonar. Gracias por enseñarme a ser paciente. A mi padre, de quien herede el coraje y la fuerza para luchar por lo que uno quiere. Gracias por siempre darle los mejores ejemplos. Espero un día poder pagarles un poco de todo lo que me han dado.

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About 10 years ago, while still an undergraduate student, I became a student worker at ASU. While working at the Center for Violence Prevention, I met Dr. Charles Katz. He has changed my life in many ways. To say I owe Chuck a debt of gratitude would be an absolute understatement. As a first generation college student, who migrated to the United States at the age of 17, the thought of pursuing a graduate education wasn't necessarily on my wish list. If it were not for Chuck, I would have never chosen this path. He encouraged me to pursue higher education and provided incredible opportunities that have completely changed my life. Over the last 10 years, Chuck has become my mentor, friend, and big brother. He believes in me more than I could ever believe in myself and for that I will always be grateful.

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CHAPTER ONE

INTRODUCTION

Since the establishment of the American police, the role of the police has

been to work for – and with – the communities they serve (Goldstein, 1990;

Kelling & Moore, 1988). As recently as May 2015, the introduction to the

President's Task Force on 21st Century Policing Final Report highlighted the

importance of building, developing, and maintaining police legitimacy, asserting

that the philosophical mission of the Task Force was to identify recommendations

"to build trust between citizens and their peace officers so that *all components of*

a community are treating one another fairly and justly and are invested in

maintaining public safety in an atmosphere of mutual respect" (emphasis added)

(p. 2).

From the beginning, the social issues of the era have affected the

relationship between the police and the public. During the mid 1800s police were

required to enforce Jim Crow laws (William & Murphy, 1990), then later were

required to enforce immigration laws and deport noncitizens (Romero, 2006). The

duality in the roles of the police affected the relationship between the police and

communities of color.

Even during and after the Civil Rights movement of the mid 1900s, which

sought social justice for all, police organizations in many parts of the United

States remained notorious for engaging in excessive and unjustified use of force

and discriminatory practices (Fyfe, 1988; Walker, 1980). This often resulted in

the development of negative relations between the police and the community,

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particularly with racial and ethnic minority populations. Consequently, police in many communities across the nation lost the trust of the public and were viewed as lacking legitimacy.

In recent decades, police organizations throughout the U.S. have been working to establish a positive relationship with the communities they serve. Through research and practice, it has been determined that in order for the public to obey, respect, and collaborate with the police, it must be able to view the police as legitimate (Tyler & Fagan, 2008). Researchers and policymakers alike have been working on further identifying the meaning of legitimacy within a police organization and the ways in which legitimacy can be achieved (Tyler, 1990; 2004; Mazerolle et al., 2012). It has been determined that, at least in part, in order for the police to be perceived as legitimate, they must exercise fair treatment (Tyler, 1990). As suggested by some scholars (e.g., Tyler, 1990), therefore, fair treatment can be expected to enhance police legitimacy.

The value of legitimacy for a police organization lies in the "moral obligation" to obey the law that legitimacy enacts on the public. When a police organization is perceived as legitimate, the public is more likely to support its actions and those of the actors representing the police organization, and to perceive those actions as appropriate and just (Tyler, 1990). It is hypothesized that in turn, this enhances public willingness to cooperate and comply with the police (Sunshine & Tyler, 2003), thus providing an environment in which the police can be more efficient and effective (Mastrofski, Snipes, & Supina, 1996; Murphy & Cherney, 2011). As demonstrated by current social events (e.g., current police-

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community conflicts in New York City, Ferguson, Baltimore, and other cities across the United States), depleted levels of legitimacy can have meaningful negative consequences for a police department (e.g., decreased public willingness to cooperate and comply with the police).

Although a number of correlates to legitimacy have been discussed (see Mazerolle et al., 2012), the most often examined and widely supported correlate to legitimacy is procedural justice. That is, if the public views the police as exercising procedurally just behavior (e.g., fair treatment), the public is more likely to perceive the police as legitimate (Tyler, 1990). These presuppositions lead to a theoretical framework known as the process-based model of regulation (Tyler, 1990; 2006). According to this framework, procedural justice will enhance legitimacy and, in turn, legitimacy will enhance the public willingness to cooperate with the police. Consequently, individuals obey the law due to normative factors (e.g., because it is the "right" thing to do) rather than instrumental factors (e.g., because they have been deterred by the criminal justice system).

Current events speak clearly to the importance of establishing and maintaining a positive relationship between the police and their communities and of establishing and maintaining legitimacy, particularly with communities of color (see White & Fradella, 2016). The current social climate surrounding the events of Ferguson, New York City, Baltimore, and many other cities that have experienced conflict between the police and the community has once again highlighted the detrimental consequences of failing to achieve procedural justice

and legitimacy. A discussion on this topic, therefore, becomes imperative if one is to understand the current state of the relationship between the police and the community, the development of global views of the police, and the perceptions of procedural justice and police legitimacy.

Although police procedural justice and legitimacy is important for all communities, it is of particular concern for communities of color, as these tend to hold negative global views of the police in general (Webb & Marshall, 1995; Weitzer, 2000), and negative views of procedural justice and legitimacy specifically (Correia, Reisig, & Lovrich, 1996; Rice & Piquero, 2005). The views of Blacks have been studied extensively, but relatively few studies have focused on assessing perceptions of Hispanics.[1] Over the past 15 years, the number of Hispanics in the United States has grown substantially and, according to the Pew Research Center, Hispanics account for more than half of the nation's population growth since 2000 (Passel & Cohn, 2008). Further, according to the U.S. Census Bureau (2010), Hispanics are the most populous minority group in America and account for 16.7 percent of the nation's population. Learning about Hispanic perceptions of police, therefore, is crucial for police agencies and communities alike.

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[1] The terms *Hispanic*, *immigrant(s)*, and *undocumented immigrant(s)* are used throughout this dissertation. These terms are mutually exclusive and will not be used interchangeably. Unless otherwise noted, *Hispanic* refers to the ethnic background of the individual. *Immigrant(s)* refers to anyone not born in the United States. *Undocumented immigrant(s)* refers to individuals who are immigrants without a status that allows them legally to live in the United States.

The limited understanding of the relationship between the police and the Hispanic community is confounded by the fact that much of the growth of the Hispanic population is due to the influx of immigrants from Latin America (Passel & Cohn, 2008). The Migration Policy Institute estimates that as of 2013, approximately 40 million immigrants live in the United States, most of them having migrated from Latin American countries (Zong & Betalova, 2015). Further, it has been estimated that about 11 million of those immigrants are undocumented. Yet, to date, the study of the relationship between immigrant communities and the police has been minimal at best (for some exceptions, see Provine et al., 2016; Pryce, 2016). "Law enforcement agencies should build relationships based on trust with immigrant communities. This is central to overall public safety," states The President's Task Force on 21st Century Policing (2015, p. 17). Without empirical research, however, it would be difficult to provide guidance to police agencies on how to accomplish this.

The purpose of this dissertation is to build upon and extend existing research that addresses racial and ethnic minority perceptions of the police, specifically of Hispanics and undocumented immigrants. This study will assess Hispanic perceptions of police procedural justice and legitimacy in comparison with White perceptions, and will assess undocumented immigrant perceptions of police procedural justice and legitimacy compared those of U.S. citizens. Data for this study were collected by surveying residents and recently booked arrestees in Maricopa County, Arizona.

CHAPTER TWO

LITERATURE REVIEW

The Role of the Police in Society

Since the establishment of the London Metropolitan Police in 1829, the

police have been tasked with responsibility for crime control. Under this model,

the police are to deter, arrest, and incapacitate criminals for the purpose of

reducing crime. The emphasis on the police as crime fighters has persisted despite

much prior research indicating that police officers spend the majority of their time

on non-crime related tasks such as order maintenance and service activities. For

example, Scott's (1981) analysis of data from 24 law enforcement agencies

showed that 80 percent of calls for service were for non-crime-related incidents

such as information sharing, dispute resolution, public nuisances, and traffic

problems (see also Reiss, 1971; Manning, 1978; Walker, 1980).

Regardless, much of the discussion about the police role has centered on

the unique position that police hold in society. The seminal work of Bittner

(1975), for example, emphasized that the police capacity to use force is at the

center of the police role. Unlike others, he explains, the police have the authority

to detain, arrest, search, and use force to perform their responsibilities. Although

the police are not permitted to use force in all situations, those with whom they

come into contact typically understand that the police are authorized to use force

when appropriate and that officers are armed with a weapon and can use deadly

force if required. Walker (1992) and the American Bar Association (1973)

expanded on this by noting that the police are available to the public 24 hours a day, seven days a week, when others are not available to provide assistance. As a consequence, police are often called in as generalists to solve a variety of problems such as disputes between neighbors, medical emergencies, and various forms of disorder, delinquency, and criminality. Goldstein (1977) argues that the central role of the police is to maintain social control and solve problems, while at the same time maintaining the public's constitutional rights. The police fulfill this role by responding to problems associated with order maintenance and crime. Similarly, Van Maanen (1974) argued that the role of the American police in society is to respond to a "moral mandate" for justice in situations where individuals have violated societal norms (see also Manning, 1978).

From the 1930s through the 1980s, as a means of enhancing legitimacy and to further focus their role in society, the police sought to remove themselves from political influence, which had historically been the source of much of their authority. The police emphasized that their core function was crime fighting and stipulated that if it were not for all of the "social work" they had to do, they would be able to be much more effective at their job (Kelling & Moore, 1988: 11). During this period, the police adopted a more classical theory of police administration where law enforcement agencies embraced a stronger "pyramid of control," line-level officers held less authority, and higher ranking officers had more authority. Police leaders sought innovative strategies to increase productivity through the routinization of policing for the purpose of increasing activity.

Most police agencies during this period also sought to increase the professionalism and perceived expertise of the police in fighting crime and to redefine the role of the public in terms of passive recipients of professional policing services (Kelling & Moore, 1988). Much like doctors, dentists, lawyers, and accountants who provide professional services to their clients, the police emphasized that they were the experts in the field of crime fighting and the public should defer to them for assistance. A number of scholars such as Muir (1977) and Goldstein (1977) attempted to identify the ideal characteristics of a "professional officer" for the purpose of facilitating organizational change through revised hiring and training practices. Drawing from the work of Weber on what constitutes a professional government official, Muir (1977), for example, described the role of police officers as "street-corner politicians" and developed a typology that described a professional (i.e., good) police officer. Muir suggested that "good" officers should have passion and perspective (i.e., these officers would understand the importance of the use of coercive force and would possess empathy). Muir also described the characteristics of non-professional policemen who lacked one or both of these characteristics: officers with perspective but no passion (reciprocators), passion but no perspective (enforcers), and those policemen with neither passion nor perspective (avoiders).

Within this broader discussion of professionalism and police behavior, increased attention was placed on police use of force. Muir suggested that over reliance on coercion and use of force could contribute to "bad policing." He further emphasized that for the police to do their job, the public must agree to an

informal social contract that grants freedom to exercise an amount of power that would otherwise be viewed as illegitimate. For example, as discussed above, the police are granted the authority to deprive the public of their liberty and are allowed to use force – including deadly force (Bittner, 1970; see also Skolnick & Fyfe, 1993).

However, police officers during this time were not necessarily well trained to use such authority. In fact, Bittner (1970) conveyed that "the only instructions any policeman ever receives in this respect consists of sermonizing that he should be humane and circumspect, and that he must not desist from what he has undertaken merely because its accomplishment may call for coercive means" (p. 124). According to Bittner, police officers were informally but routinely encouraged to use force, even when it might be viewed as excessive. This necessarily prolonged the poor relationship between the police and some segments of the public (see Greene, 2000). Although the conflict between the police and the public has persisted since the establishment of the American police, tensions were strongest during the mid 1900s when social movements, such as the Civil Rights movement, were at their zenith. It was also during this time that differential treatment – particularly as it relates to ethnic and racial minorities – and biased police practices were more publically recognized and publicized (Walker, 1984; Williams & Murphy, 1990). This resulted in a further strained relationship between the police and the public, and prolonged and intensified negative attitudes toward the police and a loss of police legitimacy.

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In an attempt to address these strained relationships, police organizations have implemented numerous reforms over the last several decades, such as policies and practices that control the use of force and discretion (Fyfe, 1988; Walker, 1993). Many American police agencies have also instituted community policing with the purpose of fostering stronger relationships between the police and the community (Kelling & Moore, 1988). Since the development of community policing, police agencies have continued to work with their communities to identify and solve problems that are the most important to the public. Similarly, the implementation of problem-oriented policing (POP) has helped further strengthen the relationship between the police and the public (Goldstein, 1990). According to Goldstein (1990), POP "has implications for every aspect of the police organization" and "connects with the current move to redefine the relationship between the police and the community" (p. 3).

More recently, attention has been placed on increasing police legitimacy for the purpose of strengthening community capacity to control crime. These operational strategies seek to enhance police legitimacy for the purpose of increasing reports of crime, providing increased and better intelligence, and in general achieving greater cooperation between the police and the public. The "process-based model" theorizes that those police agencies that are perceived to be more legitimate by the public will be more likely to control crime (Reisig & Lloyd, 2009).

Procedural Justice and Legitimacy: The Process-Based Model of Regulation

Defining Legitimacy

Prior to the 1990s, the instrumental model had been dominant in the study of law-abiding behavior.[2] Drawing from rational choice and deterrence perspectives (see Nagin, 1998), on the one hand the instrumental model suggests that crime-related behaviors are motivated by self-interest. That is, through a cost-benefit "analysis," individuals decide whether it is in their best interest to engage in criminal behavior. If the risks involved in engaging in crime are "worth" the benefit, individuals are more likely to opt to engage in crime. On the other hand, if the individual perceives a high likelihood of punishment, they may be deterred from engaging in crime. Therefore, according to this perspective, behavior is dictated by perceived sanctions and/or benefits (Nagin, 1998; Tyler & Fagan, 2008). Police and other criminal justice agencies rely on this "rational choice" model to inform their understanding of human motivation to control crime. The instrumental model of crime control can be observed in such public policies as increased citations, "zero-tolerance" policing, and more arrests, among other sanctions. It was believed that increased threats of punishment and harsher penalties would deter the public from committing crimes. Further, legal authorities attempted to gain cooperation by offering rewards for compliant behavior (Tyler, 1990).

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[2] Tyler (1990) also refers to the instrumental model as social control and public choice perspectives.

Although the instrumental model was widely accepted by criminal justice policymakers and practitioners for a number of decades, its effectiveness on crime control began to be questioned during the latter part of the 1900s as academics and others challenged the reliability, assumptions, and propositions of rational choice/deterrence perspective. For example, a relatively large body of literature has reported that for many offenders the perceived benefits of crime outweigh the costs of possible punishment (Piliavin et al., 1986; Piquero & Tibbetts 1996; Tittle & Botchkovar, 2005). As research continued to demonstrate that the effects of deterrence were often temporary and not nearly as strong as expected (Ross, 1984; Sherman, 1990), deterrence theory became less influential in policymaking and in criminology and criminal justice.

As reliance on the instrumental model decreased, social theorists concomitantly began to encourage policymakers to develop and adopt policies reflecting assumptions of the normative model. [3] The normative model relies on the assumption that individuals obey the law because of their *normative* values, which are reflective of personal ethical views rather than societal pressures (Tyler, 1990). That is, societal norms are internalized by the individual to the extent that they become "personal norms" that guide one's behavior even when external authority is not present.

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[3] Throughout his work, Tyler refers to the normative model as legitimacy, social norms model, self-regulation model, and value based model (see Tyler, 1990, 2006, 2009; Tyler & Fagan, 2008). In this review, however, the normative model will be referred to as legitimacy.

Within agencies and institutions, the normative model is often referred to as *legitimacy*. Operationalized in terms of *trust* and normative *obligation* to obey the law (Tyler, 1990; Sunshine & Tyler, 2003),[4] legitimacy is defined as a normative characteristic of institutions that allows them to be perceived as having the right or authority to exercise power (Tyler, 2006). Drawing from the work of Weber (1968), Tyler defines legitimacy as "a psychological property of an authority, institution, or social arrangement that leads those connected to it to believe that it is appropriate, proper, and just" (Tyler 2006, p. 271; see also Tyler, 2003). That is, individuals engage in a form of self-regulation and "follow orders" because it is "the right thing to do." Individuals comply with the law and rules due to the influence of normative factors rather than instrumental factors (see Tyler & Fagan, 2008).

Police Legitimacy

As it relates to policing, the importance of legitimacy lies in the need for cooperation and compliance from the public. That is, in order for the police to be efficient and effective in their role as protectors and crime fighters, they need the public to willingly share information and to cooperate and comply. Some have even suggested that, given the role of the police as "gatekeepers" of the criminal justice system, views of police legitimacy can influence views of the entire criminal justice system as legitimate (or not). For example, Murphy (2009) suggested that if the police are viewed as legitimate and are thought of as

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[4] More recent research has started to question this operationalization (e.g., Gau, 2014; Reisig, Bratton, & Gertz, 2007) and some of these arguments will be discussed in detail in later sections.

trustworthy, the courts and correctional system will be more likely to be viewed as legitimate, as gains or losses in legitimacy in one part of the criminal justice system can influence legitimacy in another part of the criminal justice system.

A substantial number of empirical studies have examined the role and importance of police legitimacy. Overall, it has been demonstrated that legitimacy plays a role in fostering positive police-community relationships (Sunshine & Tyler, 2003) and in enhancing willingness to cooperate and comply with the police (Sunshine & Tyler, 2003; Reisig, Bratton, & Gertz, 2007).

Achieving Police Legitimacy

Researchers have suggested that perceptions of legitimacy are developed through individual-level encounters with police officers (Mastrofski, Snipes, & Supina, 1996; McCluskey, Mastrofski, & Parks, 1999; Skogan, 2006; Frydl & Skogan, 2004; Tyler 2003, 2004).[5] That is, characteristics of the interaction between the police and the public can shape the public's perception of police legitimacy. Researchers have studied these incident-level characteristics and identified "pathways" that might lead to increased police legitimacy. For example, a systematic review of police legitimacy by Mazerolle and colleagues (2012) identified five unique pathways (or correlates) to higher levels of police legitimacy. These include tradition, legality, high police performance, distributive justice, and procedural justice. These pathways are presented in figure 1.

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[5] It has also been suggested that perceptions of police legitimacy can be developed vicariously. For example, one can perceive the police as less legitimate if the police have mistreated a friend or family member (see Gau & Brunson, 2010). The correlates discussed here are those identified by Mazerolle, Bennett, Davis, Sargeant, and Manning (2012).

Figure 1: Theoretical Model of "Pathways" to Police Legitimacy as Proposed by Mazerolle and Colleagues (2013)
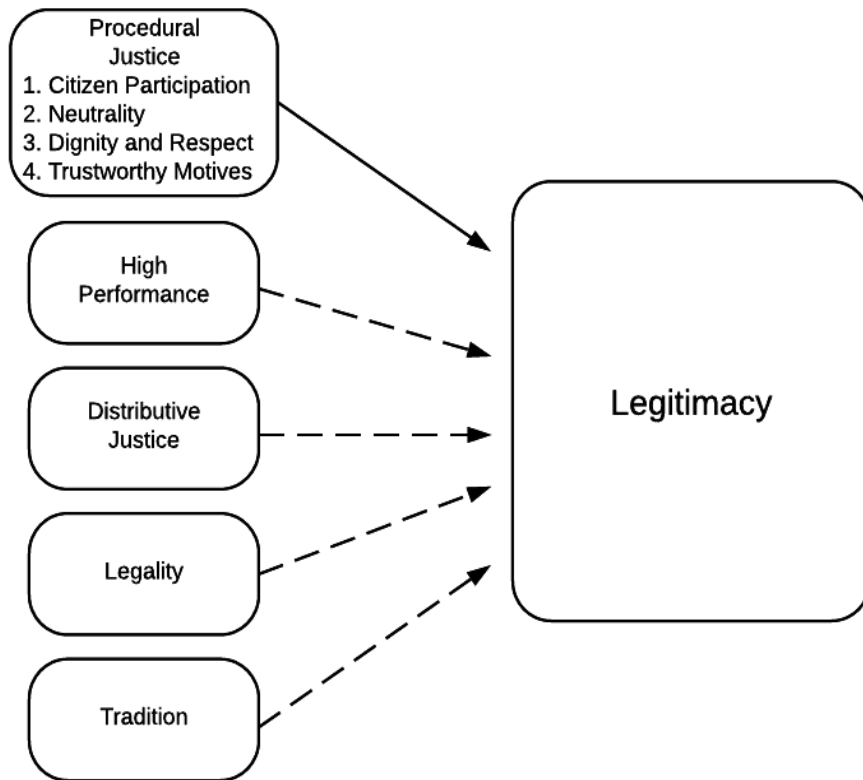
Source: Mazerolle, Bennet, Davis, Sargeant & Manning (2013)

"Tradition" suggests that perceptions of police legitimacy can be related to traditional and/or historical perceptions of the police. These perceptions might be derived from a micro perspective, such as generational family perspectives (e.g., a "law enforcement family"), or from a much larger macro-level perspective of the police, such as a historical negative relationship with the community (e.g., negative relationship with the racial/ethnic minority community). Legitimacy of

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the law, or legality, refers to the public's perception of the *actual law* as legitimate, rather than the legitimacy of those who enforce the law (Jackson, Bradford, Hough, & Murray, 2011; Jackson, Bradford, Hough, Myhill, Quinton, & Tyler, 2012). Police performance relates specifically to perceptions of *how* the police do their job. For example, if the public perceives the police as performing their job well, they are more likely to view the police as legitimate (Hinds & Murphy, 2007). Distributive justice refers to perceptions of *what* the police do; the public will perceive the police as fair if the levels of engagement, police services, and so forth are distributed in a fair manner (Engel, 2005; Murphy & Cherney, 2011). Last, the authors identified perceptions of procedural justice as a correlate to police legitimacy. According to Mazerolle and colleagues (2012), a procedurally just interaction between the police and the public is characterized as being inclusive of the public's opinions, neutral (or fair), respectful, and guided by trustworthy motives. Among the five different pathways, procedural justice is the most widely examined correlate to legitimacy (Sunshine & Tyler, 2003; Tyler & Huo, 2002; Murphy & Gaylor, 2010; Reisig, Tankebe, & Mesko, 2014) and has been suggested as the main antecedent to legitimacy (see Mazerolle et al., 2013; Sunshine & Tyler, 2003; Tyler, 1990).

Procedural Justice as a Theory

Among the first to develop the concept of procedural justice were Thibaut and Walker (1975) and Leventhal (1980). Thibaut and Walker (1975) conceptualized procedural justice in terms of the public's perceptions of their treatment by and satisfaction with the criminal justice system. They suggested that

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the degree of "control" exerted by the public during the interaction would determine their perceptions of procedural justice. Thibaut and Walker (1975) defined control in two ways: (1) process control (i.e., control over the process of the interaction) and (2) decision control (i.e., control over the final decision).

Leventhal (1980) further developed the concept of procedural justice. Like Thibaut and Walker (1975), he emphasized the importance of process control (or the representation of the public in the decision-making process), but further specified the concept by identifying the factors that influence fair judgments (e.g., bias suppression, ethicality, etc.). Specifically, Leventhal (1980) suggested that the public focuses on six aspects of the interaction between the public and the legal system, which in turn influence their perceptions of procedural justice. These aspects, referred to as "criteria," include consistency in treatment, limited bias, quality and accuracy when making decisions, opportunity to correct unfair decisions, representation in the decision-making process, and ethicality. According to Leventhal (1980), encounters defined by these criteria will be perceived by the public as procedurally fair.

A number of contemporary scholars have sought to further examine the key concepts associated with procedural justice. Tyler and Wakslack (2004) argue that there are three "criteria"[6] that must be met in order for an encounter to be perceived as procedurally just: "(1) quality of decision making – perceived

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[6] When defining procedural justice, Tyler and Wakslack use three specific criteria to describe the operationalization of procedural justice. However, these specific criteria are not used throughout the larger body of literature on procedural justice and police legitimacy and recent research has begun to question this operationalization. These arguments and other measurement issues are discussed in later sections.

neutrality and consistency; (2) quality of treatment – being treated with dignity and respect, having one's rights acknowledged; and (3) trustworthiness – believing that the authorities are acting out of benevolence and a sincere desire to be fair" (p. 225). According to the authors these criteria represent the essential elements of procedural justice and, if these "criteria" are met, individuals are more likely to believe they have been treated in a procedurally just manner.

Over the past forty years, the ways in which scholars have applied procedural justice have been diverse. As a theory, procedural justice has been used to describe interactions with actors in the criminal justice system (Leventhal, 1980; Thibaut & Walker, 1975; Tyler, Rasinski, & Spodick, 1985; Tyler, 1988). Procedural justice has also been used to understand citizen compliance with rules, as well as regulations and acceptance of those decisions made by the criminal justice system. These findings have held steady even when controlling for the type of outcome received. For example, while examining data collected from Illinois residents through a telephone survey, Tyler and Folger (1980) tested the hypothesis that procedures used to resolve a dispute would have an effect on the public's satisfaction with police performance. Their findings supported their hypothesis and indicated that "the procedures utilized to resolve a dispute have an impact upon satisfaction that is independent of outcomes received" (p. 281). Similarly, and related to police-community interactions, the authors found that – regardless of whether the contact was citizen or police-initiated – the public's perception of fairness of treatment played a role in their satisfaction. This finding remained despite the outcome of the interaction (e.g., whether the police solved

the problem for which they were called or whether the citizen was cited) (see also Wells, 2007).

Prior to the 1990s, procedural justice had been used as a stand-alone theoretical framework to assess perceptions of fair treatment. However, in 1990 procedural justice was adopted and incorporated into a larger theoretical model. In his seminal book *Why People Obey the Law*, Tom Tyler (1990) proposes the process-based model of regulation as a framework that suggests that procedural justice is an antecedent to legitimacy. Essentially, the model proposes that perceptions of legitimacy are preceded by perceptions of procedural justice, and willingness to cooperate and/or comply with the criminal justice system is generated by perceptions of legitimacy (see figure 2). For example, as it relates to policing, legitimacy will be achieved if the individual believes that the police officer acted in a fair – or procedurally just – manner, and this legitimacy will translate into greater willingness to comply with requests and cooperate with the police (Sunshine & Tyler, 2003). In this sense, procedural justice is essential for fostering positive views of legitimacy. Consequently, the process-based model of regulation suggests that procedural justice is a foundational component of the framework.

Figure 2. Basic Depiction of the Process-Based Model of Policing
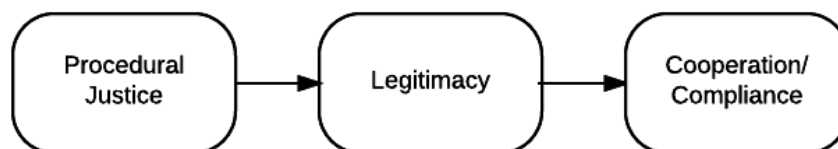
Since the emergence of this model, a substantial number of studies have examined the relationship between procedural justice and legitimacy, and the effect of the two on cooperation and compliance with the police. Employing diverse methodologies (e.g., Gau, Corsaro, Stewart, & Brunson, 2012; Mazerolle, Antrobus, Bennett, & Tyler, 2013; Murphy, Mazerolle, & Bennett, 2014; Papachristos, Mears & Fagan, 2012; Paternoster, Brame, Bachman, & Sherman, 1997) and using diverse samples (e.g., Hurst & Frank, 2000; Laxminarayan, 2012; Livingston, Desmarais, Greaves, Parent, Verdun-Jones, & Brink, 2014; Murphy, 2013; Hinds, 2007; Papachristos, Mears, & Fagan, 2012; Piquero, Fagan, Mulvey, Steinberg, & Odgers, 2005), this body of research has found empirical support for the positive effects of procedural justice on legitimacy (see Mazerrolle et al., 2013; Sunshine & Tyler, 2003; Tyler & Huo, 2002).

The Process-Based Model of Policing

Since the emergence of community policing in the 1980s and 1990s, practitioners and policing scholars have started to think of police-citizen encounters in terms of procedural justice *and* legitimacy (Kelling & Moore, 1988; Bayley & Mendelsohn, 1968; Reiss, 1971). As stated above, during this time police agencies were interested in developing more positive relationships with the community and were placing more focus on personal interactions (Skogan, 2006). Skogan contends that negative police-citizen interactions "matter" more than positive ones, as negative interactions are more likely to be remembered and to result in negative perceptions of the police (as high as a 7 to 1 ratio). However, there are various characteristics of the interaction that may play a role in the

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process of developing global perceptions of the police, as well as perceptions specific to procedural justice and police legitimacy. As noted above, procedural justice has been one of the most widely studied "pathways" to achieving legitimacy. Over the past couple of decades, dozens of studies have examined the relationship between procedural justice and legitimacy. Employing diverse methodologies and operationalization of key constructs, this body of literature has, for the most part, supported the notion of procedural justice as the main antecedent to legitimacy (for some examples, see Sunshine & Tyler, 2003; Reisig, Bratton, & Gertz, 2007).

Procedural Justice, Legitimacy, and Police Cooperation/ Compliance

Although fewer in number, some studies have examined the full process-based model of regulation: whether procedural justice serves as a predictor of legitimacy and whether in turn procedural justice and legitimacy have an effect on willingness to cooperate or comply with the police (Figure 2).

One of the earliest and most influential pieces of literature in the procedural justice-legitimacy-cooperation/compliance framework is the work of Sunshine and Tyler (2003). In this study, the authors concluded that fair treatment can have positive implications as the public will be more likely to perceive the police as legitimate, engage in self-regulation, and comply when requested. Tyler and Fagan (2008) reached similar conclusions. In their study of New York City residents, the authors found that positive police-community interactions can enhance police legitimacy and that legitimacy shapes willingness to cooperate with the police, specifically as it relates to fighting crime. The authors concluded

that the value of legitimacy for police agencies lies in the way legitimacy can shape people's behavior.

A relatively recent study of Australian citizens conducted by Mazzerolle and colleagues (2013) analyzed data collected through the first randomized field trial experiment testing the impact of police-citizen encounters on views of the police. While being stopped by the police during a roadblock operation, participants in the control group were treated "as usual" by the police, meaning that little interaction took place during the stop. Participants in the experimental group experienced procedurally just treatment, as officers interacting with these participants were instructed to follow a script that emphasized the four elements of procedural justice: citizen participation, dignity and respect, neutrality, and trustworthy motives (p. 40). The goal of the study was to test the impact of police-initiated procedurally just encounters on citizens' specific attitudes, and how these attitudes affected generalized perceptions of legitimacy, cooperation, and satisfaction with the police. The results revealed that perceptions of procedural justice had an effect not only on specific attitudes, but also on the general views of the police. These effects were also present in the relationship between procedural justice and legitimacy, as procedural justice predicted satisfaction with the police, and legitimacy was found to be a "guiding factor" for willingness to cooperate with the police (p. 56). The authors concluded that the police in fact have much to gain from positive police-community interactions.

Reisig, Tankebe, and Mesko (2014) tested the full process-based model by examining whether procedural justice predicted legitimacy and, in turn, whether

legitimacy predicted compliance. Using a European sample, the authors found that perceptions of procedural justice predicted perceptions of legitimacy and these, in turn, predicted willingness to cooperate with the police. Similarly, Hough et al. (2010) found that procedural justice (measured as trust in the police) was a strong indicator of police legitimacy and that police legitimacy was a powerful predictor of compliance. The authors concluded that the process-based model held true in the United Kingdom.

Support for the process-based model has also been found among arrested individuals. In a recent study of recently booked arrestees in Maricopa County, White and colleagues (2016) found that perceptions of procedural justice were positively and significantly related to perceptions of police legitimacy. Further, perceptions of legitimacy were strong predictors of willingness to cooperate with the police. These findings held regardless of the type offense for which the arrestee was charged.

Furthermore, research has demonstrated the importance of public cooperation for the police to be able to do their job (Mastrofski, Snipes, & Supina, 1996; McCluskey, Mastrofsky, & Parks, 1999; Murphy & Cherney, 2011). In their study of Australian citizens, Murphy and Cherney (2011) found that procedural justice and legitimacy enhanced public cooperation, which allowed the police to perform their job in a more efficient and effective manner. Mastrofski, Snipes, and Supina (1996) also found support for this idea. In their study, the authors found that when officers engaged in behavior that "undercut" their legitimacy, the public was less willing to comply with their requests. In their

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conclusion, the authors suggested that officers who engaged in pro-community policing tactics tended to be successful at achieving their goals.

Despite this support, a number of questions regarding the durability and applicability of the framework have come to light during recent years. These questions surround the conceptualization and operationalization of procedural justice and legitimacy, and the nature of the relationship between procedural justice and legitimacy has recently been questioned.

Methodological Concerns

Until recently, few prior studies have addressed the ways in which procedural justice and legitimacy are measured, the consistency of definitions and usage across studies, and whether or not the operationalization of the scales are consistent with the conceptualization of the theoretical construct.[7] Academics and researchers have increasingly raised concerns about these inconsistencies and have questioned the validity and reliability of procedural justice and legitimacy (see Gau, 2011, 2014; Johnson, Maguire, & Kuhns, 2014; Reisig, Bratton, & Gertz, 2007; Reisig, Tankebe, & Mesko, 2014). Their questions revolve around the conceptualization (the way in which the idea being studied is defined) and the dimensionality (the way in which the idea being studied is measured – how many dimensions there are) of the two constructs, and the operationalization (survey

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[7] The words *concept* and *construct* are used here interchangeably. These terms refer to procedural justice and/or legitimacy, except where otherwise noted.

items being used to measure the concept) of both procedural justice and legitimacy.[8]

Reisig, Bratton, and Gertz (2007) were among the first to discuss these measurement issues. In their study, Reisig and colleagues were interested in testing the applicability of the process-based model of regulation, but more so, the authors were interested in testing the construct validity of legitimacy. Using a telephone survey of a sample of more than 400 participants collected from across the United States, the authors found support for the model: Procedural justice was found to be related to legitimacy, which is in turn was found to be related to cooperation and compliance. When examining the construct validity of procedural justice and legitimacy, however, the authors found that not all survey items loaded as theoretically hypothesized. Two survey items that were expected to load on the procedural justice component – [police] make decisions based on their own personal feelings and [police] don't listen to all citizens involved before deciding what to do – did not load on this hypothesized construct. Using factor-analytical procedures, the authors also assessed whether theoretically driven legitimacy survey items loaded in the hypothesized latent construct. They found that survey items that theoretically should load on the legitimacy construct were instead loading in two different latent constructs: "obligation to obey" and "trust." When

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[8] The terms *conceptualization*, *dimensions* and *dimensionality*, and *operationalization* are used throughout this review. *Conceptualization* refers to the way in which the idea being studied is defined, often relying on theoretical foundations. *Dimensions* or *dimensionality* refer to the way in which the concepts were measured (i.e., multidimensional, unidimensional). *Operationalization* refers to the survey items, indicators, or variables used to construct each dimension and, in turn, each concept (see Appendix A).

the authors disaggregated legitimacy, they found that "trust" was related to cooperation and compliance, but "obligation to obey" was not – this in spite of the fact that both items are widely reviewed as dimensions of legitimacy (Sunshine & Tyler, 2003). The authors encouraged other researchers to assess the process-based model of regulation through the use of different methodologies to identify "additional items reflecting hypothesized latent constructs" (2007, p. 21).

Towards a Reconceptualization

Others have argued that this body of research should assess the conceptualization of procedural justice and legitimacy with greater scrutiny (see Cherney & Murphy, 2011; Houghs et al., 2013; Johnson, Maguire, & Kuhns, 2014; Tankebe, 2013; Bottoms & Tankebe, 2012). Tankebe pushed the debate surrounding the conceptual meaning and dimensional structure of legitimacy even further by suggesting a new conceptualization for legitimacy. Drawing from some of his own previous work (Beetham, 1991; Bottoms & Tankebe, 2012), Tankebe argued that obligation to obey the law is neither a dimension nor a substitute for legitimacy, as suggested by Tyler (1990, 2006); rather, Tankebe argued, obligation to obey is its own concept. Using a sample drawn from Ghana, Tankebe posited legitimacy as being comprised of four dimensions: distributive fairness, procedural fairness, lawfulness (of the police), and effectiveness. Tankebe's reconceptualization of legitimacy includes perceptions of procedural justice and excludes conventionally used perceptions of trust and obligation to obey.

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Whether the focus is on using diverse analytical strategies or on re-conceptualizing procedural justice and/or legitimacy, this body of research is arguably at a critical point in its development, particularly due to the momentum and amount of attention it has received in past years. In spite of these differing ideas surrounding the advancement of this framework, researchers have yet to determine and assert the next steps in advancing this framework.

Assessing Procedural Justice, Legitimacy and Trust

Review of the items used to operationalize both procedural justice and legitimacy suggests that regardless of whether trust is part of Tyler's original conceptualization, and whether it is treated as a dimension or as a single survey item indicator, the concept is important to research on this theoretical framework (e.g., Hough et al., 2010; Nix et al., 2015). It is still unclear, however, how much the actual operationalization matters. For example, no research has tested whether a single item measuring trust in the police yields similar results to those of a multidimensional scale of legitimacy that includes trust. This is important for at least two reasons. First, knowing whether this has an effect on the outcomes of interest (i.e., cooperation and/or compliance) would allow for a better interpretation of the findings. If having trust in the police matters as much as viewing the police as legitimate, then policy implications can be targeted toward building trust between the police and the community they serve. Second, this would allow for a more robust argument for a reconceptualization of legitimacy. If trust does not impact legitimacy and, as some have argued, it is instead a dimension within procedural justice, then a more robust argument can be made

suggesting the reconceptualization not only of legitimacy (as suggested by

Tankebe), but of the entire process-based model of regulation framework.

Need for Advancing this Body of Research

The scholarship on procedural justice and police legitimacy has

highlighted the importance of individual characteristics and of how individual

characteristics may potentially affect the development of police perceptions. Race

and ethnicity (Gau & Brunson, 2010; Rice & Piquero, 2005) are among the

personal characteristics that have been found to have the strongest effects on

perceptions of procedural justice and police legitimacy. Arguably, these

perceptions come as a result of a history of strained relations between the police

and communities of color. To date, few studies have examined racial/ethnic

minorities' global perceptions of police, or perceptions specific to procedural

justice and legitimacy past the Black/White racial dichotomy. Further, even fewer

studies have assessed immigrant or undocumented immigrant perceptions of

police procedural justice and legitimacy. This is an important gap in social

science research, particularly due to the current sociopolitical climate surrounding

issues related to policing and race, ethnicity, and immigration status in the United

States.

Further, most of the research testing the process-based model of policing

has been conducted in certain geographical locations, such as the East Coast

region of the United States. Although these locations are composed of a

substantial number of racial/ethnic minorities, the racial/ethnic composition may

be rather different than for other locations—for example, the West Coast or

Southwest region. Further, different regions account for differences in policing

strategies across agencies (i.e., differences between the New York Police

Department and the Phoenix Police Department). These differences can play a

role in the way individuals develop perceptions of the police. Consequently, what

we know thus far from the literature regarding the relationship between race,

ethnicity, and perceptions of procedural justice and police legitimacy is difficult

to generalize to the entire U.S. population. Therefore, it is important that this

framework is applied to different geographical locations in order to determine its

applicability and durability across various contexts.

Overview: Relationship of Police with Racial/Ethnic Minorities and

Immigrants

Researchers have described as problematic the historical relations between

the American police and racial/ethnic minorities -- most often Blacks, but

including marginalized populations such as legal and undocumented immigrants

(Walker, 1984; Williams & Murphy, 1990). Differential treatment by police due

to race has existed since the formation of professional police in the United States.

Dating back to the antebellum Civil War era, the police have been agents of

socio-legal order, and in that role they were expected to impose the institutional

racism of certain legal standards, such as Jim Crow laws (William & Murphy,

1990). As Williams and Murphy suggested, police participation in enforcing such

laws resulted in a pattern of police behaviors and attitudes that "includes the idea

that minorities have fewer civil rights, that the task of the police is to keep them

under control, and that the police have little responsibility for protecting them

from crime within their communities" (p. 27). These behaviors and attitudes were commonly acted out in abusive treatment of persons of color, particularly of Black slaves (see Reichel, 1988; Walker, 1977). Thus, marginalized populations have long been more likely to hold negative global views of the police, when compared with White populations (Bayley & Mendelsohn, 1969; Webb & Marshall, 1995; Weitzer, 2000).[9] Animosity between police and communities of color has persisted for decades, as police have been shown to be more likely to use excessive force, over-rely on arrests, and engage in other less protective and more aggressive policing behaviors with minorities (Human Rights Watch, 1998; Kochel, Wilson, & Mastrofski, 2011).

The relationship between police and the immigrant community has been marked by similarly contentious historical events that have set precedents for a strained relationship. Researchers have characterized the relationship between police and immigrants during the late 1800s and early 1900s as violent and oriented towards conflict (Escobar, 1993; Rosales, 1999). Early U.S. police forces such as the Texas and Arizona Rangers were charged with controlling recently acquired Mexican territory (Romero, 2006) and were held responsible for deporting noncitizens by any means, often through the use of violent behavior, excessive force, unjustified arrests, and other illegitimate means, solely at their discretion (Escobar, 1993; Romero, 2006). As late as the 1950s, discriminatory programs, such as Operation Wetback, involved the police in the "round-up" and

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[9] Note that racial/ethnic groups cannot be treated as a homogenous category. Perceptions may vary between racial and ethnic groups. Overall, however, these populations (here referred to as "marginalized populations") tend to hold more negative views than White populations.

deportation of undocumented immigrants, again often through unjustified use of force and profiling (Astor, 2009).

The prevalence of such policing roles and behavioral "norms" persisted through the mid-20th century when social movements, notably the Civil Rights Movement of the 1950s and 1960s, were at their zenith. During this time, differential treatment as it related to ethnic/racial minorities and immigrants in general became more widely visible to the nation as a whole (Walker, 1984; Williams & Murphy, 1990).

Although mid-century social movements helped to advance the relationship between the police and the community of color, differential treatment of marginalized persons by the police is still present in modern American policing, and the police engage in activities that target immigrants due not only to their racial/ethnic background, but also to their legal status. Provine & Sanchez (2011) suggest that the most common practice, known as cross-deputation or "crimmigration" (Stumpf, 2006), allows local police to enforce immigration laws through discriminatory practices such as racial profiling (e.g., SB1070 in the state of Arizona; similar legislation in Alabama, Utah, Georgia, and other states). Cross-deputation is enacted under agreements between federal and local law enforcement agencies, such as Arizona's 287 (g). These types of agreements allow local law enforcement agencies to act on behalf of federal law enforcement to enforce federal laws in immigration-related matters (2011).

Stumpf (2006) argued that the convergence of criminal and immigration law would result in the increased alienation of individuals who are being

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criminalized by their status as immigrants (see also Stumpf, 2011; Vázquez, 2015). A decade later, in 2016, Provine and colleagues supported Stumpf's notions, contending that the cooperative relationship envisioned for the collaboration between the federal and local governments (i.e., the "force multiplier") that would allow more resources to be allocated to removing undocumented immigrants could have positive implications only for federal law enforcement, and that the collaborations were likely to yield more problems than benefits for local law enforcement agencies. According to the authors, it is the patchwork or "the disconnectedness among levels of government and units of government across the country" (p. 150) that raises concerns among immigrant communities and creates problems for local law enforcement agencies.

For immigrant communities, the confusion between whether their local law enforcement agencies are primarily protectors of the public safety or enforcers of immigration laws leads them to feel alienated and unprotected. For local law enforcement agencies, regardless of whether they are in fact enforcing immigration laws, this dual and sometimes conflicting role places them at high risk of losing trust and cooperation from the immigrant community. This becomes counterproductive, and it deviates from one of the goals of local law enforcement agencies, as the President's Task Force on 21st Century Policing emphatically asserts: "Law enforcement agencies should build relationships based on trust with immigrant communities" and that this "is central to overall public safety" (p. 91).

While this is happening at the national level, certain U.S. regions are arguably more affected by cross-deputation and crimmigration laws than others,

mainly due to the willingness of their local governments to participate in these types of law enforcement practices. Such is the case in the southwest region of the United States, specifically the state of Arizona. In 2010, Senate Bill 1070 was introduced in the state of Arizona. SB 1070 proposed that state and local law enforcement agencies act on behalf of federal immigration officers to enforce federal immigration laws (Romero, 2011). The bill further required that those individuals assisting or transporting undocumented immigrants be charged as criminals (see also Martinez, 2010), thus criminalizing individuals for merely having a relationship with or assisting an undocumented immigrant.

A recent study by Escobar (2016) speaks clearly to the implications of criminalizing individuals due to their immigrant status for a community in general, and for the individual specifically. Escobar focuses on the ways Latina immigrants' criminalization extends beyond their interactions with the correctional system, but her arguments can extend not only across genders, but also to other criminal justice systems. As Escobar explains, the system often "creates" criminals. This results in the disenfranchisement of minorities in general, and of ethnic minorities specifically. Further, these individuals are likely to become alienated and to lose trust in the criminal justice system. Thus, within the policing context, "creating" criminals can result in deterioration in the relationship with the police.

For these and related reasons, the historically negative relationship between the police and marginalized communities continues, resulting in greater distrust of the police among these populations. Lower levels of trust – or the

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depletion of perceived legitimacy – have arguably led to marginalized

communities becoming less likely to cooperate and comply with the police. For

instance, some marginalized groups are reported to have adopted a "culture of

silence," dictating how much and what information should be shared with police

regarding residents and community issues (see Weitzer & Brunson, 2009;

Weitzer, Tuch, & Skogan, 2008). In their study of youth in St. Louis, Weitzer and

Brunson (2009) found that far from collaborating with the police, youth would go

to lengths to evade them; the youth feared that the police would persuade them to

become informants and that they would suffer retaliation if they did not

cooperate.

American policing has been placed in dual and sometimes conflicting

roles almost since its inception as a public institution, and thus differential

treatment behaviors and attitudes took root. Police practices prior to the 1960s

that encouraged discrimination and profiling engendered a strained relationship

with communities of color that continues today. This has resulted in racial/ethnic

minorities, compared to Whites, having less favorable views of the police and in

immigrants associating their local police with federal immigration law

enforcement. Because of these strained relationships, racial/ethnic minorities are

less likely to be willing to cooperate with the police.

Race/Ethnicity and Police Perceptions Specific to Procedural Justice and

Police Legitimacy

Public perceptions of the police have been extensively studied (Bayley &
Mendelsohn, 1969; Decker, 1981; Smith & Hawkins, 1973; Webb & Marshal,
1995). A number of these studies have focused specifically on racial/ethnic
minorities' perceptions of the police and how they differ from those of Whites
(Gau & Brunson, 2010; Gallup Poll, 2003; Rice & Piquero, 2005; Schafer,
Huebner, & Bynum, 2003; Priest & Carter, 1999). A smaller number of studies
have focused on marginalized populations' perceptions of the police as fair
enforcers of the law (i.e., procedural justice), whether the police can be trusted
(i.e., perceptions of legitimacy), and how these perceptions relate to each other
(Tyler, 2004; Tyler & Sunshine, 2003). Collectively, these studies have found
that, similar to global perceptions of the police, attitudes specific to procedural
justice and legitimacy vary by race and ethnicity[10] (Miller, 1977; Tyler &
Sunshine, 2003); and that race and ethnicity have a strong and robust relationship
with perceptions of procedural justice and police legitimacy (Gau & Brunson,
2010; Rice & Piquero, 2005).

Empirically, when compared with Whites, racial/ethnic minorities have
been found to perceive the police as less "fair." It has been suggested that
negative police contacts often result in racial/ethnic minorities holding less
favorable views of police legitimacy, either independently or through negative

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[10] Research has found that a number of other factors often intersect with race/ethnicity and further
influence perceptions. For example, community characteristics (Schafer, Huebner, & Bynum,
2003), individual characteristics other than racial/ethnic background (Sunshine & Tyler, 2003), as
well as characteristics of the interaction (Skogan, 2006) can shape perceptions of procedural
justice and legitimacy. However, I focus here on examining the effects of racial/ethnic background
as the main predictor of perceptions of procedural justice and legitimacy, and other factors will
only be discussed in passing.

perceptions of procedural justice (Correia, Reisig, & Lovrich, 1996; Rice &

Piquero, 2005). For example, in their study of New York residents, Rice and

Piquero (2005) found that Blacks tended to hold more negative perceptions of

police procedural justice and these perceptions were the consequence of their

prior problematic interactions with the police (see also Schafer, Huebner, &

Bynum, 2003; Priest & Carter, 1999). Specifically, the authors found that after

controlling for demographic characteristics, Black respondents, when compared

with non-Black respondents, were three times more likely to view the police as

racially biased.

Similar results were found by Gau and Brunson (2010) who reported that

inner-city racial/ethnic minority men viewed the police as unfair and racially

biased and that, due to their racial/ethnic minority background, officers were

discourteous and verbally abusive. Specifically, they reported that procedural

justice was often compromised and police legitimacy was frequently undermined

due to a prior negative and unjust encounter with the police (see also Rice &

Piquero, 2005). Similar findings were reported by Brunson (2007) in his

qualitative study of African American young men's perceptions of the police. He

found that overall, the men in his sample were likely to hold negative views of the

police and often reported experiencing harassment and overall poor treatment

from the police. This unjust treatment undermined the officers' legitimacy, which

in turn resulted in a hostile relationship between the police and the African

American community.

Similar conclusions were reached through a multi-city study of African American juvenile offenders (Lee, Steinberg, & Piquero, 2010). Lee and colleagues examined whether ethnic identity affected perceptions of police procedural justice (measured as perceptions of police discrimination). Their results revealed that youth who had a stronger sense of ethnic identity were more likely to report negative perceptions of the police's procedurally just behavior. Lee, Steinberg, and Piquero (2010) also found that race/ethnicity played a role in the development of perceptions of police legitimacy. Although slightly different than expected, the authors reported that youth with a stronger sense of ethnic identity were more likely to report positive views of police legitimacy, suggesting that, although ethnic identity mattered for perceptions of fair treatment, it was not necessarily important for perceptions of legitimacy.

The relevance of these findings, however, lies in the importance of perceptions of procedural justice and legitimacy for willingness to comply and cooperate with the police (Tyler, 1990; Sunshine & Tyler, 2003). Research has suggested that, regardless of ethnicity, negative perceptions of procedural justice can lead to negative perceptions of police legitimacy which, in turn, can decrease willingness to cooperate or comply with the police (Gau & Brunson, 2010; Sunshine & Tyler, 2003). Sunshine and Tyler, for example, found that perceptions of procedural justice affected perceptions of legitimacy similarly across racial groups. That is, perceptions of procedural justice – whether positive or negative – affected perceptions of legitimacy similarly for Blacks and Whites. In turn,

negative perceptions of police legitimacy resulted in a diminished likelihood of willingness to cooperate with the police.

Similar results have been found when focusing specifically on African American perceptions of the police. For example, while examining perceptions of Black community members across jurisdictions, Gau and Brunson (2010) found that due to perceived unfair treatment and lower perceptions of police legitimacy, the participants in their sample were less likely to comply with the police. In a study that compared racial/ethnic group differences in perceptions of trust and confidence in the police, Tyler (2005) found further support for the notion that some police perceptions can impact a resident's likelihood of cooperating with the police. For example, while examining the perceptions of a multi-ethnic sample of New York residents, Tyler reported that "institutional trust" (beliefs about the degree to which the police are honest and care for the members of the communities they police, p. 324) enhanced the willingness to cooperate for all ethnic groups while "motive-based" trust (a "type of trust [that] involves inferences about the motives and intentions of the police and reflects the concept of fiduciary trust," [p. 325]) enhanced the willingness to cooperate among Hispanics. These findings lend support to the notion that ethnic/racial minorities might perceive and experience procedural justice and legitimacy in unique ways that impact their willingness to cooperate with the police.

Overall, existing research on race and police procedural justice and legitimacy supports the notion that minorities perceive the police as less fair (see Gau & Bunson, 2010a). Existing research also supports the notion that racial

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minorities are less likely to view the police as legitimate (Rice & Piquero, 2005). Although these findings are valuable, they are also limited to assessing the differences between African Americans and Whites (e.g., Gau & Brunson, 2010; Reisig, McCluskey, Mastrofski, & Terrill, 2004; for exceptions see Correia, 2010; Solis, Portillo, & Brunson, 2009; Lai & Zhao, 2010; Vidales, Day, & Powe, 2009). This is problematic because the populations of other ethnic groups have grown substantially over the past few decades. For example, according to the Pew Research Center, Hispanics account for more than half of the nation's growth since 2000 (Passel & Cohn, 2008). Additionally, according to the U.S. Census Bureau, Hispanics are the most populous minority group in America – 52 million in 2011 (a total of 16.7% of the nation's population). Nevertheless, little is known regarding Hispanics' views of procedural justice and police legitimacy. Therefore, research examining ethnic and racial minorities' perceptions of procedural justice and legitimacy should increasingly focus on the inclusion of – at a minimum – Hispanics in their samples.

Immigrants' Perceptions of Procedural Justice and Police Legitimacy

Despite the large and growing number of immigrants in the United States, and repeated calls for local police to enforce federal immigration laws, little is known regarding immigrants' perceptions of the police (for exceptions, see Davis & Hendricks, 2007; Menjivar & Bejarano, 2004; Rengifo & Fratello, 2015; Wu, Sun, & Smith, 2011). Even smaller is the body of literature that examines immigrants' perceptions of procedural justice and police legitimacy (for exceptions, see Correia, 2010; Röder & Mühlau, 2012). Further, the few studies

that have been conducted have yielded inconsistent results relating to both global views of the police and immigrants' perceptions specific to procedural justice and police legitimacy.

For example, Menjivar and Bejarano (2004) studied immigrants' perceptions of the police; their study yielded conflicting results. Using a sample of respondents from the Phoenix (AZ) metropolitan area, and relying on over sixty qualitative interviews with immigrants from four different Latin American countries, the authors found that immigrants developed their perceptions of law enforcement through three particular mechanisms: prior experiences with law enforcement in their home countries (termed by the authors as "bifocal lenses"), their experiences with U.S. immigration enforcement, and "vicarious" experiences – that is, through their social networks. The authors found that immigrants perceived the police as a source of protection, but also as "a source of anxiety." They sometimes felt they could call the police, but preferred not to do so as they feared maltreatment due to their ethnic/immigrant status. Overall, however, immigrants did not necessarily demonstrate negative perceptions of the police.

Given what is known regarding police perceptions of marginalized populations, it is reasonable to hypothesize that immigrants would be likely to have more negative views of the police than would U.S. citizens. However, and despite their arguably increased level of disadvantage due to their status as ethnic minorities *and* immigrants, some research has shown that immigrants are more likely than non-immigrants to hold positive views of the police (Davis &

Hendricks, 2007; Rengifo & Fratello, 2015; for exceptions, see Menjivar & Bejarano, 2004). For example, Wu, Sun, and Smith (2011) found that Chinese immigrants were more likely than non-immigrants to rate police positively in overall performance and in the specific areas of effectiveness, integrity, and demeanor. Similar results were reported by Correia (2010). In his study, which focused on comparing perceptions of predominantly Hispanic immigrants and non-immigrants in Nevada, he found that immigrants viewed the police more positively than did non-immigrants. His findings also showed that immigrants' positive perceptions of the police were related to perceptions of the police as helpful.

The work of Röder and Mühlau (2012) also supports the notion that immigrants are more likely to hold different views of the police than non-immigrants. The authors used a sample of European immigrants to examine their views of criminal justice institutions. They reported that, compared to native-born individuals, first generation immigrants were more trusting of the criminal justice system. However, when immigrants' perceptions of criminal justice entities other than the police were examined, the results suggested that immigrants were less likely than other criminal justice entities to trust the police. Additionally, their trust in police declined further as immigrants became more acculturated.

A more recent study, conducted in the United States, found results similar to those of Röder and Mühlau (2012). Rengifo and Fratello (2015) found that first generation immigrants (i.e., foreign-born individuals) in New York were more likely to have positive views of the police than second generation immigrants

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(i.e., U.S.-born individuals), including perceptions of police effectiveness. Further, second generation immigrants were more likely to have negative perceptions of police "legitimacy," but their perceptions, unlike those of the first generation respondents, were moderated by perceptions of fairness and neutrality (see also Goff, Epstein, & Reddy, 2013).

Although relatively few in number, some studies have focused attention on whether immigrants' perceptions of the police have an effect on the likelihood of cooperating with the police (e.g., reporting crimes), and it has been suggested that, compared to native-born individuals, immigrants are less likely to be willing to cooperate with the police (Goff, Epstein, & Reddy, 2013; Davis & Hendricks, 2007; for exceptions see Hautala, Dombrowski, & Marcus, 2015). Goff and colleagues (2013) concluded that due to perception of unfair treatment (e.g., local police enforcing immigration laws) Hispanic immigrants were less likely to view the police as legitimate and were consequently less likely to report crimes to the police.

Davis and Hendricks (2007) also found that immigrants were less likely to call the police. Differently, however, using a sample collected through a telephone survey of residents of Seattle, the authors found that immigrants were more likely to have positive views of the police than were citizens. Regardless of these positive views, when compared to native-born respondents, immigrants were still less likely to seek help from the police or contact the police when needed. The authors further reported that immigrants reported a lack of interest in engaging

with the police at any level, regardless of whether this was related to crime reporting or participation in police-led community events.

The above studies serve as an important foundation for a much needed research agenda. The United States has been, and will continue to be, a country of immigrants. Regardless of the methods used to enter the country, persons from all over the world will continue to come to the "land of opportunity" to pursue the "dream" – the very "dream" for which the country was founded. Although times have changed and immigration has taken a different form – and color, it remains an important and arguably driving force in the United States. Yet, in relation to the body of research that has examined perceptions of the police, the ways in which immigrants perceive the police is still an open empirical question. Similarly, little is known about this population, and what is known about immigrants is often influenced by inaccurate media portrayals (Wang, 2012) and political agendas (Romero, 2011). However, regardless of immigration status, immigrants are part of U.S. communities. Immigrants, like U.S. citizens, are at risk of experiencing crime, victimization, and violence. These and related reasons are, in part, the motivation of this dissertation.

Maricopa County as a Research Setting

The dearth of research on Hispanics' and immigrants' perceptions of the police is even more relevant within certain regions, such as areas with higher levels of Hispanic and immigrant population concentration. Although research on marginalized populations' perceptions of the police is important regardless of the

region, areas with higher concentrations of these specific populations can yield different results, as they may vary substantially in key aspects (e.g., policing strategies, economic status); therefore, finding an appropriate region in which to study this topic becomes imperative.

An ideal setting for the study of this topic is the state of Arizona in general, and Maricopa County specifically. Maricopa County, Arizona is one of the biggest counties in the United States. Due to its proximity to the U.S. international border, it accounts for a large population of Hispanic and foreign-born residents. According to the U.S. Census Bureau, in 2010, almost 30 percent of the county's population was Hispanic and about 15 percent was foreign-born. Further, about 57 percent of the population is White, which allows for comparisons between the Hispanic and White populations. Thus, these characteristics allow for Maricopa County to serve as a setting from which a representative sample can be drawn.

Maricopa County also has a unique sociopolitical climate. Over the past decade, the Maricopa County Sheriff's Office (MCSO) has been accused of engaging in racial profiling, often targeting undocumented immigrants. Formerly led by "America's Toughest Sheriff," a self-proclaimed title, MCSO has been the center of multiple controversies, mainly due to what some refer to as inhumane, unethical, and illegal practices against the community in general, but particularly against Hispanics and immigrants. These actions have not only resulted in lawsuits, protests, and general complaints, but have also been condemned by

popular civil rights advocacy groups such as Amnesty International and the American Civil Liberties Union (ACLU), and have sparked the involvement of and investigations led by United States Justice Department (James, 2009). However, in order to understand the current sociopolitical climate in Maricopa County, we must go back about a decade when the county started to gain national and international attention due to its discriminatory practices.

Sheriff Joseph Arpaio's concerns regarding undocumented immigrants became apparent around 2005 when Maricopa County Attorney Andrew Thomas, whose campaign slogan was "stop illegal immigration," joined the County Attorney's Office. The two elected officials focused on dealing with the "immigration issue" by conducting raids and immigration sweeps in Latino neighborhoods. In 2007, the MCSO unlawfully stopped and detained Manuel Ortega, a Mexican tourist. The stop led to a lawsuit (*Melendez v. Arpaio*). The lawsuit soon expanded and several other individuals with similar experiences joined the action (ACLU, 2008). It was later ruled by the United States District Judge Grant Murray Snow that, in fact, Sheriff Arpaio had engaged in discriminatory practices that violate the Fourth and Fourteenth Amendments of the United States Constitution, as well as the Civil Rights Act of 1964.

In 2008, the Department of Justice (DOJ) Civil Rights Division started a separate investigation of Sheriff Arpaio's alleged discriminatory practices. Sheriff Arpaio refused to cooperate with the Department of Justice and failed to provide requested documentation, to grant interviews, or to allow the DOJ to interview

MCSO personnel. The following year, DOJ filed a suit against the Sheriff to compel his cooperation with the investigation. The suit was settled in 2011, and the Sheriff allowed DOJ to review hundreds of thousands of documents. As a result of the suit, DOJ was also able to interview MCSO staff. After a three-year investigation, DOJ issued its findings letter, which concluded that Sheriff Arpaio and the MCSO had engaged in racial profiling and discriminatory and unconstitutional policing practices, particularly against Hispanics (Billeaud, 2011; Lacey, 2011). The results of the investigation gained national and international attention with influential media outlets such as the New York Times and the Associated Press making statements such as that the MCSO had "a pervasive culture of discriminatory bias against Latinos" that "reach[ed] the highest levels of the agency" (Billeaud, 2011; Lacey, 2011).

Perhaps it was the result of the suit, or perhaps it was the magnitude of media and public attention, but in 2011 the United States Department of Homeland Security revoked the MCSO's authority to identify undocumented immigrants, a right that had been granted to MCSO through the 287(g) program in 2007. It was further mandated by Judge Snow's ruling that the MCSO would be monitored and would have to abide by the rules of a court-appointed monitor (Hensley, 2013).

Despite all this, Sheriff Arpaio continued to engage in discriminatory practices and failed to follow court-mandated orders. This led to DOJ filing a suit (*United States v. Maricopa County et al.*) stating that the MCSO continued to

discriminate against individuals due to their ethnicity, language skills, and skin color.[11] In early 2016, contempt of court charges were filed against Sheriff Arpaio. In 2017, Joe Arpaio lost the election and is no longer Maricopa County's Sheriff. As of April 2017, he is being held in criminal contempt and a trial date is to be set soon.

The unique characteristics of Maricopa County offer both advantages and disadvantages for studying the topics at hand. The characteristics of its population allow for a fair comparison between Hispanics and White residents, with both groups being well represented. Similarly, the County is home to a substantial number of foreign-born individuals, making comparisons between immigrants and U.S. citizens feasible.

On the other hand, the social-political climate may present a potential disadvantage. Unlike Sheriff Joe Arpaio and his associates, the majority of Maricopa County's major police departments did not collaborate in cross-deputation or crimmigration law enforcement (Provine et al., 2016). In fact, many opposed the County's rhetoric. Still, the attitudes and actions of Maricopa County's law enforcement personnel may have generated additional negativity towards police procedural justice and legitimacy. No empirical research has demonstrated this, however, hence the importance of studying this setting.

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[11] Though a substantial part of the suit focused on racial profiling and discrimination against Latinos, the suit also listed other issues such as victimization of women and maltreatment of inmates.

Although the research on police procedural justice and legitimacy that has been conducted allows academics and policymakers to start a conversation regarding the importance of racial/ethnic minorities' and immigrants' perception of the police, it brings forward more questions than answers. For example, given the intersection of disadvantage that racial/ethnic minorities and immigrants are exposed to (e.g., being from a racial/ethnic minority, legal status), it would be expected that, unlike other racial/ethnic minorities, immigrants might hold more negative views of the police due to their experiences with the kind of marginalization that often leads to institutionalized discrimination and racial profiling. Therefore, learning more about what affects immigrants' perceptions of the police becomes an important and understudied area of research.

Present Study

Inspired and guided by the arduous work of policing, race, immigration, procedural justice, and legitimacy scholars, the purpose of this dissertation is to build on the procedural justice and legitimacy body of literature by assessing Hispanics' and undocumented immigrants' perceptions of the police in an under-studied region of the United States. As reviewed above, perceptions of the police are a result of a multitude of factors, including individual characteristics as well as situational factors. However, racial and ethnic background have been – and continue to be – some of the strongest indicators of global police perceptions and perceptions specific to procedural justice and police legitimacy. Yet, as previously stated, most research examining racial and ethnic differences has focused on

comparing the perceptions of Blacks and Whites, while few studies have been

conducted in regions that account for large numbers of Latin Americans. Even

fewer studies have examined immigrants' perceptions of procedural justice and

police legitimacy, despite the substantial growth of the Hispanic population that

the United States has experienced in recent years. Further, most of the research

conducted has been in specific regions of the United States that are characterized

by unique racial/ethnic resident composition and unique concentrations of

immigrants (i.e., the East Coast). Thus, the overgeneralization of findings from a

specific geographical location can result in biased implications. Although

empirical support from prior research serves as a testament of the applicability of

the process-based model of policing, it does not necessarily translate to a "one-

size-fits-all" set of policy implications. Communities across the United States

vary substantially in a number of factors, and different policies and strategies are

often necessary to better suit the needs of not only those living within those

communities, but also those patrolling and serving them. However, until more

research is conducted with marginalized populations from regions that employ

diverse policing strategies, the generalizability of the model must be offered in a

much more conservative manner. Regionally unique characteristics impede the

generalizability of research findings to other regions of the United States (e.g., the

Southwest region). The large and growing number of undocumented immigrants

residing within Arizona's boundaries and particularly within Maricopa County,

Arizona's proximity to the U.S. international border, and the number of

immigrants constantly coming across the state allow this geographical area to

serve as a desirable setting to study the topic at hand. Therefore, using data collected from Maricopa County, Arizona residents, this dissertation focuses on answering three research questions.

Research Questions

Research Question 1: Does the process-based model of regulation hold among a sample of residents of the Southwest region of the United States? That is, do findings from the Southwest region support the larger body of literature that suggests that perceptions of procedural justice are positively related to perceptions of police legitimacy, and are perceptions of legitimacy related to willingness to cooperate and/or comply with police? Further, do the general public and arrestees differ in the ways they perceive procedural justice and police legitimacy?

Research Question 2: Do respondents of different races/ethnicities differ in their perceptions of procedural justice and police legitimacy? Specifically, do Hispanic and White respondents differ in their perceptions, and are these respondents' perceptions of police legitimacy related to willingness to cooperate and/or comply with police?

Research Question 3: Do U.S. citizens and undocumented immigrants differ in their perceptions of procedural justice and police legitimacy, and are their respective perceptions of police legitimacy related to willingness to cooperate and/or comply with police?

Analytical Methodology

As stated above, over the past decade, the conceptualization and operationalization of procedural justice and legitimacy have been questioned. Researchers have called for a more thorough investigation of the measurements of procedural justice and legitimacy (Gau, 2011; 2014; Reisig, Bratton, & Gertz, 2007; also see Johnson, Maguire, & Kuhns, 2014; Reisig, Tankebe, & Mesko, 2014; Tankebe, 2013) and have even recommended a reconceptualization of these key theoretical constructs (Tankebe, 2013). Given these concerns, prior to assessing the main research questions, this dissertation examined whether these measurement issues were present among residents and arrestees in the Southwest. In order to do so, exploratory factor analysis (EFA) first was conducted. The purpose of the analysis was to assess the convergent and discriminant validity of theoretically driven dimensions of procedural justice and legitimacy. After the results of the EFA analysis were examined, confirmatory factor analysis (CFA) was conducted to *confirm* the results of the EFA models. This assisted in determining whether theoretical procedural justice and legitimacy constructs held in this empirical analysis (Tabachnick & Fidell, 2007).

CHAPTER THREE

METHODS AND DATA

In order to examine the research questions of interest, this dissertation uses data collected through two surveys administered in Maricopa County, Arizona: the Arizona Arrestee Reporting Information Network (AARIN) survey and the Arizona Crime Victimization Survey (AZCVS) survey. In this chapter, I first discuss the setting, followed by methods and data for each sample. A description of the measures and analytical strategy will follow. Last, the implications of the study and data limitations will be discussed.

Setting

Maricopa County is currently the fourth largest county in the United States; about 3.8 million of Arizona's 6.4 million residents reside in Maricopa County and, according to the 2010 U.S. Census Bureau, it is considered to be one of the fastest growing areas in the United States. Maricopa shares its border with Yavapai, Gila, Pinal, Yuma, and La Paz counties, and some of that border is as close as one hundred miles to the U.S. international border (http://2010.census.gov/news/pdf/cb11cn76_az_totalpop_2010map.pdf).

According to the Census Bureau (2010), the majority of Maricopa County's residents fall between the ages of 25 and 44 years old. The number of males and females are comparable in this county (49.4% and 50.6%, respectively). About 56.5 percent of the county's population is White (non-

Hispanic) and about 29.6 percent is Hispanic. Regarding citizenship, about 14.9 percent of the residents reported being foreign born.

Arizona Crime Victimization Survey

Methods and Data

Modeled after the National Crime Victimization Survey (NCVS), the Arizona Crime Victimization Survey (AZCVS) focuses on producing estimates of violent, property, identity theft, and hate crime victimization for Arizona residents, focusing specifically on Maricopa County and Pima County residents. Although the AZCVS was modeled after the NCVS, given the methodological differences between NCVS and AZCVS and the different implementation strategies, the survey was modified. Although the primary goal of the survey is to produce information relating to experiences with victimization, the survey also captures residents' perceptions of their local police and their effectiveness in addressing crime, as well as awareness of and access to victim assistance programs.

Unlike the NCVS, the AZCVS was administered through telephone interviews. The AZCVS employed random digit dialing (RDD) and a computer-assisted telephone interviewing (CATI) system from mutually exclusive samples of landline and cell phone numbers. Although the use of cell phones in telephone interviews is not thought of as a conventional data collection method, this method offers a substantial sampling benefit. Over the past decade, the prevalence of cell-phone-only households has increased substantially. In 2003, about 3 percent of American adults lived in cell-phone-only households, a number that increased to

about 13 percent by 2007 (Blumberg & Luke, 2007). The continuing growth of cell-phone-only households has led to coverage concerns with RDD surveys, as these surveys have traditionally excluded cellular telephone numbers. Incorporating cell phone numbers into the sampling frame used for this study allows us to reach a wider and perhaps more diverse sample and eliminates the bias of only including households with a landline telephone service. Further, given the relatively large number of Hispanic residents in the state of Arizona, interviews were conducted in both English and Spanish in order to accommodate those respondents who were only able to speak Spanish and/or preferred to complete the survey in Spanish.

Sample

The study sought to complete the minimum of 800 surveys of residents per county that would allow for generating population estimates of victimization in Maricopa and Pima counties. In addition to the 1,600 surveys in the two largest counties, available resources allowed for an additional 200 completed surveys from residents of the other 13 counties in Arizona. This sampling strategy allows for victimization estimates and other data to be reported for each of the two largest counties in Arizona, Maricopa and Pima Counties, which comprise more than 75 percent of the population of the state, in addition to statewide estimates. Originally, a total of 23,925 telephone numbers were considered for participation. Of these, 7,962 were non-responsive numbers (e.g., disconnected/non-working), and 8,702 were unoccupied households, 5,139 refused to participate, and 244

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completed a partial interview. Therefore, the full sample of completed interviews included a total number of 1,878 completed surveys (1,336 via a landline phone and 542 via a cell phone) leading to a final response rate of 12.3 percent.[12]

The total sample included completed surveys from 1,878; 854 of the surveys were completed by residents of Maricopa County, 824 were completed by residents of Pima County, and 200 were completed by residents of other counties throughout the state. For the purpose of this study, the sample was reduced to include only responses from Maricopa County residents. The purpose behind reducing the sample was to be able to make direct comparisons between the AZCVS and AARIN surveys (i.e., between Maricopa County's general and arrestee populations). Therefore, the final sample included a total number of 854 completed surveys, 705 via a landline phone (RDD) and 149 via a cell phone.

The data were collected in February and March of 2013. Sample characteristics are presented in table 3.1.[13] As would be expected when using a general population sample, the number of respondents was slightly higher for females than for males (52.6 and 47.5% respectively). The average age was about 54 years old. The majority of the respondents were White (70.2%), followed by

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[12] There are several methods for reporting response rates. According to the American Association for Public Opinion Research (AAPOR), one of the most sophisticated methods uses the Response Rates 1 (RR1) guidelines. However, research in criminology and criminal justice often uses less conservative guidelines, such as Response Rates 5 (RR5). Using the RR5 method, response rates for this study are comparable to criminology and criminal justice research (e.g., Katz, Webb, & Armstrong, 2006).

[13] Parts of this methodology can also be found on *The 2013 Arizona Crime Victimization Survey Report* (Stevenson, 2013).

Hispanic (22.6%), an "other" ethnicity (3.6%), and African American (3.5%).

About a quarter of the respondents said their highest level of education was high

school (24.9%), about a third said they had attended some college (32.9%), and

about a third said they had a college or graduate degree (36.2%). Over half

(60.5%) said they were married, and 45.2% said they were employed at least part-

time. In terms of immigration status, the vast majority (96.2%) reported being a

citizen of the United States.

Table 3.1
AZCVS Maricopa County Sample Characteristics (n=854)

Characteristics	n	%
Gender		
Female	449	52.6
Male	405	47.5
Age (SD)[1]	788	54.01 (18.71)
Race/Ethnicity		
White	566	70.3
African American	28	3.5
Hispanic	182	22.6
Other	29	3.6
Education		
Less than High School Education	50	6.1
High School Graduate or Equivalent	205	24.9
Some College Education	271	32.9
College or Graduate Education	298	36.2
Married	491	60.5
Employment		
No Job	451	54.8
Part- or Full-Time Job	372	45.2
Citizenship Status		
U.S. Citizen	822	96.2
Non- U.S. Citizen	32	3.8

Immigration Status		
Undocumented	6	0.7

Note. Other race/ethnicity includes: American Indian, Asian, Hawaiian or Pacific Islander, Mixed, or "Other"

[1] Ages ranged from 18 to 97 years old

Arizona Arrestee Reporting Information Network

Methods and Data

In addition to the data collected through the AZCVS survey, data from the Arizona Arrestee Reporting Information Network (AARIN) Project will also be used for this dissertation. The AARIN project was established in Maricopa County (Arizona) in January of 2007. Funded by the Maricopa County Board of Supervisors, the project was modeled after the Arrestee Drug Abuse Monitoring (ADAM) Project, which was sponsored by the National Institute of Justice (National Institute of Justice, 2003). The purpose of the ADAM project was to monitor drug use trends and other at-risk behaviors among recently booked arrestees. Similarly, the AARIN project focused on collecting data to examine drug trends, participation in criminal involvement, self-report victimizations, and other at-risk behaviors of recently booked arrestees. The AARIN project sampled both male and female adult arrestees who were recently booked. Data collection for this project ended in June of 2013.

The AARIN project used a systematic sampling protocol and data were collected from multiple facilities. The protocol called for the random selection of arrestees from two groups: stock and flow. The "stock" group included arrestees who were booked overnight during the hours interviewers were not present at the

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facility. The "flow" group included arrestees who were booked during data collection hours. This process was chosen to ensure the selection of a representative sample of arrestees over a 24-hour period. Data were collected for two continuous weeks at Maricopa County Central Intake (4th Avenue Jail) and for one-week periods at Mesa and Glendale jails. This sampling method was used to ensure a representative sample of those arrested and booked throughout the county. Data were collected on a quarterly basis (i.e., four times a year) from participating facilities.[14] During the data collection periods, trained interviewers conducted face-to-face interviews with arrestees. Interviews were conducted daily during an eight-hour shift.

The AARIN project used a core survey instrument that included questions that captured demographic information, such as race and ethnicity, gender, and age, as well as self-report data on drug use. In addition to the core survey instrument, various special topic survey addenda were administered. These addenda covered topics such as criminal involvement, gang involvement, and perceptions of the police, among others. This study will analyze data collected using the core survey instrument and the police contact addendum. The police contact addendum collected self-report data on arrestees' perceptions of the police, including perceptions of procedural justice and legitimacy, as well as other experiences such as use of force and willingness to cooperate with the police.

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[14] Due to budget cuts, data collection periods changed from four times to three times per year in 2010.

Sample

The final sample used for this study included 2,268 completed interviews conducted from 2010 to 2012. Sample characteristics are presented in table 3.2.[15] The majority of the respondents were male (75.9%) and the average age was about 32 years old. In terms of race and ethnicity, the majority of the sample was composed of Whites (36.8%), Hispanics (31.4%), African American (14.3%), or "other" racial or ethnic background (17.5%). The majority of the sample had completed at least high school (34%) or some post-high school education such as some college (27.3%), or had a college or graduate degree (5.9%). About a third of the sample members said they had not graduated from high school. About half said they were currently employed, reporting working at least part time. Less than a fifth (14%) of the respondents reported living with a spouse. In terms of citizenship, 8.5 percent reported being immigrants and 6.6 percent said they were undocumented. These numbers are similar to those in other studies conducted in Maricopa County (see Katz, 2008).

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[15] Eight cases were deleted due to missing data in the dependent variables of interest.

Table 3.2
AARIN Sample Characteristics (n=2,268)

Characteristics	n	%
Gender		
Female	547	24.1
Male	1721	75.9
Age (SD)[1]	2268	31.95 (10.61)
Race/Ethnicity		
White	835	36.8
African American	323	14.3
Hispanic	712	31.4
Other	396	17.5
Education		
Less than High School Education	740	32.8
High School Graduate or Equivalent	767	34.0
Some College Education	615	27.3
College or Graduate Education	134	5.9
Living with Spouse	317	14.0
Employment		
No Job	1096	49.7
Part- or Full-Time Job	1108	50.3
Citizenship Status		
U.S. Citizen	2069	91.5
Immigrant	192	8.5
Immigration Status		
Undocumented	149	6.6

Note. Other race/ethnicity includes: American Indian, Asian,
Hawaiian or Pacific Islander, Mixed, or "Other"

[1] Ages ranged from 18 to 74 years old

<center>**Measures**</center>

For this study, legitimacy and cooperation/compliance constructs served as dependent variables. Procedural justice, race/ethnicity, and immigration status served as independent variables. A list of the exact wording used to ask the perception questions is presented in Appendix B. Demographics characteristics such as gender, age, education, marital status, employment, as well as perception of police effectiveness and distributive justice served as control variables. The same items were available in both samples (AZCVS and AARIN). The operationalization of each variable used for this dissertation is described below.

Dependent Variables: Cooperation

As stated above, two dependent variables were used to test this model: willingness to cooperate with the police and perceptions of police legitimacy.

Cooperation. *Cooperation* was measured using four items that captured respondents' willingness to cooperate with the police. These items included "[would you] Call police to report a theft/burglary where you were the victim," "[would you] Call police to report minor (misdemeanor) crime," "[would you] Call the police to report a serious (felony) crime," and "[would you] Call the police to report a violent crime where you were the victim." All items were measured using Likert-type response categories and responses ranged from 0 to 3 (strongly disagree to strongly agree). The relationship between these items was assessed through EFA. As presented in table 3.3, results from the EFA suggested a good model fit; all factor loadings approached or exceeded a .6 loading, which

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is considered a "good" fit in social science research (Comrey & Lee, 1992;

Tabachnick & Fidell, 2007) indicating that these items were capturing the same

construct and that it was appropriate to use them in the same scale. Although the

loading for "[willingness] to report a minor crime" for the AZCVS sample was

lower than desired, this item was retained to maintain measurement consistency

across both samples.

Table 3.3
Scale Cronbach's alphas and exploratory factor analysis loadings

	Factor Loadings	
Item	AZCVS Factor 1	AARIN Factor 1
Theoretically Driven Measures		
Police Cooperation (α =.902; α =.899)		
To report a theft/burglary where you were the victim	**0.867**	**0.881**
To report a minor crime	0.583	**0.804**
To report a serious crime	**0.891**	**0.904**
To report a violent crime where you were the victim	**0.885**	**0.891**
Eigenvalues	2.670	3.033
% of variance	66.740	75.814

Note: Factor loadings over .60 appear in bold.

In addition to the EFA analysis, CFA analyses were conducted. In order to

assess the model fit, the confirmatory fit index (CFI), the Tucker-Lewis index

(TLI), and the root mean square error of approximation (RMSEA) were

examined. Conventional CFI estimates ranged from 0.00 to 1.00; values between

0.90 and 0.94 are considered an acceptable fit and values above 0.95 are

considered a very good fit (Hu & Bentler, 1999). Similarly, the TLI ranges from

0.00 to 1.00; a value of 1.00 is ideal, but values above 0.90 are considered an

acceptable fit (Bollen, 1989). The RMSEA is a measure of error. The ideal value

for the RMSEA is 0.0, however, a value under 0.06 is considered a good fit. In

social science research, values between 0.08 and 0.10 are sometimes considered

acceptable (Byrne, 2012).

The results from the CFA for *police cooperation* are presented in table 3.4.

The results of the CFA using the AZCVS data indicated a good model fit;

RMSEA=0.076; CFI=0.999; TLI=0.998. The results of the CFA using the

AARIN data, however, were not as robust, as the RMSEA index was somewhat

higher than desired (RMSEA=.10). However, as stated above, this value is

sometimes acceptable in social science research (Byrne, 2012). Other fit indices

suggested a good model fit; CFI=0.997; TLI=0.992.

Table 3.4									
Results from confirmatory factor analysis									
	Factor Loadings								
Item	AZCVS					AARIN			
	RMSEA	CFI	TLI	χ^2		RMSEA	CFI	TLI	χ^2
Model									
Model 1: Cooperation	0.076	0.999	0.998	11.613**		0.10	0.997	0.992	56.454***
Note. p***<.001, p**<.01, p*<.05									

Dependent and Independent Variables: Procedural Justice and

Legitimacy

Legitimacy and procedural justice served as dependent and independent

variables in this study, respectively. However, as discussed above, recent research

has raised some concerns regarding the operationalization of the two constructs. Specifically, researchers have questioned the discriminant and convergent validity of the items included in both constructs (Gau, 2011; 2014; Reisig, Bratton, & Gertz, 2007; see also Johnson, Maguire, & Kuhns, 2014; Reisig, Tankebe, & Mesko, 2014), some suggesting that "trust" is part of legitimacy (Sunshine & Tyler, 2003), others suggesting that it measures procedural justice (Hugh et al., 2010), or that it measures neither legitimacy or procedural justice (see Tankebe, 2013). To assess these concerns, factor analytical procedures were used to determine the appropriate operationalization of procedural justice and legitimacy.

The first step of the analysis was to conduct exploratory factor analysis (EFA) to determine whether the procedural justice and legitimacy theoretical measures were related. The results are presented in table 3.5. For the AZCVS sample, the results showed that all theoretically driven procedural justice items overlapped as expected; all loadings were over 0.8. As it related to legitimacy, however, theoretical measures did not load as expected. Specifically, accepting police decisions and doing what the police say loaded in the same construct (λ = 0.796 and λ = 0.862, respectively); however, the item measuring "trust" loaded with procedural justice, rather than legitimacy (λ = 0.815). When the results from the AARIN sample were examined, the findings were somewhat similar. As with the AZCVS sample, all theoretically driven procedural justice items loaded together; and all loadings were over 0.8. However, "trust" did not load with either the procedural justice or legitimacy latent constructs. Accepting police decisions and

doing what the police say loaded in the same construct, however (λ = 0.796 and

λ = 0.862, respectively).

Table 3.5

Scale Cronbach's alphas and exploratory factor analysis loadings

	Factor Loadings			
Item	AZCVS		AARIN	
	Factor 1	Factor 2	Factor 1	Factor 2
Theoretically Driven Measures				
Procedural Justice (α =.902; α =.910)				
Police treat people with respect.	**0.862**	0.118	**0.823**	0.189
Police take time to listen to people.	**0.875**	0.059	**0.812**	0.156
Police treat people fairly.	**0.877**	0.086	**0.849**	0.193
Police respect people's rights	**0.839**	0.114	**0.824**	0.210
Legitimacy (α =.611; α =.712)				
You should accept police decisions, even if you think they are wrong.	0.09	**0.870**	0.252	**0.796**
You should do what the police tell you to do, even if you disagree.	0.123	**0.864**	0.115	**0.862**
The police can be **trusted** to make decisions that are right for the community.	**0.815**	0.150	0.568	0.460
Eigenvalues	3.843	1.390	3.805	1.059
% of variance	54.904	19.852	54.364	15.129

Note: Factor loadings over .60 appear in bold.

Given the loading inconsistencies related to the "trust" measure, the next step

was to assess the relationship between procedural justice and legitimacy

theoretical measures, while omitting the "trust" item. Factor loadings for both

samples are presented in table 3.6. As it related to procedural justice, the results

showed minimal change from the previous model (table 3.5); for both data

sources, there was an increase in the factor loading from about 0.005 to 0.017.

Loadings for the legitimacy latent construct also increased for both samples. The

most important finding, however, was that omitting the "trust" item did not have any effect on the way procedural justice and legitimacy constructs loaded.

Table 3.6

Scale Cronbach's alphas and exploratory factor analysis loadings

	Factor Loadings			
	AZCVS		AARIN	
Item	Factor 1	Factor 2	Factor 1	Factor 2
Theoretically Driven Measures				
Procedural Justice (α =.902; α =.910)				
Police treat people with respect.	**0.870**	0.132	**0.830**	0.193
Police take time to listen to people.	**0.884**	0.066	**0.818**	0.159
Police treat people fairly.	**0.885**	0.095	**0.855**	0.195
Police respect people's rights.	**0.856**	0.124	**0.829**	0.209
Legitimacy (α =.683; α =.690)				
You should accept police decisions, even if you think they are wrong.	0.094	**0.869**	0.263	**0.804**
You should do what the police tell you to do, even if you disagree.	0.112	**0.865**	0.128	**0.873**
Eigenvalues	3.249	1.377	3.362	1.051
% of variance	54.157	22.946	56.032	17.514

Note: Factor loadings over .60 appear in bold.

Next, CFA was conducted to *confirm* that these items were measuring the desired latent construct. As with the EFA analysis, the CFA analysis was conducted in two steps: two models were fitted, with one including the "trust" measure. Overall, the results from the CFA supported the results from the EFA model (table 3.6). Specifically, and related to the AZCVS sample, the results of the CFA model that included the "trust" item (model 1, table 3.7) suggested a poor model fit (RMSEA=0.131; CFI=0.933; TLI=0.892). However, when the "trust" item was omitted (model 2, table 3.7), the results indicated an

improvement in the model fit, with most of the goodness of fit measures resulting within the desired parameters (RMSEA=0.037; CFI=0.999; TLI=0.998).

Similarly, the results of the CFA models for the AARIN data supported the results of the EFA model. That is, when the CFA model included the "trust" item (model 1, table 3.7), the estimates indicated a poor model fit (RMSEA=0.1.41; CFI=0.975; TLI=0.960), and when the "trust" item was omitted (model 2, table 3.7), the goodness of fit indicators reached the desired parameters, indicating a good model fit (RMSEA=0.048; CFI=0.998; TLI=0.99). These estimates are presented in table 3.7.

Table 3.7									
Results from confirmatory factor analysis									
	Factor Loadings								
Item	AZCVS					AARIN			
	RMSEA	CFI	TLI	χ^2		RMSEA	CFI	TLI	χ^2
Model									
Model 1: Two Factors with Trust	0.131	0.933	0.892	201.91***		0.141	0.975	0.96	602.440***
Model 2: Two Factors without Trust	0.037	0.999	0.999	17.232*		0.048	0.998	0.996	50.320***
Note. p***<.001, p**<.01, p*<.05									

Therefore, guided by the results from the factor analysis, procedural justice and legitimacy was analyzed as follows.

Procedural Justice. *Procedural justice* was measured using four different items: "Police treat people with respect," "Police take time to listen to people," "Police treat people fairly," "Police respect people's rights." All items were measured using Likert-type response categories and responses ranged from 0 to 3

(strongly disagree to strongly agree). Factor scores were used for regression analyses.

Legitimacy. *Legitimacy* was measured using two different constructs: *obligation to obey* and *trust*. *Obligation to obey* was measured by using the two following items: "You should accept police decisions, even if you think they are wrong," and "You should do what the police tell you to do, even if you disagree." *Trust* was measured using the single item indicator: "The police can be trusted to make decisions that are right for the community." Similar to procedural justice, all items were measured using Likert-type response categories and responses ranged from 0 to 3 (strongly disagree to strongly agree). Factor scores measuring *obligation to obey* were used for regression analyses. *Trust* was included as an independent single-item indicator (0 to 3; strongly disagree to strongly agree).

Independent Variables: Race/Ethnicity and Undocumented Immigrant Status

Variables representing race, ethnicity, and immigration status also served as independent variables. As with perceptions of the police, these responses were collected through self-report data. All items were asked and coded in the same way for both samples (AZCVS and AARIN).

Race/Ethnicity. *Race/ethnicity* served as a main independent variable for one of the research questions. Race and ethnicity included four different groups: White, Hispanic, African American, and "other." The "other" category included those respondents who self-reported being American Indian, Asian, Hawaiian or

Pacific Islander, mixed, or an "other" racial or ethnic group. For comparison

purposes, these four groups were recoded into dummy variables.

   Undocumented Immigrant. *Undocumented immigrant* status also served

as a predictor of interest for a portion of this analysis. This variable was measured

as "0" for citizen and "1" for undocumented immigrant. Citizenship status was

determined through self-report and was measured as undocumented immigrant

and U.S. citizen. The respondents were asked, "Are you a citizen of the United

States?" If the participant responded as having been born in the United States, he

or she was coded as a U.S. citizen. The participant was also coded as a U.S.

citizen if he or she reported to be an American citizen by naturalization.

Participants who stated that they were not born a U.S. citizen were asked, "How

did you enter the United States?" Participants indicating having used an

immigrant visa issued by the U.S. State Department, having been admitted as a

refugee seeking asylum, or entering with a student, work, or long-term visa were

coded as legal residents and were not included in the analysis.[16] Last, those

participants who stated that they had entered the United States using a non-

immigrant visa and overstayed or that they had entered the United States without

documents were coded as undocumented immigrants.[17]

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[16] Legal residents were omitted from the analysis for two reasons. First, there were not enough respondents that reported "legal" resident status and, therefore, comparisons between this group and undocumented immigrants or U.S. citizens were not feasible. Further, although this group of respondents were also immigrants, the purpose of this analysis is to focus on the perceptions of undocumented immigrants, hence the choice to omit individuals with "legal" resident status.

[17] As a bilingual interviewer, I participated in conducting the majority of interviews with individuals of different immigration status. It was my experience that those arrestees who responded to being noncitizens did not show signs of discomfort when responding to the

Control Variables

Several self-reported control variables were used for the present analysis. These variables included demographic characteristics such as gender and age. Variables representative of socio-demographic characteristics, such as marital status, education level, and employment status, were also included.

Gender was measured as "0" for female and "1" for male. *Age* was included in the analysis as a continuous variable. *Education* was measured using two dummy variables: high school education (i.e., completed at least high school or the equivalent; yes=1) and post high school education (i.e., completed at least some college or vocational training; yes=1). *Employment Status* included two categories: no employment (coded as "0") and employed at least part-time (coded as "1"). Last, *Marital Status* measured whether the participant reported currently being married (yes=1). A full list of the coding procedure is presented in Appendix C.

This study also controlled for other perceptions of the police. Specifically, *Police Efficiency/Effectiveness* was measured using two items: "Police try to solve problems or do something when called" and "Most police officers in your community do their job well." Perceptions of police *Distributive Justice* was

immigration status question. The participants were not reluctant to respond to this question and responded with the same ease as they responded to other questions. Unfortunately, to date, the is no empirical research that examines the methodologies used for interviewing undocumented immigrants nor on the reliability of undocumented immigrants' self-report and it is therefore not possible to compare to prior research.

measured using a single item: "Police treat racial or ethnic minorities differently."

All items were measured using Likert-type response categories and responses

ranged from 0 to 3 (strongly disagree to strongly agree).

Analytical Strategy

The analysis for this dissertation was conducted in stages. Bivariate and

multivariate analyses were first used to describe the two samples. The second step

was to assess the discriminant and convergent validity of the main theoretical

constructs. This was done by conducting exploratory (EFA) and confirmatory

(CFA) factor analyses. The factor loadings from the CFA for procedural justice

and legitimacy – operationalized as with two constructs: trust and obligation to

obey – were used in the regression analyses. The analysis relied on Ordinary

Least Squares Regressions (OLS) to assess the relationship between perceptions

of the police and willingness to cooperate/comply, while controlling for

individual (e.g., ethnicity, age, gender) and situational characteristics (e.g.,

education, employment status, marital status), and other police perceptions (e.g.,

efficiency, effectiveness, distributive justice). Details about the analysis plan are

discussed below.

**Research Question 1: Does the procedural justice and legitimacy model of
policing hold among a sample of residents in the Southwest region of the
United States? Do residents differ from arrestees in the way they perceive
procedural justice and legitimacy?**

Data collected through the general population sample (AZCVS) were used to assess this question. In order to complete the analysis, OLS regression was employed.[18] This question was also examined using the arrestee data (AARIN). The purpose of using both samples was to compare the findings and assess whether there were similarities and/or differences between the general population and the detained population. Following a step-wise approach, four different models were conducted for each sample. First, while controlling for individual characteristics and police perceptions, the relationship between procedural justice and trust was modeled. The same model was used to assess the relationship between procedural justice and perceived obligation to obey. Next, the relationship between perceptions of procedural justice, trust and willingness to cooperate was assessed. Last, the relationships between procedural justice, perceived obligation to obey, and willingness to cooperate was examined. Detailed findings are presented in tables 4.1 and 4.2 in the next chapter.

Research Question 2: Are there racial/ethnic differences in the perceptions of procedural justice and police legitimacy? Specifically, are there differences between Hispanic and White respondents, and are these perceptions related to their willingness to cooperate and/or comply with the police?

Similarly to the first research question, data from both surveys (AZCVS and AARIN) were used to assess this question. The analysis plan was the same as the one used for the first question. That is, four models were conducted using each

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[18] Based on overall diagnostics, OLS regression was the appropriate method of analysis.

data source. The first model assessed the relationship between procedural justice and trust, while the second model assessed the relationship between procedural justice and perceived obligation to obey. The third model examined the relationship between procedural justice, trust, and obligation to obey. The fourth model, examined the relationship between procedural justice, perceived obligation to obey, and willingness to cooperate.

Differently from the analysis plan of the first research question, however, the sample was reduced to include only Hispanic and White respondents and respondents who reported being Black or from an "other" racial/ethnic background were omitted from the analysis. The findings are described in tables 4.2 and 4.3 in the next chapter.

Research Question 3: Do undocumented immigrants perceive procedural justice and police legitimacy differently than U.S. citizens, and are these perceptions related to their willingness to cooperate and/or comply with the police?

The goal here was to compare perceptions of undocumented immigrants to those of U.S. citizens. Participants who reported being "legal/permanent residents" were not included in the analysis. Only data collected from the AARIN survey were used to assess this question. Data from the AZCVS survey was not used to assess this question due to the small number of responses obtained from participants on this question. Specifically, only 0.7 percent of AZCVS respondents reported undocumented status. The low number of undocumented

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respondents did not allow for a comparison between the two groups and therefore this research question was only assessed using the arrestee sample.

Just as with research questions 1 and 2, four models were conducted. While controlling for immigration status, the first model assessed the relationship between procedural justice and trust, and the second model assessed the relationship between procedural justice and perceived obligation to obey. While also controlling for immigration status, the third model examined the relationship between procedural justice, trust, and obligation to obey. The fourth model examined the relationship between procedural justice, perceived obligation to obey, and willingness to cooperate.

Limitations of the Data

As with any study, a number of limitations must be considered. The first limitation with these data is the fact that these findings were only representative of Maricopa County's general and arrestee populations. As stated above, the sociopolitical climate in Maricopa County is relatively unusual. Therefore, responses from residents and/or arrestees of this county might not be representative of other regions of the United States.

AZCVS

A limitation of the AZCVS sample was related the method used to administer the interviews. Telephone interviews are more likely than face-to-face interviews to result in a refusal (see Sturges & Hanrahan, 2004) or prematurely

terminated interview, which results in much lower response rates for telephone interviews. Due to the uncertainty associated with receiving a random phone call, respondents may feel less comfortable with sharing their personal information. In-person interviews offer the advantage of being able to identify the interviewer, which legitimatizes the process, resulting in more cooperation and willingness to complete the interview.

Further, RDD samples are also more likely to capture individuals with higher incomes and higher levels of education, suggesting that these samples underrepresent a segment of the population with lower socio-economic status (Thornberry, 1987; Weeks et al., 1983). Related, individuals of lower income may be more likely to lack of resources for owning a telephone, which would exclude them from the sample.

AARIN

A limitation of the AARIN data is the way data on immigration status were collected. As official data on immigration status was not available, immigration status was determined by a self-report measure. Although prior research has found support for the validity of self-report measures of different characteristics related to crime (Hindelang & Hirschi, 1979), these characteristics do not include immigration status. It is possible that undocumented immigrant arrestees may under-report their undocumented immigrant status for fear of being deported. A second limitation is that the sample of participants used for this analysis consisted of adult arrestees only. Therefore, findings from the analysis

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should not be generalized to the general population, as past research has found that arrestee samples can differ from the general population, especially with those individuals who have not been in contact with the criminal justice system (Tonry, 1995).

Further, the state of Arizona in general, and Maricopa County specifically, has recently been the center of political debate regarding the implementation of anti-immigration laws (e.g., most recently SB1070, during the time these data were collected). For the past several years, Arizona and Maricopa County have been known for their tough policies against immigration and the wide discretion used when implementing immigration laws, such as their participation in implementing federal immigration laws through agreements such as the 287(g) program and Secure Communities. These characteristics might prevent the generalizability of the research findings obtained through this study.

Ethical Considerations

As with any research study including human subjects, there are ethical considerations that should be discussed. A specific concern is the way in which data pertaining to immigration status were collected. All AARIN survey interviewers received a twelve-hour training. A portion of this training focused on addressing the importance of interviewee confidentially. In addition, all survey interviewers were required to complete certification and training in Institutional Review Board (IRB) standards and procedures.

CHAPTER FOUR

FINDINGS

In this chapter, I discuss the research findings. This chapter is organized in three sections, with each section describing the findings from each one of the three research questions of interest. The goal of this study was to assess the relationship between certain theoretical constructs while controlling for other relevant factors. Specifically, while controlling for individual characteristics (e.g., sex, age, educational attainment) and general perceptions of the police (e.g., perceptions of police efficiency and effectiveness), the goal was to assess the relationship between procedural justice, legitimacy, and willingness to cooperate with the police. In order to do so, four different equations were modeled for each research question (for each data source). Each research question examines the relationship between procedural justice, legitimacy (measured in terms of perceived trust and willingness to cooperate), and willingness to cooperate with the police, while controlling for other relevant variables. The results are presented in tables 4.1 through 4.5.

The analysis was conducted with a step-wise approach. The first step was to determine the operationalization of procedural justice and legitimacy. This was done through factor analyses (see chapter 3). Once the operationalization of procedural justice and legitimacy was determined, a series of ordinary least squares (OLS) regressions were conducted. A total of twenty regressions were modeled; four models for each research question by data source, with the exception of the last research question in which only the arrestee sample was

used. While controlling for individual characteristics and police perceptions, each

model tested the applicability of the process-based model of policing. The first

model tested the relationship between procedural justice and trust. The second

model tested the relationship between procedural justice and obligation to obey.

The third model tested the relationship between procedural justice and trust, and

their relationship to willingness to cooperate. Last, the fourth model tested the

relationship between procedural justice and obligation to obey, and their

relationship to willingness to cooperate.[19] The results of each model are described

in detail next.

**Research Question 1: Applicability of the Process-Based Model of Regulation
in a Southwest Region**

The goal of the first research question was to assess the applicability (or

durability) of the process-based model of policing in a region of a Southwestern

state of the United States. Specifically, the first research question asks, "Does the

process-based model of regulation hold among a sample of residents of the

Southwest region of the United States? That is, do findings from the Southwest

region support the larger body of literature that suggests that perceptions of

procedural justice are positively related to perceptions of police legitimacy, and

are perceptions of legitimacy related to willingness to cooperate and/or comply

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[19] Before interpreting the findings, I conducted multicollinearity diagnostics. The diagnostic tests indicated that multicollinearity was not a problem; variance inflation factors (VIF) and conditional indices (CI) were well below levels that would suggest collinearity (Belsley, Kuh, & Welsch, 2002; Fisher and Mason, 1981).

with police? Further, do the general public and arrestees differ in the way they

perceive procedural justice and police legitimacy?" This research question was

assessed using both data samples employed for this study: the general population

sample (AZCVS) and a sample of arrestees (AARIN).

Results from the AZCVS Sample

Table 4.1 displays the findings from the AZCVS sample. The full sample

of respondents (n=854) was used for this analysis. The first model (Model 1)

assessed the relationship between procedural justice and perceived trust, while

controlling for other characteristics. The model R^2 is .217, meaning that about 22

percent of the variation in *trust* was explained by this model. The results

supported the theory: perceptions of procedural justice were positively and

significantly related to perceptions of trust in the police (b = .228; β = 0.436).

However, neither individual level characteristics (i.e., gender, age, race or

ethnicity, employment or marital status, and level of education) nor other police

perceptions (i.e., effectiveness, efficiency, and distributive justice) were

significantly related to perceived trust.

Differently, perceptions of procedural justice were not significantly related

to perceived obligation to obey (Model 2). However, several individual level

characteristics were related to obligation to obey. Specifically, age (b = .004; β =

0.159) was positively and significantly related to perceived obligation to obey;

older individuals were more likely to report obligation to obey. As it related to

level of education, those with less than a high school education (b = -.233; β = -

0.114) and those with a college degree (b = -.206; β = -0.184) were negatively

related to obligation to obey, when compared with those who had completed a high school education. However, gender, race or ethnicity, employment or marital status, or other police perceptions were not significantly related to perceived obligation to obey. The R^2 for this model was .127, meaning that about 13 percent of the variation in obligation to obey was explained by this model.

Table 4.1

Predicting trust, obligation to obey, and willingness to cooperate using the full resident sample (AZCVS) (n = 854)

	Model 1: Predicting Trust				Model 2: Predicting Obligation to Obey				Model 3: Trust Predicting Willingness to Cooperate				Model 4: Obligation to Obey Predicting Willingness to Cooperate			
	b	SE	β	t-ratio	b	SE	β	t-ratio	b	SE	β	t-ratio	b	SE	β	t-ratio
Male	-0.028	0.022	-0.05	-1.261	0.06	0.059	0.056	1.011	-0.07	0.037	-0.091	-1.908	-0.078*	0.036	-0.101	-2.182
Age	0.001	0.001	0.041	0.823	0.004*	0.002	0.159	2.513	0.001	0.001	0.026	0.383	0.001	0.001	0.029	0.426
Race/Ethnicity																
White (reference)																
Black	-0.052	0.073	-0.035	-0.710	-0.013	0.185	-0.005	-0.069	-0.062	0.088	-0.029	-0.704	-0.039	0.08	-0.019	-0.485
Hispanic	-0.003	0.032	-0.005	-0.090	0.015	0.078	0.012	0.191	-0.086	0.052	-0.097	-1.632	-0.084	0.052	-0.094	-1.621
Other	-0.007	0.078	-0.004	-0.090	-0.003	0.171	-0.001	-0.019	0.092	0.053	0.037	1.735	0.110*	0.046	0.049	2.380
Currently Employed	0.028	0.023	0.049	1.228	0.039	0.073	0.037	0.539	0.021	0.045	0.027	0.462	0.022	0.044	0.029	0.504
Married/Living with Spouse	0.004	0.024	0.006	0.149	-0.144	0.081	-0.133	-1.774	0.102**	0.04	0.130	2.559	0.103**	0.039	0.132	2.628
Less than High School Education	-0.056	0.062	-0.051	-0.889	-0.233*	0.116	-0.114	-2.005	-0.056	0.095	-0.038	-0.592	-0.073	0.096	-0.049	-0.758
College Graduate	0.029	0.028	0.048	1.009	-0.206**	0.076	-0.184	-2.710	0.011	0.049	0.014	0.234	0.017	0.047	0.021	0.371
Police Efficiency	0.019	0.047	0.037	0.393	0.128	0.081	0.136	1.568	0.009	0.055	0.013	0.158	0.011	0.052	0.016	0.211
Police Effectiveness	-0.041	0.044	-0.082	-0.940	0.089	0.086	0.094	1.039	0.054	0.056	0.077	0.964	0.054	0.052	0.078	1.028
Distributive Justice	0.032	0.019	0.087	1.640	0.052	0.050	0.075	1.032	0.034	0.024	0.068	1.408	0.032	0.024	0.064	1.339
Procedural justice	0.228***	0.058	0.436	3.937	0.119	0.099	0.120	1.199	0.082	0.094	0.112	0.865	0.075	0.082	0.104	0.917
Legitimacy																
Trust	--	--	--	--	--	--	--	--	0.019	0.089	0.014	0.217	--	--	--	--
Obligation to Obey	--	--	--	--	--	--	--	--	--	--	--	--	0.015	0.039	0.020	0.384

Note. p***<.001, p**<.01, p*<.05

b = unstandardized coefficients; SE = standard errors; β = fully standardized coefficients.

For trust, $R^2 = .217$; for obligation to obey, $R^2 = .127$; for trust and willingness to cooperate, $R^2 = .064$; for obligation to obey and willingness to cooperate, $R^2 = .078$.

The next model (Model 3) examined the relationship between, procedural justice, trust, and willingness to cooperate. The R^2 for this model was .064, meaning that only about 6 percent of the variation in willingness to cooperate was explained by this model. The only statistically significant relationship in this model was found between marital status and willingness to cooperate; being married was significantly and positively related to willingness to cooperate (b = .102; β = 0.130). Age, sex, race/ethnicity, employment status, educational attainment, and police perceptions were not significantly related to willingness to cooperate. Overall, this model did not find support for the theory.

When examined in Model 4, marital status was also found to be a significant factor when assessing the relationship between procedural justice, obligation to obey, and willingness to cooperate. That is, while controlling for perceptions of procedural justice and perceived obligation to obey, being married was significantly and positively related to willingness to cooperate (b = .103; β = 0.132). In addition, respondents from an "other" racial/ethnic background were significantly more likely to be willing to cooperate (b = .110; β = 0.049), whereas males were significantly less likely (b = -.078; β = -.101) to report willingness to cooperate. However, age, employment status, educational attainment, and police perceptions were not significantly related to willingness to cooperate. Overall, the R^2 for this model was .078, meaning that about 8 percent of the variation in

willingness to cooperate was explained by this model. Similar to Model 3, findings from this model did not show support for the theoretical model.

However, when assessing the relationship between procedural justice and trust, as well as the relationship between procedural justice and obligation to obey, the results showed a significant and positive relationship. That is, procedural justice was significantly and positively related to trust ($b = .230$; $\beta = 0.445$; $p = .000$) as well as being related to obligation to obey ($b = .246$; $\beta = 0.450$; $p = .000$). Similarly, procedural justice ($b = .110$; $\beta = 0.223$; $p = .000$) and trust ($b = .112$; $\beta = 0.323$; $p = .000$) were related to willingness to cooperate, and procedural justice ($b = .120$; $\beta = 0.200$; $p = .000$) and obligation to obey ($b = .140$; $\beta = 0.222$; $p = .000$) were also related to willingness to cooperate. These findings showed that the relationship between all constructs is not simply null, but it is not as powerful as other relationships in the model (model not shown).

Results from the AARIN Sample

The first research question of interest was also assessed using the sample of arrestees. Just as with the general population sample, the full sample of respondents was used to assess this research question; the arrestee sample included data collected from 2,268 arrestees. The first step in assessing this question was to examine the relationship between procedural justice and trust. The results showed support for the theory; perceptions of procedural justice were significantly and positively related to perceptions of trust ($b = .138$; $\beta = 0.205$) (table 4.2, Model 1). The results also showed that several individual level

characteristics were related to perceptions of trust. Specifically, age (b =-.003; β = -0.059) was significantly and negatively related to trust. However, having a job (b = .051; β = 0.052) was significantly and positively related to perceptions of trust. Further, perceptions of police efficiency, (b = .097; β = 0.117) and perceptions of police effectiveness (b = .247; β = 0.345) and perceived distributive justice (b = .100; β = .153) were significantly and positively related to trust. Gender, race/ethnicity, level of education, and marital status were not significantly related to trust. The R^2 for this model was .292, meaning that about 29 percent of the variation in *trust* was explained by this model.

When assessing the relationship between procedural justice and obligation to obey, the results supported the theoretical model; perceptions of procedural justice were significantly and positively related to perceived obligation to obey (b = .390; β = .300) (Table 4.2, Model 2). In this model, race was also significantly related to obligation to obey. Compared to White respondents, Black respondents were significantly less likely to perceive obligation to obey (b = -.185; β = -.068). Other police perceptions were also significantly related to perceived obligation to obey. Specifically, perceptions of police efficiency (b = .381; β = 0.238) and perception of police effectiveness (b = .356; β = 0.258), and perceptions of distributive justice (b = .252; β = .199) were significantly and positively related to obligation to obey. Age, sex, marital status, employment status, and educational attainment were not significantly related to obligation to obey. The R^2 for this model was .388. That is, this model explained about 39 percent of the variation in obligation to obey.

Table 4.2

Predicting trust, obligation to obey, and willingness to cooperate using the full arrestee sample (AARIN) (n= 2,268)

	Model 1: Predicting Trust				Model 2: Predicting Obligation to Obey				Model 3: Trust Predicting Willingness to Cooperate				Model 4: Obligation to Obey Predicting Willingness to Cooperate			
	b	SE	β	t-ratio	b	SE	β	t-ratio	b	SE	β	t-ratio	b	SE	β	t-ratio
Male	0.015	0.022	0.013	0.685	-0.014	0.053	-0.006	-0.261	-0.372***	0.047	-0.166	-7.852	-0.372***	0.047	-0.166	-7.852
Age	-0.003**	0.001	-0.059	-2.955	-0.002	0.002	-0.024	-0.952	0.003	0.002	0.034	1.55	0.003	0.002	0.034	1.55
Race/Ethnicity																
White (reference)																
Black	0.001	0.029	0.001	0.03	-0.185**	0.068	-0.068	-2.73	0.037	0.062	0.013	0.595	0.037	0.062	0.013	0.594
Hispanic	0.041	0.024	0.039	1.723	0.07	0.058	0.034	1.217	-0.012	0.051	-0.006	-0.246	-0.012	0.051	-0.006	-0.246
Other	0.006	0.026	0.005	0.227	-0.007	0.064	-0.003	-0.113	-0.078	0.059	-0.031	-1.327	-0.078	0.059	-0.031	-1.327
Currently Employed	0.051**	0.019	0.052	2.636	-0.008	0.046	-0.004	-0.169	0.265***	0.041	0.138	6.421	0.265***	0.041	0.138	6.421
Married/Living with Spouse	0.008	0.026	0.005	0.293	0.021	0.064	0.008	0.331	0.253***	0.057	0.092	4.427	0.253***	0.057	0.092	4.427
Less than High School Educatio	0.015	0.022	0.014	0.662	0.041	0.057	0.020	0.715	-0.113*	0.051	-0.055	-2.231	-0.113*	0.051	-0.055	-2.231
College Graduate	-0.003	0.023	-0.003	-0.131	-0.055	0.054	-0.027	-1.009	0.151**	0.048	0.074	3.159	0.151**	0.048	0.074	3.159
Police Efficiency	0.097***	0.019	0.117	5.243	0.381***	0.039	0.238	9.793	0.168***	0.037	0.104	4.542	0.168***	0.037	0.104	4.542
Police Effectiveness	0.247***	0.024	0.345	10.215	0.356***	0.034	0.258	10.425	0.345***	0.033	0.248	10.41	0.345***	0.033	0.248	10.411
Distributive Justice	0.100***	0.015	0.153	6.594	0.252***	0.029	0.199	8.633	0.133***	0.027	0.105	4.921	0.133***	0.027	0.105	4.92
Procedural justice	0.138***	0.017	0.205	8.068	0.390***	0.029	0.300	13.328	0.154***	0.03	0.118	5.135	0.115***	0.032	0.088	3.591
Legitimacy																
Trust	--	--	--	--	--	--	--	--	0.304***	0.051	0.13	6.012	--	--	--	--
Obligation to Obey	--	--	--	--	--	--	--	--	--	--	--	--	0.164***	0.036	0.128	4.571

Note. p***<.001, p**<.01, p*<.05

b = unstandardized coefficients; SE = standard errors; β = fully standardized coefficients.

For trust, R² = .292; for obligation to obey, R² = .388; for trust and willingness to cooperate, R² = .247; for obligation to obey and willingness to cooperate, R² = .242.

Model 3 in table 4.2 shows the relationship between perceptions of procedural justice, perceived trust in the police, and willingness to cooperate with the police. The results showed a positive and significant relationship between perceptions of procedural justice ($b =$. 154; $\beta = 0.118$), perceived trust ($b = .304$; $\beta = 0.13$), and willingness to cooperate. Although neither age nor race/ethnicity were significantly related to willingness to cooperate, there were several significant individual level factors. For example, the results showed that males were significantly less likely to report willingness to cooperate ($b = -.372$; $\beta = -0.166$). Having a job ($b = .265$; $\beta = 0.138$) and being married ($b = .253$; $\beta = 0.092$) were positively and significantly related to willingness to cooperate. Education was also significantly related to willingness to cooperate. On the one hand, compared to respondents who completed a high school education, respondents with less than a high school education were significantly less likely to report willingness to cooperate ($b = -.113$; $\beta = -0.055$). Alternatevely, respondents with a college education were significantly more likely to report willingness to cooperate ($b = .151$; $\beta = 0.074$). As it related to police perceptions, perceptions of police efficiency ($b = .168$; $\beta = .104$) and perceptions of police effectiveness ($b = .345$; $\beta = .248$), and perceptions of distributive justice ($b = .133$; $\beta = .105$) were significantly and positively related to willingness to cooperate. The R^2 for this model was .242. That is, this model explained about 24 percent of the variation in obligation to obey.

Model 4 in table 4.2 shows the findings related to the relationship between perceptions of procedural justice, perceived obligation to obey, and willingness to cooperate. The results showed a positive and significant relationship between perceptions of procedural justice ($b =. 115$; $\beta = 0.088$), perceived obligation to obey ($b = .164$; $\beta = 0.128$), and willingness to cooperate. Further, the results from this model showed that males were less likely to report willingness to cooperate ($b = -.372$; $\beta = -0.166$). Also, having a job ($b =.265$; $\beta = 0.138$), being married ($b = .253$; $\beta = 0.092$) and having attended college ($b =.151$; $\beta = 0.074$) were significantly and positively related to willingness to cooperate. Compared to high school graduates, however, those with no high school education were less likely to be willing to cooperate ($b = -.113$; $\beta = -0.055$). Perceptions of police efficiency ($b = .168$; $\beta = 0.104$) and effectiveness ($b = .345$; $\beta = 0.248$), and perceived distributive justice ($b = .133$; $\beta = 0.105$) were significantly and positively related to willingness to cooperate. Neither gender, age, level of education, employment status, nor marital status were significantly related to obligation to obey. The R^2 for this model was .247, meaning that about 25 percent of the variation in *willingness to cooperate* was explained by this model.

Research Question 2: Applicability of the Process-Based Model of Policing among Hispanics

The goal of the second research question was to assess whether there are differences between Hispanics and Whites in perceptions of the police and willingness to cooperate with the police. Specifically, the second research question asks, "Do respondents of different races/ethnicities differ in their

perceptions of procedural justice and police legitimacy? Specifically, do Hispanic

and White respondents differ in their perceptions, and are these respondents'

perceptions of police legitimacy related to willingness to cooperate and/or comply

with police?" This research question was assessed using the two different data

sources, the sample of residents (AZCVS), and the sample of arrestees (AARIN).

For theoretical reasons, samples were reduced to only reflect Hispanic and White

respondents. The results are presented in tables 4.3 and 4.4.

Results from the AZCVS Sample

Results from the general population sample are presented in table 4.3. As

stated above, the sample was reduced to only include respondents who stated their

racial/ethnic background was Hispanic or White, omitting respondents who

reported being Black or from an "other" racial or ethnic background. Therefore, a

sample of 748 general population surveys was used to assess this research

question. The first model (Model 1) showed that when predicting perceived trust

in the police, procedural justice was the only significant predictor; perceived

procedural justice was positively related to perceived trust ($b = .240$; $\beta = 0.456$)

($R^2 = .237$). However, this finding was not supported when predicting perceived

obligation to obey; procedural justice was not significantly related to obligation to

obey (Model 2). Other factors were related to perceived obligation to obey,

however. For example, perceptions of police efficiency were significantly and

positively related to obligation to obey ($b = .151$; $\beta = 0.197$) and being male was

significantly and positively related to obligation to obey ($b = .091$; $\beta = 0.100$).

The R^2 for this model is .148. Race/ethnicity was not significantly related to either

trust or perceived obligation to obey. Estimates for both of these models are

presented in table 4.3.

Table 4.3

Predicting Hispanics' perceptions of trust, obligation to obey, and willingness to cooperate using the resident sample (AZCVS) (n=748)

	Model 1: Predicting Trust				Model 2: Predicting Obligation to Obey				Model 3: Trust Predicting Willingness to Cooperate				Model 4: Obligation to Obey Predicting Willingness to Cooperate			
	b	SE	β	t-ratio	b	SE	β	t-ratio	b	SE	β	t-ratio	b	SE	β	t-ratio
Male	-0.015	0.019	-0.028	-0.817	0.091*	0.040	0.100	2.289	-0.036	0.032	-0.046	-1.126	-0.042	0.031	-0.055	-1.379
Age	0.001	0.001	0.060	1.277	0.001	0.001	0.026	0.501	0.001	0.001	0.055	0.916	0.001	0.001	0.051	0.896
Currently Employed	0.015	0.021	0.027	0.694	-0.063	0.045	-0.069	-1.398	0.029	0.038	0.037	0.742	0.033	0.037	0.043	0.886
Married/Living with Spouse	-0.012	0.021	-0.021	-0.566	-0.035	0.050	-0.038	-0.707	0.084*	0.035	0.107	2.405	0.084*	0.033	0.107	2.506
Less than High School Educatio	-0.052	0.053	-0.046	-0.983	-0.157	0.105	-0.084	-1.497	0.016	0.083	0.010	0.190	-0.023	0.085	-0.014	-0.266
College Graduate	0.002	0.024	0.004	0.095	-0.086	0.051	-0.087	-1.680	-0.020	0.042	-0.024	-0.483	-0.011	0.040	-0.014	-0.279
Police Efficiency	0.029	0.042	0.062	0.678	0.151*	0.065	0.197	2.322	-0.006	0.048	-0.010	-0.132	-0.002	0.047	-0.004	-0.051
Police Effectiveness	-0.052	0.046	-0.107	-1.125	0.036	0.066	0.045	0.547	0.028	0.051	0.040	0.543	0.021	0.047	0.032	0.454
Distributive Justice	0.032	0.017	0.088	1.828	0.030	0.039	0.051	0.778	0.042	0.023	0.084	1.849	0.038	0.021	0.077	1.803
White (reference)																
Hispanic	-0.007	0.028	-0.011	-0.242	-0.049	0.052	-0.046	-0.936	-0.103*	0.047	-0.115	-2.164	-0.107*	0.046	-0.120	-2.326
Procedural justice	0.240***	0.068	0.456	3.542	0.103	0.087	0.118	1.187	0.109	0.086	0.147	1.268	0.115	0.081	0.156	1.410
Legitimacy																
Trust	--	--		--	--	--	--	--	0.036	0.081	0.026	0.448	--	--	--	--
Obligation to Obey	--	--		--	--	--	--	--	--	--		--	-0.019	0.038	-0.023	-0.500

Note. p***<.001, p**<.01, p*<.05

b = unstandardized coefficients; SE = standard errors; β = fully standardized coefficients.

For trust, R^2 = .237; for obligation to obey, R^2 = .148; for trust and willingness to cooperate, R^2 = .064; for obligation to obey and willingness to cooperate, R^2 = .067.

Models 3 and 4 in table 4.3 predict willingness to cooperate. Both of these models showed a significant and negative relationship between race/ethnicity and willingness to cooperate. For example, while controlling for procedural justice, trust, as well as other individual characteristics and police perceptions (Model 3), Hispanic respondents were significantly less likely to be willing to cooperate, compared to Whites (b =-.103; β = -0.115). Being married was also significantly and positively related to willingness to cooperate (b = .084; β = 0.107). Similarly, when predicting willingness to cooperate, while controlling for procedural justice, obligation to obey, as well as other individual characteristics and police perceptions (Model 4), Hispanic respondents were significantly less likely to be willing to cooperate, compared to Whites (b =-.107; β = -0.120). Again, being married was also significantly and positively related to willingness to cooperate (b = .084; β = 0.107). Neither Model 3 nor Model 4 supported the theoretical model. That is, neither procedural justice, trust, nor obligation to obey was significantly related to willingness to cooperate. The results showed that about 6 percent of the variation in willingness to cooperate was explained by the model accounting for trust (Model 3; R^2 = .064) and about 7 percent of the variation in willingness to cooperate was explained by the model accounting for obligation to obey (Model 4; R^2 = .067).

Results from the AARIN Sample

The next step was to assess the perceptions of Hispanics, compared to those of Whites, while using the data from the arrestee survey. As with the

general population survey data, the arrestee sample was reduced to only include

Hispanic and White respondents, resulting in a final sample of 1,496 respondents.

For the arrestee sample (table 4.4, Model 1), the results show several statistically

significant relationships. For example, procedural justice was significantly and

positively related to perceived trust in the police ($b = .155$; $\beta = 0.236$). Having a

job was also significantly and positively related to perceived trust ($b = .069$; $\beta =$

0.071). Perceptions of police efficiency ($b = .118$; $\beta = 0.144$), perceptions of

police effectiveness ($b = .237$; $\beta = 0.333$), and perceptions of distributive justice

($b = .083$; $\beta = 0.126$) were significantly and positively related to perceptions of

trust. Importantly, race/ethnicity was not significantly related to perceived trust;

that is, Hispanics did not differ in their perceptions of trust when compared to

White respondents. Further, sex, age, marital status, and educational attainment

were not significantly related to perceived trust. Overall, this model explained

about 30 percent of the variation in trust ($R^2 = .304$).

The model that examined perceived obligation to obey revealed similar

findings. In this model (Model 2), procedural justice was significantly and

positively related to perceived obligation to obey ($b = .402$; $\beta = 0.314$).

Perceptions of police efficiency ($b = .375$; $\beta = 0.234$), perceptions of police

effectiveness ($b = .352$; $\beta = 0.253$), and perceptions of distributive justice ($b =$

$.255$; $\beta = 0.198$) were significantly related to perceptions of obligation to obey.

Similar to the previous model (Model 1), race/ethnicity were not significantly

related to perceived trust; that is, Hispanics did not differ in their perceptions of

trust when compared to White respondents. In this model, however, none of the

individual level characteristics were significantly related to obligation to obey.

The results indicated that about 39 percent of the variation in obligation to obey

was explained by this model (R^2 = .389).

Table 4.4

Predicting Hispanics' perceptions of trust, obligation to obey, and willingness to cooperate using the arrestee sample (AARIN) (n=1,496)

	Model 1: Predicting Trust				Model 2: Predicting Obligation to Obey				Model 3: Trust Predicting Willingness to Cooperate				Model 4: Obligation to Obey Predicting Willingness to Cooperate			
	b	SE	β	t-ratio	b	SE	β	t-ratio	b	SE	β	t-ratio	b	SE	β	t-ratio
Male	0.011	0.027	0.010	0.412	-0.025	0.064	-0.011	-0.394	-0.361***	0.058	-0.161	-6.260	-0.360***	0.058	-0.161	-6.260
Age	-0.001	0.000	-0.035	-1.571	-0.003	0.003	-0.074	-1.030	0.001	0.001	0.017	0.450	0.001	0.001	0.017	0.450
Currently Employed	0.069**	0.024	0.071	2.860	-0.041	0.056	-0.021	-0.725	0.234***	0.050	0.122	4.641	0.234***	0.050	0.122	4.642
Married/Living with Spouse	-0.024	0.031	-0.017	-0.769	0.030	0.079	0.011	0.373	0.246***	0.068	0.092	3.606	0.246***	0.068	0.092	3.606
Less than High School Educatio	0.019	0.027	0.018	0.706	0.049	0.068	0.024	0.723	-0.146*	0.061	-0.072	-2.395	-0.146*	0.061	-0.072	-2.395
College Graduate	-0.034	0.028	-0.033	-1.213	-0.089	0.068	-0.043	-1.305	0.123*	0.059	0.060	2.102	0.123*	0.059	0.060	2.102
Police Efficiency	0.118***	0.023	0.144	5.175	0.375***	0.047	0.234	7.985	0.176***	0.045	0.110	3.897	0.176***	0.045	0.110	3.897
Police Effectiveness	0.237***	0.028	0.333	8.466	0.352***	0.042	0.253	8.326	0.347***	0.040	0.249	8.584	0.347***	0.040	0.249	8.584
Distributive Justice	0.083***	0.018	0.126	4.619	0.255***	0.035	0.198	7.185	0.147***	0.033	0.114	4.438	0.147***	0.033	0.114	4.437
White (reference)																
Hispanic	0.037	0.024	0.038	1.555	0.064	0.058	0.034	1.109	-0.016	0.052	-0.008	-0.309	-0.016	0.052	-0.008	-0.310
Procedural justice	0.155***	0.022	0.236	7.147	0.402***	0.034	0.314	11.645	0.190***	0.036	0.148	5.215	0.153***	0.038	0.120	3.978
Legitimacy																
Trust	--	--	--	--	--	--	--	--	0.339***	0.063	0.145	5.369	--	--	--	--
Obligation to Obey	--	--	--	--	--	--	--	--	--	--	--	--	0.170***	0.043	0.135	3.916

Note. p***<.001, p**<.01, p*<.05

b = unstandardized coefficients; SE = standard errors; β = fully standardized coefficients.

For trust, $R^2 = .304$; for obligation to obey, $R^2 = .389$; for trust and willingness to cooperate, $R^2 = .254$; for obligation to obey and willingness to cooperate, $R^2 = .245$.

Model 3 examined the relationship between perceived procedural justice, trust, and willingness to cooperate between Hispanics and Whites. Once again, there were no significant differences between Hispanics and Whites. Perceptions of procedural justice ($b = 0.190$; $\beta = .148$) and perceptions of trust ($b = 0.339$; $\beta = .145$), however, were significantly and positively related to reported willingness to cooperate with the police. Holding a job ($b = 0.234$; $\beta = .122$), being married ($b = 0.246$; $\beta = .092$), and having a college degree ($b = 0.123$; $\beta = .060$) were also significantly and positively associated with willingness to cooperate. Being male ($b = -0.361$; $\beta = -.161$) and having less than a high school education ($b = -0.146$; $\beta = -.072$) were significantly, but negatively, related to willingness to cooperate. Last, police perceptions were also significantly related to reported willingness to cooperate. Perceived police efficiency ($b = 0.176$; $\beta = .110$) and perceived police effectiveness ($b = 0.347$; $\beta = .249$), and perceived distributive justice ($b = 0.147$; $\beta = .114$) were positively related to willingness to cooperate. Age of the respondent was not related to perceived willingness to cooperate. The R^2 for this model was .254, meaning that about 25 percent of the variation in *willingness to cooperate* was explained by this model.

Model 4 shows the relationship between perceptions of procedural justice, perceived obligation to obey, and willingness to cooperate. Again, race/ethnicity was not significantly related to willingness to cooperate; Hispanics did not significantly differ from White respondents in their willingness to cooperate with the police. However, with the exception of age, all other independent and control

variables were significantly related to willingness to cooperate. For example, perceptions of procedural justice ($b = .153$; $\beta = 0.120$) and perceived obligation to obey ($b = .170$; $\beta = 0.135$) were significantly and positively related to willingness to cooperate. Being employed ($b = .234$; $\beta = 0.122$), being married ($b = .246$; $\beta = 0.092$), and holding a college degree ($b = .123$; $\beta = 0.060$) were also significantly and positively associated with willingness to cooperate. Differently, however, respondents with no high school education were significantly less likely to cooperate with the police ($b = -.146$; $\beta = -0.072$). This was also found among males who were significantly less likely to report willingness to cooperate with the police ($b = -.360$; $\beta = -0.161$). As it relates to police perceptions, perceptions of police efficiency ($b = .176$; $\beta = 0.110$) and perceptions of police effectiveness ($b = .347$; $\beta = 0.249$), and perceptions of distributive justice ($b = .147$; $\beta = 0.114$) were significantly and positively associated with willingness to cooperate. The R^2 for this model was .245, meaning that about 25 percent of the variation in *willingness to cooperate* was explained by this model.

Research Question 3: Applicability of the Process-based Model of Policing among Undocumented Immigrants

The last research question focused on examining the perceptions of undocumented immigrants of the police, compared to those of U.S. citizens. Specifically, this questions asks, "Do U.S. citizens and undocumented immigrants differ in their perceptions of procedural justice and police legitimacy, and are their respective perceptions of police legitimacy related to willingness to

cooperate and/or comply with police?" This question was assessed using data obtained from the sample of arrestees. For theoretical reasons, the sample was reduced to only include undocumented immigrants and U.S. citizens; responses from all immigrants that did not hold U.S. citizenship (e.g., permanent resident status or a "green card" holder) were omitted from the analysis.

Overall, the findings show that perceptions of the police were rarely affected by immigration status, with the exception of perceived trust in the police. For example, as presented in table 4.5 (Model 1), undocumented immigrants were significantly more likely to report trusting the police, compared to U.S. citizens ($b = .094$; $\beta = 0.048$). Being currently employed was also significantly and positively related to perceptions of trust ($b = .050$; $\beta = 0.051$). Police perceptions were also significantly related to perceived trust. Specifically, and supporting the theoretical model, procedural justice was positively related to trust ($b = .138$; $\beta = 0.204$). Further, police efficiency ($b = .099$; $\beta = 0.120$) and police effectiveness ($b = .240$; $\beta = 0.337$), and distributive justice ($b = .098$; $\beta = 0.149$) were positively related to trust in the police. Age, sex, marital status, and educational attainment were not significantly related to trust. The model R^2 suggests that about 29 percent of the variation in trust was explained by this model ($R^2 = .288$).

The next model (Model 2) in table 4.5 examined the relationship between immigration status and obligation to obey. Although immigration status was not significantly related to perceived obligation to obey, the theoretical model was supported. That is, perceptions of procedural justice ($b = .386$; $\beta = 0.298$) were all positively and significantly related to perceived obligation to obey. Further, other

police perceptions were strongly associated with perceived obligation to obey. For example, perceptions of police efficiency (b = .377; β = 0.237) and perceptions of police effectiveness (b = .355; β = 0.260), and distributive justice (b = .261; β = 0.208) were positively and significantly related to perceived obligation to obey. None of the individual level characteristics included in this model were found to be significant. However, this model accounted for about 39 percent of the variation in trust (R^2 = .393).

Table 4.5

Predicting undocumented immigrants' perceptions of trust, obligation to obey, and willingness of cooperate using the arrestee sample (AARIN) (n=2,136)

	Model 1: Predicting Trust				Model 2: Predicting Obligation to Obey				Model 3: Trust Predicting Willingness to Cooperate				Model 4: Obligation to Obey Predicting Willingness to Cooperate			
	b	SE	β	t-ratio	b	SE	β	t-ratio	b	SE	β	t-ratio	b	SE	β	t-ratio
Male	0.015	0.022	0.013	0.692	-0.024	0.053	-0.011	-0.449	-0.367***	0.048	-0.165	-7.699	-0.367***	0.048	-0.165	-7.699
Age	-0.001	0.000	-0.030	-1.826	-0.003	0.002	-0.079	-1.391	0.001	0.001	0.013	0.490	0.001	0.001	0.013	0.490
Currently Employed	0.050*	0.020	0.051	2.531	-0.003	0.046	-0.002	-0.066	0.244***	0.042	0.127	5.838	0.244***	0.042	0.127	5.839
Married/Living with Spouse	-0.009	0.026	-0.006	-0.325	0.026	0.065	0.010	0.402	0.245***	0.058	0.089	4.203	0.245***	0.058	0.089	4.203
Less than High School Education	0.022	0.023	0.021	0.971	0.044	0.056	0.022	0.781	-0.133**	0.050	-0.065	-2.638	-0.133**	0.050	-0.065	-2.638
College Graduate	-0.009	0.023	-0.009	-0.396	-0.067	0.055	-0.034	-1.231	0.163**	0.048	0.080	3.375	0.163**	0.048	0.080	3.375
Police Efficiency	0.099***	0.019	0.120	5.189	0.377***	0.039	0.237	9.687	0.160***	0.038	0.100	4.260	0.160***	0.038	0.100	4.260
Police Effectiveness	0.240***	0.025	0.337	9.789	0.355***	0.034	0.260	10.356	0.346***	0.033	0.250	10.384	0.346***	0.033	0.250	10.384
Distributive Justice	0.098***	0.015	0.149	6.321	0.261***	0.029	0.208	8.951	0.135***	0.027	0.107	4.970	0.135***	0.027	0.107	4.969
Immigration Status																
U.S. Citizen (reference)																
Undocumented Immigrant	0.094*	0.040	0.048	2.334	0.157	0.097	0.042	1.614	0.158	0.086	0.042	1.845	0.158	0.086	0.042	1.844
Procedural justice	0.138***	0.018	0.204	7.730	0.386***	0.030	0.298	13.016	0.155***	0.031	0.119	5.080	0.117***	0.032	0.089	3.600
Legitimacy																
Trust	--	--		--	--	--		--	0.275***	0.051	0.119	5.412	--	--	--	--
Obligation to Obey	--	--		--	--	--		--	--	--	--	--	0.157***	0.036	0.122	4.312

Note. p***<.001, p**<.01, p*<.05 (two-tailed)

b = unstandardized coefficients; SE = standard errors; β = fully standardized coefficients.

For trust, R^2 = .288; for obligation to obey, R^2 = .393; for trust and willingness to cooperate, R^2 = .241; for obligation to obey and willingness to cooperate, R^2 = .237.

Models 3 and 4 (table 4.5) present the estimates that assessed the relationship between procedural justice, trust and willingness to cooperate (model3) and procedural justice, obligation to obey, and willingness to cooperate (model 4) while controlling for immigration status and other relevant factors. Model 3 shows that males ($b = -.367$; $\beta = -0.165$) and those with less than a high school education ($b = -.133$; $\beta = -0.065$), compared to high school graduates, were significantly less likely to report willingness to cooperate with the police. Holding current employment ($b = .244$; $\beta = 0.127$), being married ($b = .245$; $\beta = 0.089$), and being a college graduate ($b = .163$; $\beta = 0.080$) were significant predictors of an increase in willingness to cooperate. Perceptions of police efficiency ($b = .160$; $\beta = 0.100$) and perceptions of police effectiveness ($b = .346$; $\beta = 0.250$), and perceptions of distributive justice ($b = .135$; $\beta = 0.107$) were significantly and positively related to willingness to cooperate. Further, this model supported the theory; perceptions of procedural justice ($b = .155$; $\beta = .119$) and perceived trust ($b = .275$; $\beta = .119$) were significantly and positively related to willingness to cooperate. This model explains about 24 percent of the variation in willingness to cooperate ($R^2 = .241$).

Last, the relationship between obligation to obey and willingness to cooperate was modeled. In this model, immigration status was not significantly related to willingness to cooperate. However, the results showed a significant relationship between several other variables and willingness to cooperate. For

example, being male ($b = -.367$; $\beta = -0.165$) and having less than a high school education ($b = -.133$; $\beta = -0.065$) were significantly less likely related to willingness to cooperate. However, being currently employed ($b = .244$; $\beta = 0.127$), being married ($b = .245$; $\beta = 0.089$), college graduates ($b = .163$; $\beta = 0.080$) were significantly and positively related to willingness to cooperate. Police perceptions were also significantly related to willingness to cooperate; perceptions of police efficiency ($b = .160$; $\beta = 0.100$) and perceptions of police effectiveness ($b = .346$; $\beta = 0.250$), and perceptions of distributive justice ($b = .135$; $\beta = 0.107$) were positively related to willingness to cooperate. Last, perceptions of procedural justice ($b = .117$; $\beta = 0.089$) and perceived obligation to obey ($b = .157$; $\beta = 0.122$) were significantly and positively related to willingness to cooperate. About 24 percent of the variation in willingness to cooperate is explained by this model ($R^2 = .237$).

In this chapter, I have discussed the findings for all three of my research questions. While the theoretical framework and main independent variables of interest were sometimes supported, the results of this empirical analysis were not entirely consistent with findings from prior research. In the next chapter, I discuss these findings in more detail focusing specifically on how they relate to prior research conducted on the same or other similar topics, and the potential explanations for counterintuitive and contrasting results. Theoretical, empirical, and policy implications of these research findings are also discussed.

CHAPTER FIVE

DISCUSSION

For decades, the relationship between the police and the community has been a topic of interest for researchers, academics, and policymakers. Often surrounded by concerns about a negative relationship between the community and the police, researchers in particular have extensively assessed this topic. More recently, researchers and academics have employed the process-based model of regulation (Tyler, 2006) as a framework within which to study this relationship. That framework relies on the notion that when the police treat the public in a procedurally just manner, the public is more likely to view the police as a legitimate institution.

Theoretically, positive views of police legitimacy should foster a heightened willingness to cooperate or comply with the police. This theory suggests positive implications for all parties involved: The public is treated in a just manner, while the police gain willing cooperation from the public. In turn, cooperation is important for police agencies as cooperation from the public helps them be more efficient and effective.

Much research focusing on the process-based model of regulation has found support for the framework. Overall, findings from this body of literature suggest that procedurally just interactions are positively and significantly related to perceptions of legitimacy and, in turn, perceptions of police legitimacy are related to enhanced willingness to cooperate (see Mazerrolle et al., 2013; Sunshine & Tyler, 2003; Tyler & Huo, 2002).

In recent years, however, scholars have begun to question certain aspects of the framework. Among the issues in question are the conceptualization of procedural justice and legitimacy (see Gau, 2011, 2014; Johnson, Maguire, & Kuhns, 2014; Reisig, Bratton, & Gertz, 2007; Reisig, Tankebe, & Mesko, 2014) and the applicability of the framework when used with diverse populations (see Pryce, Johnson, & Maguire, 2016).

The goal of this dissertation has been to assess the applicability of the procedural justice and legitimacy framework. Specifically, the goal was to assess an understudied population by focusing on Hispanics and undocumented immigrants in a southwest region of the United States. Within this context, this study assessed the current discussions related to the conceptualization, operationalization, and dimensionality of procedural justice and legitimacy, relying on data collected from Maricopa County, Arizona residents and detained individuals.

The analysis for this study was conducted in a stepwise approach. First, I assessed the validity of the theoretically driven conceptualizations of procedural justice and legitimacy, by conducting reliability assessments and factor analysis on theoretically driven measures. Next, the analysis relied on regression models to assess the relationship of procedural justice, legitimacy, and willingness to cooperation with the police. A total of 20 regressions were modeled, each resulting in some significant findings worthy of discussion. Findings derived from the regression models are discussed in the sections below; however, before delving into the specifics of the research findings, I will discuss the relationship of

those findings to the conceptualization and operationalization of procedural justice and legitimacy.

This discussion is organized in four sections. In the first three sections I discuss the findings related to each one of the three research questions. In the fourth section I focus on the implications of the research findings. Within this section, I discuss implications for theory, implications for practice, and implications for future research.

Findings Related to the Measurement of Procedural Justice and Legitimacy

Scholars have recently raised several concerns regarding the conceptualization and operationalization of procedural justice and legitimacy. Specifically, their convergent and discriminant validity has been questioned, and it has been suggested that a reconceptualization of legitimacy is crucial for the advancement of the theoretical framework (Beetham 1991; Bottoms & Tankebe, 2012; Gau, 2011; Tankebe, 2009). Based on these discussions, this study assessed the conceptual validity of procedural justice and legitimacy. In order to do so, I assessed the reliability of all items by examining Chronbach's alphas, which suggested a reliable relationship between all theatrically driven items (see tables 3.5 and 3.6 in chapter 3).

Next, exploratory factor analysis (EFA) was conducted to examine the relationships between all theoretically driven procedural justice and legitimacy measures. All seven theoretically driven measures (four items measuring procedural justice and three items measuring legitimacy) were included in the

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EFA model. An important measurement finding emerged from this analysis. The EFA results suggested that, for both samples, the item measuring "trust" did not load with legitimacy. However, for the general population sample, the item measuring "trust" loaded with the procedural justice construct suggesting that, rather than being part of legitimacy, with this sample, trust was part of procedural justice. This finding supports those findings of recent research that suggest that "trust" is completely independent from legitimacy (Reisig, Bratton, & Gertz, 2007; Tankebe, 2009) and also that it is sometimes found to be part of procedural justice (Nix et al., 2015). After assessing the EFA results, confirmatory factor analysis (CFA) was conducted to determine the convergent validity of the two constructs. The results of the CFA *confirmed* results of the EFA suggesting that, in fact, trust is a concept independent from legitimacy and, although an arguably important concept, it should be treated independently from legitimacy.

Taken together, these findings support recent research that calls for a clearer conceptualization, or perhaps a reconceptualization, of legitimacy (see Cherney & Murphy, 2011; Houghs et al., 2013; Johnson, Maguire, Kuhns, 2014; Tankebe, 2013; Bottoms & Tankebe, 2012). Some recent research has started to move away from the concept of legitimacy, replacing it with obligation to obey, and trust has been omitted from the operationalization of legitimacy (for example, Tankebe, 2013). Though this is arguably a positive step in the refinement of the theory, failing to assess the relationship between trust and willingness to cooperate with the police is problematic in the sense that it misses part of a larger picture. As discussed above (and below), having trust in the police is as important as

perceived obligation to obey for the public to be willing to cooperate with the police.

Future research needs to investigate the role of trust within this framework. Trust matters; however, a clear distinction cannot be made as to whether it is part of procedural justice or of legitimacy. Although this body of research is moving into a direction in which only obligation to obey is accounted for, future research must not dismiss the role of perceived trust in the police-community relationship. Therefore, if researchers opt for replacing perceived legitimacy with perceived obligation to obey, perceived trust must still be accounted for as an independent concept.

Applicability of the Process-Based Model of Regulation

The first of the three research questions addressed by this dissertation explores the applicability of the process-based model of regulation using two samples drawn from Maricopa County, Arizona: a sample drawn from the County's general population and a sample drawn from its recently booked arrestees.

Assessment using general population sample

Assessment of the theoretical model using the general population sample resulted in three notable findings. First, the results showed that the operationalization of "legitimacy" is important for the applicability of the process-based model of regulation as a theoretical framework. The findings show that, when operationalizing legitimacy in terms of "trust," procedural justice results in a significant indicator of enhanced perceived trust in the police (i.e., legitimacy). When legitimacy is operationalized in terms of "obligation to obey," however,

procedural justice is no longer a significant predictor. The operationalization of

legitimacy also affected the relationship between individual characteristics and

perceived legitimacy. For example, when legitimacy was operationalized in terms

of trust, individual characteristics were not significantly related to perceived trust;

however, when operationalized in terms of obligation to obey, age and level of

education were significantly related to perceived obligation to obey.

Second, the results showed that regardless of the way in which legitimacy was

operationalized, the *full* theoretical model did not hold within the general

population: neither trust nor perceived obligation to obey were significantly

related to willingness to cooperate. Certain individual level characteristics, such

as marital status, ethnicity, and gender, were related to willingness to cooperate,

however. Prior research has found that individual characteristics, such as race

(Brunson, 2007; Weitzer & Tuch, 2002), and situational level characteristics, such

as level of education (Hueber, Schafer, & Bynum, 2004), are sometimes related to

perceptions of the police. Thus, a significant relationship between individual level

characteristics and perceptions of police is not an unexpected finding.

Perceptions of procedural justice were not without meaning for the

enhancement of trust or obligation to obey, nor were perceptions of procedural

justice, trust, or obligation to obey unimportant for the enhancement of

willingness to cooperate. For example, when the relationship between procedural

justice, trust, and willingness to cooperate was assessed, a positive and significant

relationship was found. The same resulted when assessing the relationship

between procedural justice, obligation to obey, and willingness to cooperate;

procedural justice was found to be important for positive views of legitimacy (model not shown). Therefore, these findings suggest not that procedural justice is nonsignificant, but instead, with the general population sample, individual and situational level characteristics exert a stronger effect than do perceptions of procedural justice on the development of perceptions of trust, obligation to obey, and willingness to cooperate. Some prior research on police perceptions speaks to this finding.

A potential explanation for a finding of a nonsignificant relationship between theoretical constructs could be related to a lack of direct contact with police. It could be that participants had not been in direct contact with the police and were basing their perceptions on vicarious experience. Thus, participants might have no "opinion" on police procedural justice or police legitimacy if they had neither prior knowledge nor direct or indirect exposure to knowledge of police officers' behavior that shaped their perceptions.

Third, and related to the above finding, it seems that individual level characteristics were more meaningful than police perceptions when predicting willingness to cooperate. Specifically, levels of education and age were related to perceived obligation to obey, and marital status and gender were related to willingness to cooperate. Prior research has also found individual characteristics, such as gender (Cao et al., 1996; Correia et al., 1996) and age (Jesilow et al., 1995), and situational characteristics, such as level of education and marital status, to play a role in perceptions of the police (Correia, 2000; Jesilow et al.,

1995). Therefore, it is not unexpected that individual and situational level characteristics would be related to willingness to cooperate.

Several individual level characteristics previously found to be related to police perceptions were found not to be significant. For example, race/ethnicity has repeatedly been found to be related to attitudes towards the police, particularly citing that African Americans are less trusting of the police than whites (Hagan & Albonetti, 1982; Weitzer & Tuch, 2002; Webb & Marshall, 1995). With the exception of Hispanics being less willing than whites to cooperate with the police, however, racial and ethnic background did not yield much statistical significance in relation to perceived trust or obligation to obey.

Similarly, perceptions of police efficiency, effectiveness, and distributive justice were not significantly related to perceived trust or obligation to obey. This finding came as a surprise, as intuitively it could be hypothesized that perceptions of police efficiency, effectiveness, and distributive justice would have an impact on perceptions of trust, obligation to obey, and willingness to cooperate. Given these counterintuitive results, this finding should be further explored using general population samples to assess the operationalization of perceptions of police efficiency, effectiveness, and distributive justice. Though these items were not correlated, it could perhaps be the case that these items are in some other way conceptually interrelated with the theoretical constructs.

These findings differ from those in past research using similar samples (e.g., general population samples). A notable example comes from the work of Tyler (1990; 2006) in which he tests the process-based model of regulation using

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a general population sample. In his research, Tyler found a significant positive relationship between perceptions of procedural justice, legitimacy, and willingness to cooperate with the police. Despite my use of a similar sampling frame for the current study (e.g., the focus on a general population sample), its results do not support the relationships found in Tyler's work.

The inconsistency could plausibly be related to the analytical strategy employed here. Much prior research has relied on "less strict" analytical methodologies, often using additive/sum scales to construct theoretical measures. For example, using a general population sample, Nix et al. (2015) found "procedural justice to be a strong antecedent of trust" (p. 630). Though Nix and colleagues used almost identical items to those used for this study, the findings of their study differ substantially from the findings of this study. The authors, however, used a different analytical methodology; they used additive scales to measure their dependent (i.e., trust) and independent (i.e., procedural justice) measures. Differently, the current study relies on factor analysis techniques and this difference alone could result in a difference in findings (see also Tyler, 2005).

Assessment using arrestee population sample

The results from the analysis using the sample of arrestees also revealed several findings worthy of discussion. The most notable finding was related to the support it offers to the theoretical model. Despite operationalization, procedural justice and legitimacy were significantly and positively related to willingness to cooperate. That is, procedural justice was positively and significantly related to both trust and obligation to obey, and in turn, both trust and obligation to obey

were significantly and positively related to willingness to cooperate. These findings support prior research using similar samples (White, Mulvey & Dario, 2016).

Additionally, the role played by perceived police efficiency, effectiveness, and distributive justice in the process-based model framework was a notable finding. The results showed that these perceptions were significantly and positively related to trust, obligation to obey, and willingness to cooperate. These findings support prior research that suggests that perceptions of the police, other than procedural justice, are related to perceptions of trust and willingness to participate with the police (Brunson, 2007). This finding comes with no surprise as it reasonable to expect that positive views of the police would be related to be trustful of the police and to feel a sense of obligation to obey and cooperate with the police.

Several individual characteristics were also found significantly related to perceived trust and obligation to obey. Specifically, younger arrestees were less likely to trust the police while arrestees currently employed either part- or full-time were more likely to trust the police. As it relates to obligation to obey, Black respondents were significantly less likely to perceive an obligation to obey the police. The latter finding supports prior research that has found that racial minorities, specifically Blacks, are more likely to have negative views or animosity towards the police (Brunson, 2007; Hagan & Albonetti, 1982; Weitzer & Tuch, 2002; Webb & Marshall, 1995). There are some plausible reasons for the latter finding. One explanation could be related to the characteristics of the encounter. It could be the case that Black respondents are being treated differently

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(compared to Whites) by the officer during the interaction, thus negatively affecting their perceived obligation to obey. Alternatively, as past research has found, Black respondents may simply not feel obligated to obey as they may not feel the police are acting in the best interest of the Black community (for example see Brunson, 2007). Future research should incorporate characteristics of the interaction as well as global perceptions of the police when assessing the applicability of the process-based model of regulation to racial/ethnic minorities.

Gender was also a significant factor when predicting willingness to cooperate. Whether controlling for perceived trust or for perceived obligation to obey, males in this study were significantly less likely than females to report willingness to cooperate. The body of research on gendered differences in attitudes towards and perceptions of the police has yet to find a consensus, however, as some studies find that males are more likely to hold positive views of the police (Correia, Reisig, & Lovrich, 1996), while others find that males are less likely to hold positive views (Taylor, Turner, Esbense, & Winfree, 2001; Cao, Frank, & Cullen, 1996), when compared with females (see also Griffiths & Winfree, 1982; Leiber, Nalla, & Farnworth, 1998; Hurst & Frank, 2000). More research is needed to determine the relationship between gender and perceptions of the police.

Employment, marital status, and education level all were significantly related to willingness to cooperate; these findings were consistent when controlling for either perceived trust or perceived obligation to obey. Those married or employed were significantly more likely to report willingness to cooperate. Taken within the context of social bond/social control theory (see Hirschi, 1969), these findings

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seem intuitive, as it may be that individuals with strong social bonds are more likely to cooperate, as the repercussions of not cooperating can bring harsher consequences. For example, prior research has found that individuals with strong social bonds, such as being married or being employed, are less likely to engage in antisocial behavior (Berg & Huebner, 2011; Krohn & Massey, 1980; Walter, 2014;). The same can apply within this context. Failing to cooperate with the police can potentially have negative consequences, as extreme as arrest, which could in turn affect social bonds. Thus, individuals may feel that cooperating with the police is ultimately in their best interest. Similarly, individuals with a college degree were more likely than those without a degree to report willingness to cooperate; also, high school graduates were more likely than individuals with less than a high school education to report willingness to cooperate. Again, this finding may be underlined by social bond theory; perhaps those with college degrees have stable careers and are not willing to jeopardize these by not cooperating with the police as failing to cooperate can have consequences that can affect their careers

As stated above, perceptions of police effectiveness, efficiency, and distributive justice were significantly and positively related to willingness to cooperate. Overall, this finding was somewhat expected as deductive reasoning would suggest that if you have positive views of the police you would be more likely to "work" or cooperate with the police.

Perhaps the most important difference between the two population samples lies in the relationship between police perceptions and reported willingness to

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cooperate with the police. As the results showed, police perceptions (i.e., procedural justice, efficiency, effectiveness, and distributive justice) were more meaningful for arrestees' reported willingness to cooperate with the police than for the willingness of the general population; this relationship was not found in the responses of the general public.

Overall, an important takeaway from the assessment of data addressing the first research question is that the applicability of the process-based model of regulation as a theoretical model varies by the population. This finding results in encouraging policy implications. Given that this framework was useful for individuals who had been in recent contact with the police (i.e., recently arrested individuals), police agencies that deal with this population can benefit significantly from employing strategies that are likely to enhance procedural justice and perceived legitimacy.

Racial and Ethnic Differences in Perceptions of Procedural Justice, Legitimacy, and Willingness to Cooperate

Criminology and criminal justice research has emphasized the need to better understand the effect of being Hispanic on perceptions of the criminal justice system in general and on perceptions of the police specifically. The second research question, therefore, examines whether racial or ethnic background plays a role in perceptions of procedural justice, legitimacy, and willingness to cooperate with the police. The goal was specifically to advance the understanding of Hispanic perceptions of the police--that is, to assess Hispanics' perceptions of procedural justice, legitimacy, and willingness to cooperate, as compared with

those of White respondents. For this research question, the general population and arrestee data samples both were reduced to include only respondents from a White or Hispanic racial/ethnic background.

Assessment using general population sample

The assessment of the general population sample resulted in several interesting findings. The first related to the applicability of the process-based model of regulation. As with the first research question, the results of the second research question did not support the process-based model of regulation as a theoretical framework: Although procedural justice was significantly and positively related to perceived trust in the police, the full theoretical model was not supported. That is, within the general population sample, procedural justice and trust were not significantly related to willingness to cooperate, nor was procedural justice related to perceived obligation to obey or willingness to cooperate.

Perceptions of police efficiency among members of this sample were significant and positively related to obligation to obey, however. This suggested that even though perceptions specific to procedural justice may not have played a role in perceived obligation to obey, other perceptions of police were important. Future research should further assess the role of perceptions of police, other than procedural justice, in perceived trust and perceived obligation to obey. This may be beyond the goal of understanding the process-based model of regulation as a theoretical framework, but this type of research has important policy implications,

as police agencies could benefit from learning what affects the public's trust in the police and its perceived obligation to obey the police.

Gender and marital status also were found to be significant predictors in some of the models. Specifically, males were significantly more likely than females to feel obligated to obey. A plausible explanation for this finding could be related to the characteristics of the actors that participated in the interaction. Perhaps feeling obligated to obey was a gendered decision (e.g., women feel more obligated to obey then men). Given that the body of research on gender and perception of the police is still inconclusive, with many having found inconsistencies in whether females were more or less likely than males to perceive the police as legitimate, this finding did not come as a surprise (see Cao et al., 1996; Correia et al., 1996; Reisig & Lloyd, 2009). Future research should continue to assess the relationship between gender and police perceptions.

Being married was significantly related to willingness to cooperate. This finding was somewhat expected as this could have been a result of social control. Individuals who are married may feel that cooperating with the police is important because the implications of failing to cooperate could cause larger damages to their personal lives; therefore, the social bond of marriage may persuade individuals to engage in pro-social behavior, such as cooperating with the police (see Hirschi, 1969).

The operationalization of legitimacy was not as meaningful for the general population sample. That is, whether legitimacy was operationalized in terms of trust or of obligation to obey, there were no significant differences in relation to

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willingness to cooperate. This finding is no different than the findings of the first research question. These findings further support the notion that, at least for this general population sample, the process-based model of regulation is not a reliable theoretical framework.

As they related to the goal of this research question, the results showed ethnic and racial differences between Hispanics and Whites. Although there were no racial/ethnic differences in views of trust or obligation to obey, ethnic background was a significant indicator of willingness to cooperate with the police: Hispanics were less likely than Whites to be willing to be cooperative. This finding supports prior research that suggests that racial and ethnic minorities, compared with Whites, are significantly less likely to have positive attitudes towards the police (Hindelang, 1974); indeed, they are significantly less likely to report confidence in the criminal justice system in general and in the police specifically (Lasley, 1994). There are a number of plausible explanations for this finding. Hispanics, like African Americans, have a history of a strained relationship with the police. As recent as the 2010, police agencies in this region have engaged in profiling of Hispanics (see Provine et al., 2016). This profiling may have contributed to some animosity or unwillingness to cooperate with the police – not only from those that were personally profiled, but also through vicarious experiences.

This finding has important implications. First, few studies have looked at Hispanics' perceptions of the police in general, or perceptions of procedural justice and legitimacy specifically, and therefore, this remains an empirical

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question. Therefore, these findings shed some light to the understanding of the relationship between ethnicity and police perceptions. This finding does, however, support the findings of those studies that have assessed Hispanics' attitudes towards the police. For example, other studies using a general population sample have found that Hispanics had lower satisfaction with the police, compared with Whites (Garcia & Cao, 2005). Overall, these findings show the importance of continuing to assess Hispanics' perceptions of the police, at least until we achieve a reasonable understanding of this relationship.

Assessment using the arrestee population sample

As with the first research question, overall, the process-based model of regulation seemed more fitting for assessing perceptions of arrestees than for assessing perceptions of the general population. While examining the findings from the sample of arrestees, I found several significant relationships, more so than when assessing the general population sample. Racial/ethnic background, however, was not significantly related to any of the key theoretical constructs.

One of the most interesting findings was related to the operationalization of the key theoretical constructs. Even when reducing the sample to only include Hispanic and White respondents, once again and as with the first research question, positive perceptions of procedural justice were found to be associated with legitimacy. This was true regardless of the way in which legitimacy was operationalized (i.e., trust or obligation to obey). That is, positive views of procedural justice were related to enhanced trust and obligation to obey. Further, perceptions of procedural justice, trust, and obligation to obey were significantly

and positively related to willingness to cooperate. Thus, with the arrestee sample, the process-based model of regulation holds as a theoretical framework even when the sample only represents Hispanic and White respondents.

Other perceptions of police were also significantly associated with enhanced trust and obligation to obey. Specifically, positive views of police efficiency and police effectiveness were associated with enhanced trust and enhanced obligation to obey. This finding has important policy implications. As suggested by this finding, police agencies can rely on their efficiency and effectiveness to build a positive relationship with the public, rather than relying only on procedural justice. In turn, this knowledge offers the police a broader set of opportunities to enhance their relationship with the community.

Individual and situational level characteristics, however, were rarely significantly related to either trust or obligation to obey, with the exception of current employment, which was associated with an increase in trust. Statistically speaking, individual and situational level characteristics were much more meaningful when predicting willingness to cooperate. Regardless of the way in which legitimacy was operationalized, males were less likely than females to report willingness to cooperate. This supports prior research that suggests that males are significantly less likely to have positive attitudes towards the police (Taylor et al., 2001; Cao et al., 1996). This finding can be a result of gendered reactions to interacting with the police. For example, females may feel more vulnerable when interacting with the police and therefore are more willing to

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cooperate. This would particularly apply if there is a gender difference, for example, if the officer is a male.

Among arrestees, being employed and being married were also significantly and positively related to willingness to cooperate. As stated before, this finding supported the overall notion of the social control school of thought that suggests that individuals with stronger social bonds will be more likely to abide by the law and engage in prosocial behavior (Hischi, 1969; see also Bersani, Laub, & Nieuwbeerta, 2009; Laub, Nagin, & Sampson, 1998). In this case, failing to cooperate with the police could potentially result in negative implications to the personal life, which could threat social bonds (i.e., marriage and employment). Educational background was also related to willingness to cooperate. For example, compared with high school graduates, those with no high school education were less likely to be willing to cooperate. Respondents with a college education, however, were more likely to be willing to cooperate. This finding might be a reflection of self-control. As stated by self-control theory, persons with higher levels of self-control are less likely to engage in antisocial activities (Gottfredson & Hirshi, 1990). In this case, a lower level of education may be an indicator of lower self-control, which in turn is an indicator of a lower level of likelihood of engaging in prosocial behaviors, such as cooperating and/or collaborating with the police.

Operationalization was not an important issue within this sample when predicting willingness to cooperate. Instead, both concepts – trust and obligation to obey – were meaningful for willingness to cooperate. For example, when

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operationalizing legitimacy in term of trust, the theoretical model was supported. That is, procedural justice and trust were significantly related to willingness to cooperate with the police. Similarly, when legitimacy was operationalized as obligation to obey, again both procedural justice and obligation to obey were significantly related to willingness to cooperate. Thus, for this sample, both concepts matter for police agencies wishing to enhance the public's willingness to cooperate.

Further, perceptions of police efficiency, effectiveness, and distributive justice were also positive and significant predictors of willingness to cooperate. This finding indicated that besides perceptions of procedural justice, other perceptions of police were also meaningful for enhancing not only perceived trust and obligation to obey, but willingness to cooperate. This finding has important implications for police agencies. As mentioned before, with this information, police agencies can rely on perceptions other than procedural justice when attempting to enhance trust, perceived obligation to obey, and the public's willingness to cooperate. I return to these implications in a later section.

These findings support prior research that suggests that the operationalization of legitimacy is an important step in the development of the theory. As demonstrated by these findings, perceived trust and perceived obligation to obey are as important for willingness to cooperate. Thus, researchers should not completely dismiss one over the other and should strive to assess both concepts when conducting their studies. The implications of this finding are further discussed in a section below.

Last, as stated above, among the sample of arrestees, race/ethnicity was not statistically significantly related to perceived trust, obligation to obey, or willingness to cooperate. This finding was somewhat unexpected as prior research has suggested that racial and ethnic minorities are less likely to trust the police (Brunson, 2007), to have positive views of the police (Correia et al., 1996; Rice & Piquero, 2005; Lee et al., 2010), or to be willing to cooperate with the police (Gau & Brunson, 2010; Weitzer & Brunson, 2009). Although most research has focused on comparing Blacks with Whites, research assessing Hispanics' perceptions has found that although their perceptions are less negative than Black respondents, Hispanics tend to have more negative views of the police when compared with White respondents (Garcia & Cao, 2005; Lasley, 1994). This finding further suggested the importance of continuing to study ethnicity and its relation to police perceptions.

When the findings from the two samples were both assessed, there were several interesting differences between them. For example, regardless of how legitimacy was operationalized, the general population sample of Hispanics was significantly less likely to be willing to cooperate with the police, compared with White respondents. Within the sample of arrestees, however, this finding was not supported; there were no racial/ethnic differences in willingness to cooperate among arrestees.

In both samples, procedural justice was significantly related to trust, yet procedural justice was not significantly related to obligation to obey. These findings further supported the notion that the operationalization of legitimacy is

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important for the applicability of the process-based model of regulation. Future research must continue to assess operationalization and refine these measures.

There are several plausible explanations for the differences between the two samples. One example is related to the difference between vicarious versus personal experiences. While the participants from the sample of arrestees had recently experienced a personal interaction with the police, this may not necessarily be the case with the participants in the general population sample. Thus, the participants from the general population sample may be developing police perceptions based on the experiences of others and not necessarily their own experiences. Related, the differences between the two samples could be a result of a "temporal effect." Arrestees had a very recent encounter with the police, whereas the general population sample could be describing their perceptions of the police based on an experience that happened some time ago. The difference can in turn affect the way the police are perceived as some detailed aspects of the interaction may be forgotten.

Undocumented Immigrants' Perceptions of Procedural Justice, Legitimacy, and Willingness to Cooperate with the Police

The last research question examined in this dissertation assesses immigrants' perceptions of the police. Specifically, the goal of this research question was to assess undocumented immigrants and U.S. citizens with respect to their perceptions of procedural justice, legitimacy, and willingness to cooperate with the police. In order to assess this research question, the sample was reduced to include only respondents who reported an undocumented immigrant status and

respondents who reported being U.S. citizens. Therefore, anyone who reported legal residency status (e.g., permanent resident status or a "green card" holder) was omitted for this analysis. Further, due to issues of statistical power, this research question was only assessed using the arrestee sample.

One important finding was related to the applicability of the theoretical framework. The results showed that the process-based model of regulation is a durable theoretical framework within which to study this population. Procedural justice was significantly and positively related to both trust and obligation to obey. In turn, both procedural justice and trust and procedural justice and obligation to obey were significantly and positively related to willingness to cooperate. Related, the operationalization of legitimacy was not as meaningful for the applicability of the theoretical model. That is, procedural justice was significantly and positively related to legitimacy regardless of whether legitimacy was operationalized in terms of trust or obligation to obey. Further, both trust and obligation to obey were significantly related to willingness to cooperate.

Importantly, however, the operationalization of legitimacy was meaningful for undocumented immigrants in the arrestee sample. For example, when legitimacy was operationalized in terms of trust, the results showed a significant relationship. That is, undocumented immigrants were significantly more likely to trust the police, compared with U.S. citizens. A significant relationship was not found, however, when assessing perceived obligation to obey. This finding suggested that even though undocumented immigrants were more likely to trust the police, they were neither more nor less likely to feel

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obligated to obey the police. This finding could be a reflection of immigrants'

perceptions of the police from their home countries. It could be the case that

undocumented immigrants were more likely to trust the police because they were

comparing American police to the police back home. In other words, it could be

that in comparison, the police in America were deemed more "trustworthy" than

the police from their home countries. Even though no research has yet examined

undocumented immigrants' perceptions of trust of the police, some research has

suggested that immigrants are likely to shape their perceptions of the police by

relying on prior experiences with the police in their home countries (Menjívar &

Bejarano, 2004).

The finding that undocumented immigrants were more likely to trust the

police is important in and of itself. To date, the knowledge regarding

undocumented immigrants' perceptions of the police in general, of procedural

justice, and of police legitimacy is limited, to say the least. Although some studies

have made efforts to understand immigrants' perceptions of the police (see Davis

& Hendricks, 2007; Menjivar & Bejarano, 2004; Pryce, Johnson, & Maguire,

2016; Rengifo & Fratello, 2015; Wu et al., 2011), very few have assessed

perceptions related to procedural justice, legitimacy, or willingness to cooperate

with the police (see Correia, Roder & Muhlau, 2012; Pryce, 2016). Further,

undocumented immigrants are rarely included in this context, and when policing

and immigration status are studied, it has conventionally been within the context

of legal studies (e.g., Kobach, 2005; Johnson, 2002). Thus, this finding offers

important and current information regarding undocumented immigrants'

perceptions of the police. Such information can be of value for police agencies that patrol populations with a greater number of undocumented immigrants and that seek the cooperation of their communities.

Immigration status in the arrestee sample was not found to be a significant indicator of willingness to cooperate with the police, however. That is, there were no statistically significant differences in this sample between undocumented immigrants and U.S. citizens in willingness to cooperate. Taken by itself, this finding can have at least two meanings. First, it could have been that the undocumented immigrants were simply neither more nor less likely than the U.S. citizens to be willing to cooperate with the police (hence the null relationship). It could also have been that the undocumented immigrants in the sample were not significantly likely to be willing to cooperate with the police due to fear of being apprehended because of their immigration status. This is particularly applicable given the social-political climate in this particular region. Historically, some police agencies in the Southwest region of the United States have engaged in enforcement of federal immigration laws which has damaged the relationship between the police and the immigrant community (Romero, 2006). More recently, some local law enforcement agencies within Maricopa County have engaged in similar practices (Provine et al., 2016). Thus, it seems rather understandable that undocumented immigrants would be unlikely to be willing to call, report, or engage with the police in a voluntary way.

Other perceptions of the police were also significantly meaningful in the arrestee sample. That is, perceptions of police efficiency, perceptions of police

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effectiveness, and perceptions of distributive justice all were significantly and positively related to willingness to cooperate. As previously stated, this finding has important implications for police agencies that interact with this population, as they offer the police alternatives to enhanced procedural justice for enhancing trust and perceived obligation to obey among the public, as well as enhanced willingness to cooperate. The implications of this finding are further discussed in a section below.

Implications from Research Findings

The findings from this study have several theoretical and policy implications, as well as implications for future research. Theoretically, the findings from this study offer insight for the conceptualization, and the reconceptualization of procedural justice and legitimacy as a theoretical framework. The findings from this study also offer some insight that can be of use for police agencies, as well as implications for future research on this topic. Implications for theory, practice, and future research are discussed below.

Implications for Theory

Over the past decade, researchers and academics have been engaging in a debate regarding the operationalization of the process-based model of regulation's key theoretical constructs: procedural justice and legitimacy. Arguably, contemporary research on procedural justice and legitimacy is currently at a crossroads, with several researchers and academics calling for a reconceptualization of legitimacy (see, for example, the work of Tankebe, Gau,

Maguire, Reisig, and others). Thus, a theoretical implication drawn from this study relates to the operationalization of legitimacy.

The findings from this study support prior research that suggests that the operationalization of legitimacy is an important step in the development of the theory. As demonstrated by the results of this study, perceived trust and perceived obligation to obey are as important for willingness to cooperate. Thus, researchers should not completely dismiss one over the other and should strive to assess both concepts when conducting their studies.

Specifically, the results showed that "trust" and "obligation to obey" both are meaningful for the theoretical framework. Even though together, trust and obligation to obey may not form the concept of legitimacy, they are still meaningful and should be included in the model as distinct measures. For example, in this study, both trust and obligation to obey were related to willingness to cooperate and this relationship changed based on the population being studied. The latter finding demonstrates the importance to assess the relationship of both, trust and obligation to obey, as these are both useful when predicting willingness to cooperate but apply differently to different populations.

Perhaps the best way to include these concepts in the framework is by treating them as dimensions of a larger concept: dimensions of legitimacy. That is, instead of including a single construct that measures legitimacy, legitimacy should be measured using trust and obligation to obey as two independent dimensions, each measured by an individual construct (see Appendix A). Doing this, will allow researchers to assess trust and obligation to obey, in relation to willingness to

cooperate, and determine which of these constructs best applies to the population being studied.

Overall, the findings from this study support the need for a reconceptualization of legitimacy, but do not support recent arguments related to *how* legitimacy should be reconceptualized. For example, Tankebe (2009) has suggested that legitimacy should be replaced with "obligation to obey," but little or no discussion has been offered regarding the role that trust would play in this reconceptualization. The findings of this study show that trust is as meaningful as obligation to obey in enhancing willingness to cooperate, particularly among certain populations (e.g., undocumented immigrants). Therefore, it can be argued that, even if legitimacy is reconceptualized in terms of obligation to obey, researchers must, at a minimum, discuss the role of trust within this framework as well.

Implications for Practice

Although some may argue that testing the operationalization of procedural justice and legitimacy is a mere theoretical exercise, the relevance of these concepts becomes particularly relevant when informing policy makers. As mentioned throughout this dissertation, the President's Task Force of 21st Century Policing, released in 2015, highlighted the importance of procedural justice and legitimacy. The Task Force, however, does not guide police agencies on how to assess whether they are enhancing their legitimacy, and policy makers throughout the country may be left wondering what procedural justice and legitimacy means for their police agencies. Therefore, it becomes the job of academics and

researchers to assist police agencies in understanding what legitimacy means for them. Given this, academics and researchers should take the time to assess the meaning of the different concepts that compose legitimacy (i.e., trust and obligation to obey) as it would be almost irresponsible for a researcher to inform a police agency that building *trust* with its community is irrelevant, and instead to encourage police agencies to focus on enhancing perceived *obligation to obey* in order to gain willingness to cooperate. Given the fact that trust *does* matter for certain populations, merely dismissing the concept of trust from the conceptualization of legitimacy is arguably a wrong decision from academics' part.

Overall, the findings from this study suggest that police agencies within this area (Maricopa County) that are interested in gaining cooperation from their communities should strive to be trusted and to gain a sense of obligation to obey from the public. In other words, they should strive for the public to obey the law because of normative factors (e.g., because it is the "right" thing to do or because they trust the police) rather than instrumental factors (e.g., because they have been deterred by the police).

Some of the findings show that police can acquire trust and a sense of obligation to obey from the communities they serve by engaging in procedurally just interactions. Procedurally just interactions can be achieved by engaging in respectful interactions with the public, demonstrating to the public that the intentions of the police are fair and transparent, and by taking the time to listen the concerns of the public during the interaction. Admittedly, these procedures are

much more difficult in practice than in theory. This is especially the case for agencies that have a longstanding history of inappropriate practices that have led to a strained relationship between the police and the community. However, regardless of what the current relationship between a given agency and the community served may be, employing procedurally just practices is arguably a good starting point for the betterment of the relationship between any community and the police.

Further, police agencies should attempt to learn about how they are perceived by their communities. Police agencies should attempt to learn whether their communities perceive the police as an entity they can trust and rely on. Although not an easy task, this can be achieved by talking with community members to hear their opinions. Police agencies can work with research partners to implement community surveys and/or interviews. The benefits for the agency would be numerous as it would be able to assess its relationship with its community in a way that would guide implementation of changes within the agency, if needed.

An additional finding that is relevant for police agencies is that of the applicability of the process-based model framework within the sample of arrestees. The findings showed that among individuals who had come into contact with the criminal justice system, perceptions of procedural justice and obligation to obey mattered for cooperation with the police. This finding is important for police agencies because this is the population with whom they are most likely to come into contact. Therefore, police agencies would benefit from enhancing

procedurally just policing strategies. This can be initiated by incorporating procedurally just policing strategies within the police academy training curriculum. Procedurally just policing (e.g., policing strategies that aim at a fair interaction) can enhance trust and obligation to obey from the public, which would in turn enhance the public's willingness to cooperate with the police.

Although the process-based model of regulation was not fully supported within the general population sample, this does not necessarily mean that police should not strive for positive community interactions. This is particularly relevant when interacting with racial and ethnic minorities. The findings from this study showed that Hispanics in the general population sample were less likely to express willingness to cooperate with the police. There is a possibility that low, or null, willingness to cooperate could result in this population being less likely to call the police for help or to report a crime. This would be far from beneficial for police agencies, as police often need the public in order to do their job. Thus, police agencies that serve the Hispanic community should assess ways other than through procedurally just interactions to attempt to enhance their perceived trust and obligation to obey and cooperation from the public.

Implications for Future Research

Last, the findings from this study showed several areas where researchers can further develop this body of research. For example, related to the main research questions of interest, the results showed that immigration status and ethnicity played a role in the development of police perceptions, as well as in the likelihood of willingness to cooperate with the police. Future research should

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continue to assess this relationship. This area of research is as timely now as ever, as police agencies will need the knowledge gained through these types of studies to confront the current social-political climate surrounding Hispanics, immigrants, and undocumented persons in the United States.

Additionally, future research should assess the role that vicarious experiences play in developing perceptions of procedural justice, legitimacy, and willingness to cooperate. Prior research has suggested that vicarious experiences play a role in developing global perceptions of the police, particularly among racial and ethnic minorities (for example, see Brunson, 2007). As it relates to procedural justice and legitimacy, this remains an empirical question. Future research should attempt to assess this relationship by asking the public what affects the way they perceive the police.

Last, as stated above, future research should assess the applicability of the process-based model of regulation while using refined operationalizations of legitimacy. That is, future research should assess the relevance of trust and obligation to obey for the concept of legitimacy. Future research should also continue to employ diverse samples and diverse statistical methodologies when assessing the applicability of the process-based model of regulation as a theoretical framework.

Conclusion

Taken together, the findings of this study offer meaningful contributions for policing research, specifically for assessing the relationship between the police and the community. Given the findings from this study, it can be concluded that

procedural justice seems to be a robust predictor of trust: the relationship between procedural justice and trust was positive and significant regardless of the sample being used. Further, the processed-based model of regulation seems a promising framework to study perceptions of individuals already involved with criminal justice agencies—procedural justice and legitimacy were robust indicators for willingness to cooperate across models, regardless of the way in which legitimacy was operationalized. Researchers and practitioners interested in enhancing positive perceptions of the police and willingness from the public to cooperate with the police should employ the process-based model of regulation.

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APPENDIX A

BASIC DEPICTION OF CONCEPTUALIZATION, DIMENSIONALITY, AND

OPERATIONALIZATION

Basic Depiction of Conceptualization, Dimensionality, and Operationalization
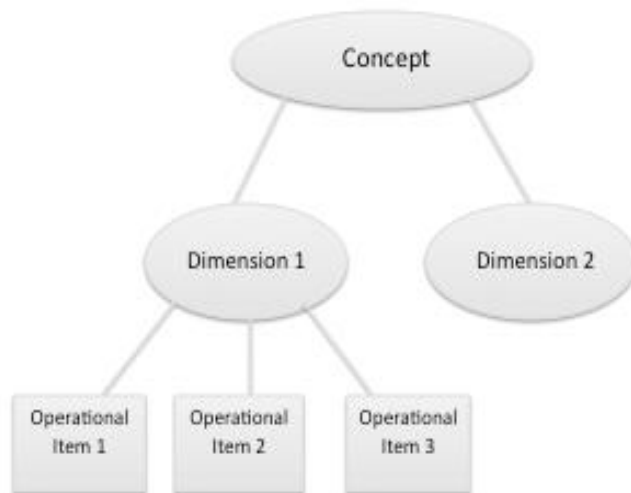
APPENDIX B

RESPONSE CATEGORIES FOR POLICE PERCEPTIONS MEASURES

Appendix B
Response categories for police
perception measures

Variable Name and Description		AZCVS		AARIN	
Procedural Justice					
Police treat people with respect.		0-3	Strongly Disagree, Disagree, Agree, Strongly Agree	0-3	Strongly Disagree, Disagree, Agree, Strongly Agree
Police take time to listen to people.		0-3	Strongly Disagree, Disagree, Agree, Strongly Agree	0-3	Strongly Disagree, Disagree, Agree, Strongly Agree
Police treat people fairly.		0-3	Strongly Disagree, Disagree, Agree, Strongly Agree	0-3	Strongly Disagree, Disagree, Agree, Strongly Agree
Police respect people's rights		0-3	Strongly Disagree, Disagree, Agree, Strongly Agree	0-3	Strongly Disagree, Disagree, Agree, Strongly Agree
Legitimacy					
You should accept police decisions, even if you think they are wrong.		0-3	Strongly Disagree, Disagree, Agree, Strongly Agree	0-3	Strongly Disagree, Disagree, Agree, Strongly Agree
You should do what the police tell you to do, even if you disagree.		0-3	Strongly Disagree, Disagree, Agree, Strongly Agree	0-3	Strongly Disagree, Disagree, Agree, Strongly Agree
The police can be trusted to make decisions that are right for the community.		0-3	Strongly Disagree, Disagree, Agree, Strongly Agree	0-3	Strongly Disagree, Disagree, Agree, Strongly Agree
Cooperation/Compliance					
Call police to report a theft/burglary where you were the victim.		0-3	Very Unlikely, Unlikely,	0-3	Very Unlikely, Unlikely,

Call police to report minor (misdemeanor) crime.	0-3	Likely, Very Likely Very Unlikely, Unlikely, Likely, Very Likely	0-3	Likely, Very Likely Very Unlikely, Unlikely, Likely, Very Likely
Call the police to report a serious (felony) crime.	0-3	Very Unlikely, Unlikely, Likely, Very Likely	0-3	Very Unlikely, Unlikely, Likely, Very Likely
Call the police to report a violent crime where you were the victim.	0-3	Very Unlikely, Unlikely, Likely, Very Likely	0-3	Very Unlikely, Unlikely, Likely, Very Likely

APPENDIX C

RESPONSE CATEGORIES FOR INDEPENDENT AND CONTROL

VARIABLES

Appendix C
Response categories for independent and control variables

		AZCVS			AARIN	
Variable Name						
Race/Ethnicity	1	White		1	White	
	2	African American		2	African American	
	3	Hispanic		3	Hispanic	
	4	Other		4	Other	
Citizenship Status	0	U.S. Citizen		0	U.S. Citizen	
	1	Immigrant		1	Immigrant	
Immigrant Status	0	U.S. Citizen Undocumented		0	U.S. Citizen Undocumented	
	1	Immigrant		1	Immigrant	
Gender	0	Female		0	Female	
	1	Male		1	Male	
Education	1	Less than High School Education		1	Less than High School Education	
	2	High School Graduate or Equivalent		2	High School Graduate or Equivalent	
	3	Some College Education		3	Some College Education	
Race/Ethnicity	4	College or Graduate Education		4	College or Graduate Education	
Married/Living with Spouse	0	No		0	No	
	1	Yes		1	Yes	
Employment	0	Unemployed		0	Unemployed	
	1	Employed at least Part-Time		1	Employed at least Part-Time	
Police Efficiency/Effectiveness	0-3	Strongly Disagree, Disagree, Agree, Strongly Agree		0-3	Strongly Disagree, Disagree, Agree, Strongly Agree	
Distributive Justice	0-3	Strongly Disagree, Disagree, Agree, Strongly Agree		0-3	Strongly Disagree, Disagree, Agree, Strongly Agree	