Trust in the Police: The Influence of Procedural Justice and Perceived Collective Efficacy*

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ABSTRACT

Most research centered on Tyler's process-based model has focused on the sources of legitimacy while largely overlooking trust in the police. The present study extends this line of literature by examining the sources of trust in the police. We consider whether perceived neighborhood collective efficacy serves as a social-psychological cognitive orientation that influences trust in the police. Using data from a random mail survey, we find that procedural justice evaluations are an important source of trust in the police. At the same time, level of perceived collective efficacy is positively associated with trust after accounting for procedural justice. The findings suggest that procedural fairness is crucial to establishing trust but peoples' cognitive orientations toward their neighborhood partially shape the level of trustworthiness afforded to police.

Tyler's (1990, 2004; Tyler & Huo, 2002) theory of procedural justice—often referred to as the process-based model of policing—suggests that the police can enhance their perceived legitimacy and trustworthiness in the eyes of the public by exercising authority in a procedurally fair manner. Establishing legitimacy or trust represents a desirable alternative to using coercive force to obtain compliance from citizens. Moreover, when citizens trust the police, they are more likely to cooperate with them by reporting crimes as well as informally enforcing societal norms. Empirical research offers support for the process-based model: individuals who believe police actions are procedurally fair are more likely to perceive them as a legitimate and trustworthy institution (Sunshine & Tyler, 2003; Tyler & Huo, 2002). Tyler (2005; Tyler & Huo, 2002) also suggests that procedural justice influences normative evaluations of the police (e.g., trust and legitimacy) net of other individual or situational factors (see also, Gau, Corsaro, Stewart, & Brunson, 2012).

The process-based model of policing has received considerable research attention over the past decade but two important areas remain open to empirical scrutiny. First, as Bottoms and Tankebe (2012) point out, there is no universally recognized definition of legitimacy. Researchers have typically measured legitimacy as *trust in the police* and *perceived obligation to obey* (Sunshine & Tyler, 2003; Tankebe, 2009; Tyler, 1990; Tyler & Huo, 2002); however, more recent studies suggest that these constructs are theoretically and empirically distinct and should therefore be treated as separate concepts (Gau, 2011, 2013; Reisig, Bratton, & Gertz, 2007). Despite such findings, the majority of research has focused on legitimacy—much less attention has been given to the sources of trust in the police. Given the evidence that evaluations of trust and legitimacy are separate concepts yet part of the same process-based normative evaluation, examining the antecedents of trust in law enforcement is important on both theoretical and

policy-oriented grounds. Second, and most important for our study, evidence exists demonstrating that neighborhood context influences individuals' attitudes toward the police (Sampson & Jeglum-Bartusch, 1998; Reisig & Parks, 2000, 2003). While important, the majority of this literature focuses on compositional effects and neglects the potentially important role that individuals' perceptions of neighborhood conditions have on their evaluations of legal actors. Recently Gau and her colleagues (2012) presented results showing that neighborhood context does *not* affect evaluations of police legitimacy but individual perceptions of neighborhood cohesion influence such evaluations. Thus, preliminary evidence suggests that the cognitive orientation individuals have toward law enforcement may be partially shaped by their perceptions of the environment in which they are situated. It is particularly important to examine such an influence on perceptions of police trustworthiness considering the social-psychological underpinnings of Tyler's theory. If perceptions of neighborhood conditions are associated with trust in the police, the question that remains is what role evaluations of procedural justice play in the relationship. Tyler's arguments would suggest that individuals' evaluations of police officer fairness should override the effects of such extraneous variables, yet no research to date has been able to examine this question.

The current study examines these issues using data from a recently collected mail survey of a random sample of citizens from a mid-sized metropolis in the southeastern United States (N=1,681). Our analyses move the current procedural justice literature forward in several ways. First, going beyond prior process-based model research that typically examines evaluations of legitimacy, we focus our analysis on the predictors of trust in the police. Second, we determine whether perceptions of neighborhood collective efficacy affect individuals' levels of trust in the police after accounting for evaluations of procedural justice. Specifically, we consider whether

perceptions of procedural justice, as Tyler postulates, diminishes the effect of other variables—including perceived collective efficacy—on trust. We conclude by discussing theoretical and policy implications as well as avenues for future research.

THE PROCESS-BASED MODEL OF POLICING

Being viewed as a legitimate and trustworthy authority is important to the police because such normative evaluations lead to compliance, cooperation, and empowerment from the public (Tyler, 1990). The police cannot be everywhere at once and, therefore, must rely heavily on voluntary compliance with the law to maintain social order. Additionally, cooperation from the public is essential to the crime suppression function of the police. Citizens cooperate with the police by reporting crimes, working together as a community to enforce social norms, and supporting the allocation of public resources to their local police department. Cooperation is especially important because it increases the likelihood that citizens will comply with police decisions in the long term (Sunshine & Tyler, 2003; Tyler & Huo, 2002). Empowerment involves the willingness of the public to accept police discretionary judgments (e.g., about when to make an arrest rather than issue a citation). The police are able to exercise discretion—especially regarding whether or not to use physical force (Bittner, 1972)—only because the public has empowered them to do so.

Tyler and Huo (2002) seem to suggest that the concept of trust is distinct from legitimacy. In their influential study of trust of legal authorities, however, they go on to measure trust as one of two components of legitimacy (the other being *perceived obligation to obey*). Scholars have recently questioned the validity of this conceptualization of legitimacy and demonstrated that *trust* and *perceived obligation to obey* do not load together onto a single factor (Gau, 2011, 2013; Reisig et al., 2007). Similarly, Tyler (2006, p. 47) has noted that the

correlation between trust and obligation to obey tends to be small (e.g., $r = 0.26$). Recently proposed conceptualizations of legitimacy have in fact defended the exclusion of trust as a component of the concept. For example, Jackson et al. (2012) define legitimacy as a sense of moral alignment with the police in addition to a perceived obligation to obey. The police as an institution are empowered by the public to maintain order and enforce laws. Legitimacy, as Jackson and his colleagues suggest, partially hinges on the degree to which the police and the public share common beliefs about the maintenance of this social order (see also, Tankebe, 2013).

Conversely, trust in the police involves a feeling that officers will exercise their authority with the community's best interest in mind. Tyler and Huo (2002, p. 58) state that, "[t]rust in a person's motives or character refers to his or her internal, unobservable characteristics that are inferred from his or her observable actions." Trust is a particularly important concept with respect to orientations toward law enforcement because citizens normally have limited knowledge about the actions taken by police and lack expertise in judging said actions (Tyler & Huo, 2002). The level of trust one has in the police is based on "cues that communicate information about the intentions and character" of the police (Jackson et al., 2012, p. 4). Thus, trust evaluations serve as a normative attitude regarding how benevolent law enforcement actions are and can be held regardless of the amount of personal contact one has with the police (Tyler & Huo, 2002). Paralleling arguments regarding legitimacy, people are believed to comply and cooperate with the police because they *trust* that officers will behave in predictable and acceptable ways. It is important to note that one could view the police as a legitimate authority without necessarily trusting certain officers (Hawdon, 2008). In the end, treating trust as a distinct concept is supported on both theoretical and empirical grounds (Gau, 2011, 2013; Reisig

et al., 2007; Tyler, 2006). Accordingly, exploring the correlates of trust evaluations is worthy of empirical inquiry (Hawdon, 2008; Jackson et al., 2012; Sargeant, Murphy, & Cherney, 2013; Tyler, 2005).

Procedural justice theory recognizes that individuals place value on the fairness of the *procedures* used to reach an outcome—oftentimes more so than the fairness of the actual outcome (Thibaut & Walker, 1975). Overwhelming evidence suggests that procedural justice is the main antecedent of evaluations of police legitimacy (Gau, 2011, 2013; Gau et al., 2012; Reisig et al., 2007; Tankebe, 2013; Tyler, 1990; Wolfe, 2011). Prior research has focused primarily on legitimacy with less attention given to the sources of trust. Existing theoretical arguments and empirical evidence stemming mainly from Tyler's work indicates that the same process-based model applies to normative evaluations of trust in the police (Gau, 2011, 2013; Reisig et al., 2007; Tyler, 2003; Tyler & Huo, 2002). Tyler (2005) found that perceived police fairness exerts the strongest influence on the public's level of trust. This begs the question: what do individuals regard as *fair*? In part, the answer varies depending on the particular situation. Tyler (2003) specifies two key elements of fairness: quality of decision making and quality of interpersonal treatment. When officers remain neutral and use objective reasoning to make decisions—as opposed to personal biases—citizens are more likely to believe their decisions are fair. Likewise, being treated with dignity and respect will lead citizens to feel an officer is being fair. A third element emerges pertaining specifically to resolving disputes: participation in the decision making process (Tyler, 2005). Citizens who are involved in a dispute value the opportunity to express their side of the story prior to any solution being reached. Officers who provide each of the involved parties with this opportunity are more likely to be perceived as exercising their discretion fairly. Regardless of the scenario, "authorities become more highly

trusted when they are seen to exercise their authority in fair ways" (Tyler, 2003, p. 299). In other words, officers who remain objective, respectful, and polite, and provide citizens with an opportunity to express their views prior to making a decision are more likely to be viewed as trustworthy in the eyes of the public. Beyond Tyler's own tests, relatively little empirical evidence exists pertaining to the connection between procedural justice and trust in the police—a gap addressed by the present study.

Another antecedent of trust is distributive justice, which focuses on perceived fairness of the outcome rather than the process. According to distributive justice theories, individuals are more accepting of outcomes if they are equal to those received by similarly situated others. As the name suggests, individuals place importance on the equal distribution of justice across different societal groups (Sarat, 1977). For instance, Tyler and Wakslak (2004) found that perceived racial profiling by police officers is associated with lower levels of public support for the police. Moreover, individuals in their study who believed the police engage in profiling expressed less willingness to comply with authorities. Tyler (2005) has also demonstrated that trust is influenced by perceptions of distributive justice but procedural justice exerts the strongest influence.

Finally, individual differences may influence levels of trust in the police. For decades, scholars have pointed to the importance of demographic characteristics such as race, gender, and age when examining attitudes toward the police. Numerous studies have found that minorities have less favorable opinions of the police than Whites (Engel, 2005; Wu, Sun, & Triplett, 2009). Likewise, research has demonstrated that minorities tend to be more distrustful of the police (Hindelang, 1974; Lasley, 1994; Tyler, 2005). Regarding age, most studies suggest that as individuals get older, they generally express more favorable opinions about the police (Frank,

Brandl, Cullen, & Stichman, 1996; Ren, Cao, Lovrich, & Gaffney, 2005; Wu & Sun, 2009). Research regarding the relationship between gender and attitudes toward police is less conclusive: some studies have found that females express more favorable attitudes (Cao, Frank, & Cullen, 1996), while others suggest gender is insignificant (Frank et al., 1996; Lai & Zhao, 2010; Ren et al., 2005). In their study which focused specifically on trust in police, Wu and Sun (2009) found that gender did not significantly influence levels of trust. Other than demographics, recent research has shown that individual differences in self-control and emotion influence the relationship between procedural justice, legitimacy, and compliance (Murphy & Tyler, 2008; Reisig, Wolfe, & Holtfreter, 2012; Wolfe, 2011).

Despite the various sources of trust in the police, the key argument of Tyler's (1990) process-based theory is that procedural justice judgments are the primary antecedent. That is, people's trust in the police is most importantly shaped by how fair they perceive officer actions to be and to a much lesser extent by the fairness of outcome distribution or individual differences. An emerging body of research calls into question this proposition and suggests that individuals' contextual environments exert important effects on their evaluations of legal actors such as the police.

PERCEIVED COLLECTIVE EFFICACY AND TRUST IN THE POLICE

Sociological inquiry appreciates that neighborhood context plays an important role in shaping resident attitudes and perceptions. Ross and Jang (2000), for instance, demonstrated that individuals situated in communities with greater amounts of disorder reported significantly higher levels of fear and mistrust of fellow neighborhood residents. Similarly, Ross, Mirowsky, & Pribesh (2001) showed that people who live in communities where the threat of victimization is common are more likely to feel powerless in the fight against becoming a victim. This sense of

powerlessness serves to intensify mistrust of one's neighbors. Ecological conditions have also been shown to influence perceptions of neighborhood disorder (Sampson & Raudenbush, 2004), safety (Austin, Furr, & Spine, 2002), and victimization risk (Pickett, Chiricos, Golden, & Gertz, 2012). In short, negative attitudes are partly the result of objective and subjective indicators of structural disadvantages.

Variation in neighborhood characteristics also matters with respect to attitudes toward the police (see, e.g., Brunson & Gau, 2011; Decker, 1981; Weitzer, 1999; Weitzer & Tuch, 2004) and the law more generally (see, e.g., Kirk & Matsuda, 2011). In their now seminal study, Sampson and Jeglum-Bartusch (1998) found that respondents from neighborhoods with greater concentrated disadvantage tended to have higher levels of dissatisfaction with the police and an overall cynical perception of the law and legal actors. In their words, "there is an ecological structuring to normative orientations—'cognitive landscapes' where crime and deviance are more or less expected and institutions of criminal justice are mistrusted" (Sampson & Jeglum-Bartusch, 1998, p. 800). Sun and colleagues (2013) recently used a unique sample of Chinese respondents to show that disadvantaged context diminishes trust in neighbors which hinders trust in the police (see also, Reisig & Parks, 2000, 2003; Wu et al., 2009).

Explanations for the relationship between context and attitudes toward the police and the legal system are largely grounded in subcultural theory. Indeed, in the social disorganization tradition structural disadvantages such as poverty, racial and ethnic heterogeneity, and residential mobility produce mutual distrust and reduced social cohesion among community residents (Anderson, 1999; Kornhauser, 1978; Sampson & Groves, 1989; Shaw & McKay, 1942). The obstruction of common values, beliefs, and norms governing appropriate behavior fosters the emergence of subcultural value systems whereby crime is expected and the law is looked upon

with a cynical eye. Sampson and Jeglum-Bartusch (1998) suggest that those subjected to such anomic conditions should be expected to harbor cynical views about the justice system regardless of whether they personally condemn violence or deviance. After all, the police may be less inclined to work diligently in communities where residents rarely self-regulate social norms (Carr, Napolitano, & Keating, 2007; Gau et al., 2012; Klinger, 1997; Sampson & Jeglum-Bartusch, 1998; Smith, 1986)—a situation that may impede feelings that the police can be trusted to make good decisions for the community.

Although largely a framework of "places", subcultural theory does not dismiss the important role of individual perceptions of neighborhood conditions (Fischer, 1995). Indeed, much contextually focused research relies on individual perceptions to create aggregate neighborhood measures (see, e.g., Sampson, Raudenbush, & Earls, 1997). Additionally, research evidence compiled to date clearly shows that compositional differences, while important, fail to fully explain a significant portion of the variation in perceptions and attitudes (see, e.g., Sampson & Jeglum-Bartusch, 1998).

We maintain that part of the answer lies in individual perceptions of neighborhood conditions in which people are situated, particularly for concepts such as trust in the police. In other words, an individual's cognitive orientation toward legal authorities may be largely shaped by how he or she perceives community informal social control efforts and mutual cohesion—creating a social-psychological cognitive landscape. Research findings support this view. Gau and associates (2012), for example, recently found that concentrated disadvantage (i.e., a contextual factor) failed to significantly predict evaluations of police legitimacy but individual perceptions of neighborhood social cohesion played a key role in explaining such normative attitudes. In fact, social cohesion remained associated with legitimacy evaluations even when

accounting for central theoretical precursors of legitimacy such as procedural and distributive justice. While studies reveal that compositional factors influence the development of cognitive landscapes primed for legal authority mistrust, research of this type suggests that the social-psychological cognitive orientation toward one's neighborhood plight may be as important (see Kochel, 2012 for a related discussion).

Durkheim's classic view of anomie offers insight into the theoretical connection between individual perceptions of neighborhood conditions and attitudes toward legal authorities. In its traditional sense, anomie is a condition of normlessness where the standards governing society are no longer held by a majority of citizens. Take for example Sampson and colleagues' (1997) idea of collective efficacy. Normally viewed as a contextual factor but easily viewed as a social-psychological orientation, perceived collective efficacy in one's neighborhood would encompass a feeling of common goals and social cohesion among neighbors. A breakdown in perceived collective efficacy is appropriately conceptualized as an anomic cognitive orientation about one's ecological environment. Recall from earlier discussions that trust in the police is a normative orientation toward a legal actor. Thus, it would be expected that those who view less collective efficacy in their neighborhoods would harbor greater mistrust in the police because normative standards are broken which allow the spread of cynical views of the police. In short, anomie in the form of diminished perceived collective efficacy may structure mistrust in formal social control agents. Research has yet to explore the individual social-psychological orientation of perceived collective efficacy on normative evaluations of trust in the police—a gap this study aims to address.

To this point our discussion implies that one's orientation toward neighborhood conditions may be an important source of trust in the police. A strict interpretation of Tyler's

(1990; Tyler & Huo, 2002) process-based model of policing would suggest otherwise. The framework proposes that normative standards of police officer conduct are more important in forming trust from the public. That is, individuals' perceptions of law enforcement procedural justice should be responsible for establishing trust in the police regardless of the degree of anomie created by perceived lack of informal social controls or mutual trust in a neighborhood. Treating people fairly sends the message to community residents that the government cares about their neighborhood despite the inability of fellow citizens to share similar views (Sampson & Jeglum-Bartusch, 1998). In statistical vernacular, procedural justice should at least partially mediate the effect of perceived collective efficacy on trust in the police. Extant empirical evidence lends preliminary support to this claim because procedural justice has been shown to influence evaluations of legitimacy even after accounting for respondents' perceptions of social cohesion and disorder (Gau et al., 2012; Tyler & Wakslak, 2004). Research to date, however, has been unable to explore the extent to which procedural justice accounts for the relationship between perceptions of neighborhood context and evaluations of the police. In particular, left an open empirical question is whether procedural justice as an antecedent of trust in the police supersedes the influence of perceptions of neighborhood collective efficacy.

If such a relationship exists it also suggests that perceptions of neighborhood context may partially set the stage for evaluations of police procedural justice. The theoretical discussions and research reviewed above would suggest that such a relationship is possible. That is, perceptions of neighborhood context may partially explain perceptions of procedural justice (Tyler & Wakslak, 2004). Individuals who perceive a breakdown of informal social controls and mutual cohesion in their own neighborhoods may be more likely to maintain cynical views of the law and less likely to perceive police efforts as procedurally fair (Sampson & Jeglum-Bartusch,

1998). However, the extent to which perceptions of neighborhood context influence evaluations of procedural justice which ultimately impact feelings of trust in the police remains an unexplored research question.

THE CURRENT STUDY

The purpose of the current study is to move the literatures on attitudes toward the police and procedural justice forward in several ways. First, we address a gap in existing literature by exploring the extent to which procedural justice evaluations are associated with trust in the police. This is important considering that most prior process-based model research examines the antecedents of police legitimacy and compelling evidence demonstrating that trust and legitimacy are distinct normative attitudes. Second, we examine whether perceptions of neighborhood collective efficacy influence trust in the police. Contextual focused research suggests there may be a relationship but little attention has been given to individual *perceptions* of neighborhood conditions on evaluations of the police—particularly for trust in the police. Third, analyses test a strict interpretation of Tyler's process-based model by examining whether individuals' evaluations of procedural justice override the effects of perceived collective efficacy on level of trust in the police. In summary, we expect procedural justice and perceived collective efficacy to have independent effects on trust evaluations (i.e., when examined in separate analyses). Once both concepts are simultaneously examined, however, we expect perceptions of procedural fairness to mediate most of the association between perceived collective efficacy and trust. We conclude the study by discussing the theoretical implications of our findings and suggesting policy relevant take away messages and productive avenues for future research.

METHODS

DATA

Data for the present study were drawn from a random sample mail survey of residents from a mid-sized, urban city in the southeastern United States. The survey served as one component in the evaluation of a larger directed-intervention law enforcement initiative funded by the Bureau of Justice Assistance. Four neighborhoods situated in the largest patrol regions of the city were selected as part of the project and corresponding survey. One of the neighborhoods was selected for a targeted enforcement to occur in the future. Two control neighborhoods were selected to closely match the target site in terms of economic disadvantage (e.g., median household income) and crime rate. On average, these three neighborhoods experienced 82.8 Part I crimes per 1,000 residents and had a median household income of $27,700 in the year prior to the survey. A fourth control neighborhood was selected by the law enforcement agency to serve as a contrast to the three economically disadvantaged and crime ridden communities. This more affluent neighborhood (median household income ~$51,000) experienced 45.5 Part I crimes per 1,000 residents in the year prior to the survey.

One-thousand households from each neighborhood were randomly selected to take part in the survey. Questionnaires were administered prior to any changes in police strategic or tactical operations and explored issues such as perceptions of the local law enforcement agency, neighborhood conditions, and local problems. A modified Dillman survey method was used to elicit participation in the survey. Specifically, an initial round of surveys was mailed to all households with a cover letter detailing the purpose of the questionnaire and importance of participation. Two weeks later a reminder post card was mailed to potential respondents to help encourage those whom had not responded to do so. Finally, two weeks after the post card

reminder another full survey and cover letter was mailed to potential respondents. In addition to the mail survey, respondents were also given the option to complete the survey on a secure website (Dillman et al., 2009). As expected, not all addresses in the sampling frame were useable: 323 surveys were returned because they were vacant or otherwise inaccessible addresses. A total of 1,681 residents returned completed surveys representing a 45.72 percent response rate (over 95 percent of respondents completed the mail version). This is comparable with average response rate generated from other random sample mail surveys (Baruch, 2008). Multiple imputation was used to handle missing data due to item nonresponse which is available in the Stata 13 *mi impute* suite (m = 30 imputations). Multiple imputation is a commonly accepted method for dealing with missing data particularly when only a small handful of cells are missing for items used in the construction of theoretical scales (Acock, 2005; Carlin, Galati, & Royston, 2008; Royston, 2004; Turanovic & Pratt, 2012).

The sample was 66 percent female and ranged in age from 19 to 96 with a mean of 57. The sample consisted of 52 percent White, 41 percent African-American, and 7 percent other racial group respondents. Ninety-six percent of participants indicated they had lived at their current residence for at least six months. In terms of education, about half of the sample had a college degree. Compared to official data on each of the neighborhoods, the sample is comprised of a slightly larger proportion of females and older people but closely approximates the racial composition of the communities. Therefore, the sample reasonably represents the population from which it was drawn on these factors. Additionally, it is important to note that most respondents were sampled from neighborhoods that have relatively high levels of disadvantage and crime and, therefore, exposure to law enforcement.

DEPENDENT VARIABLE

Consistent with Tyler and Huo's (2002) conceptualization of motive-based trust, respondents were asked the following question to capture level of *trust in the police*: "The police can be trusted to make decisions that are right for my community." The item is similar to that used in prior research on trust in the police and measures the degree to which respondents feel that local police officers' motives and future behavior will be guided by benevolent concerns about the larger community and its citizens (Tyler, 2001, 2005; Tyler & Huo, 2002; Wu & Sun, 2009). Responses were measured on a four-point Likert scale (1 = *strongly disagree* to 4 = *strongly agree*). Therefore, higher scores on the trust item suggest that a respondent believes police actions are generally made in good faith and with the community in mind. The distribution of the item indicates the sample has moderate trust in their police force (M = 2.853, SD = 0.648). However, more than one-fifth of respondents either strongly disagreed or disagreed with the question, demonstrating that a large portion of the sample is distrustful of local police officers. Table 1 provides descriptive statistics for all variables used in the analyses.

[Insert Table 1 here]

INDEPENDENT VARIABLES

Procedural justice. The items used to operationalize procedural justice were adopted from recent examinations of the process-based model of policing (see, e.g., Gau et al., 2012; Reisig et al., 2007; Sunshine & Tyler, 2003; Tankebe, 2013). Participants were asked to indicate how strongly they agree that the police in their neighborhood "treat citizens with respect," "take the time to listen to people," "treat people fairly," and "explain their decisions to the people they deal with" (1 = *strongly disagree* to 4 = *strongly agree*). The individual items capture key aspects of Tyler's (1990) conceptualization of procedural fairness—quality of decision making

(e.g., neutrality) and quality of treatment (e.g., status recognition). Principal-axis factor (PAF) analysis demonstrated that the four items loaded onto a single factor ($\lambda = 3.07$, factor loadings > 0.81). The items also demonstrated strong internal consistency ($\alpha = 0.94$) (see, e.g., Cortina, 1993) and, therefore, were summed to form an additive *procedural justice* scale with higher scores indicating more favorable evaluations of police fairness.

Perceived collective efficacy. Consistent with the above theoretical discussion, *perceived collective efficacy* is measured at the individual level and conceptualized as the social-psychological cognitive orientation respondents have toward their neighborhood. We adopted our measures from Sampson and colleagues (1997) who demonstrated that shared expectations of informal social control and social cohesion/trust form the constituent parts of collective efficacy. We measured "informal social control" with five items asking respondents to indicate how likely it would be (1 = *very unlikely* to 4 = *very likely*) that their neighbors could be counted on to intervene if (1) teenagers were skipping school and hanging out on a street corner, (2) teenagers were spray-painting graffiti on a local building, (3) teenagers were showing disrespect to an adult, (4) a fight broke out near your home, and (5) the fire station close to your home was threatened by budget cuts. "Social cohesion/trust" was captured by asking respondents how strongly they agreed (1 = *strongly disagree* to 4 = *strongly agree*) that "people around here are willing to help their neighbors," "this is a close-knit neighborhood," "people in this neighborhood can be trusted," "people in this neighborhood generally *do not* get along with each other" (reverse coded), and "people in this neighborhood *do not* share the same values" (reverse coded). PAF revealed that the items loaded on their respective informal social control ($\lambda = 4.52$, factor loadings > 0.66) and social cohesion/trust ($\lambda = 2.14$, factor loadings > 0.61) factors. Consistent with Sampson and associates (1997) and a host of prior research (see, e.g., Kochel,

2012; Wells et al., 2006), we combined all items into a single additive scale to represent individual perceptions of neighborhood collective efficacy ($\alpha = 0.86$).[1]

CONTROL VARIABLES

In order to provide unbiased estimates of the effects of procedural justice and perceived collective efficacy on level of trust in the police, several demographic control variables were included in the analyses. Respondent *age* is measured continuously and gender (1 = *Female*) and race (1 = *Racial minority*) are dummy coded.[2] *Education* is measured with four ordered categories (1 = *less than a high school diploma*, 2 = *high school diploma or GED*, 3 = *some college*, and 4 = *bachelor's degree or higher*). We also used a dummy variable—*lower crime neighborhood*—to control for whether respondents lived in the more affluent, lower crime rate neighborhood included in the sample (1 = yes). Respondents who lived in one of the more homogenous, high crime rate neighborhoods were coded as 0.[3]

Additional variables pertaining to individual experiences and perceptions were also included as statistical controls. First, scholars have suggested that the type of contact one has with law enforcement may set the tone for how a citizen evaluates the trustworthiness of police

[1] We thank an anonymous reviewer for suggesting that we conduct supplemental analyses that examine the independent effects of "informal social control" and "social cohesion" on trust in the police. All models presented below were reestimated by separately analyzing the effects of "informal social control" and "social cohesion" on procedural justice (Table 2) and trust in the police (Table 3, models 2 and 3). The analyses produced identical results in terms of significance and direction as those presented below. Therefore, we are confident that our results are not influenced by alternative operationalizations of collective efficacy (or components of the concept) and the combined scale does not produce misleading results.

[2] Ideally we would measure race using three categories (white, black, and "other") in order to capture potential differences in levels of trust or mistrust of the police among black respondents and respondents from other racial groups. Unfortunately, due to the small number of respondents who self-identified as a race other than white or black, our data is limited in its ability to speak to such potential differences.

[3] Additional analyses were also conducted given the characteristics of the neighborhoods selected as part of the larger targeted law enforcement initiative. We estimated all models reported below separately for the three homogenous neighborhoods and the "lower crime neighborhood" and all substantive results remained unchanged. We also thank an anonymous reviewer for suggesting supplemental analyses using dummy variables for the three higher crime neighborhoods and the lower crime neighborhood as the reference category (as opposed to the single binary "lower crime neighborhood" indicator). All observed relationships in these supplemental analyses mirrored the results presented below in terms of sign and significance. These robustness checks provide us with confidence that our results are not biased as a result of our coding strategy or any idiosyncrasies of the neighborhoods from which the sample was drawn.

with police-initiated contact leading to more contentious interactions and attitudes (Fyfe, 1986; Engel, 2003; Piquero & Bouffard, 2003; Tyler, 1990). Accordingly, we asked respondents to indicate whether they had contact with local police during the six months leading up to the survey. Those who answered affirmatively were questioned about the nature of the contact ("Was this contact ever initiated by the officer?"). Using this information the dummy variables *citizen-initiated contact* (1 = *yes*) and *no police contact* (1 = *yes*) were constructed and included in the analyses (*police-initiated contact* served as the reference category).

Second, research reveals that crime victims tend to have less favorable perceptions of police compared to their counterparts with no victimization exposure (Brown & Benedict, 2002). The survey inquired about how many times (0 to 4 or more times) in the previous six months respondents had been the victim of each of the following offenses: vehicle stolen, vehicle broken into, property vandalized, home burglarized, physically assaulted (i.e., by someone using hands or feet), assaulted or threatened with a weapon (e.g., knife, club, or gun), and robbed. PAF of the items revealed a single-factor ($\lambda = 2.34$, factor loadings > 0.42) and Cronbach's alpha demonstrated adequate internal consistency ($\alpha = 0.71$). Individuals' responses were summed to form an additive *prior victimization* scale. A natural log transformation was used to induce normality in the scale (a constant was added to remove zero responses).

Third, research demonstrates that individuals' perceptions of disorder within their neighborhoods partially explain attitudes toward the police (Reisig & Parks, 2000; Schafer, Huebner, & Bynum, 2003; Schuck, Rosenbaum, & Hawkins, 2008). Adopting items used in prior disorder research, we asked participants to indicate how much of a problem a series of disorder related activities were in their neighborhood (i.e., garbage, excessive noise, vandalism, drunk drivers, traffic problems, public drunkenness, drug use and sales, loitering, and youth

gangs) (see, e.g., Gau & Pratt, 2008). PAF provided evidence of a unidimensional construct (λ = 3.78, factor loadings > 0.54) and Cronbach's alpha demonstrated strong internal consistency (α = 0.86). Thus, the items were summated into a *perceived disorder* scale.

Finally, perceptions of the fairness of outcomes distributed by the police were taken into consideration. Specifically, respondents were asked how strongly they agree (1 = *strongly disagree* to 4 = *strongly agree*) that the police in their neighborhood "give minorities less help because of their race" and "provide better services to wealthy citizens" (r = 0.73). The items are consistent with those used in previous literature and were combined into a summated *distributive injustice* scale (Tyler, 2005; Tyler & Wakslak, 2004).

ANALYTIC STRATEGY

Our analysis proceeds in a series of steps each of which builds upon the other. First, we use an ordinary least squares (OLS) regression model to estimate the effect of perceived collective efficacy on perceptions of police procedural fairness. This step serves two purposes: (1) it establishes whether perceptions of neighborhood context shape evaluations of police fairness—a topic largely unexplored to date, and (2) it sets up a necessary condition for detecting the mediation effect examined in later stages of the analysis (i.e., the proposed mediated variable [perceived collective efficacy] is associated with the supposed mediator [procedural justice]) (see, MacKinnon, Krull, & Lockwood, 2000). The second step of the analysis involves three multivariate models examining the predictors of trust in the police. We use ordered logistic regression to estimate these models because the dependent variable—*trust in the police*—is ordinal in nature (Long & Freese, 2006). The first ordered logit equation serves as a baseline model to establish whether procedural justice is associated with trust in the police, net of statistical controls. The second ordered logit model examines the degree to which perceptions of

neighborhood collective efficacy, net of relevant statistical controls, are associated with level of trust in the police. Finally, in the third model procedural justice is added back into the equation to determine whether perceptions of police fairness mediate the influence of perceived collective efficacy on trust.

Several diagnostic tests revealed that harmful levels of collinearity are not present in the multivariate models discussed below. First, all bivariate correlations fell below an absolute value of 0.70 which is typically used as a threshold indicative of harmful collinearity (Tabachnick & Fidell, 2007). Second, all variance inflation factors from the multivariate models fell below the 4.0 threshold (Tabachnick & Fidell, 2007) and all condition indices below the threshold of 30 (Belsley, Kuh, & Welsch, 1980; Mason & Perreault, 1991).

RESULTS

In Table 2, the procedural justice scale is regressed onto the perceived collective efficacy scale and statistical control variables. To begin, the equation demonstrates that the variables account for nearly 19 percent of the variation in perceptions of procedural justice (F-test = 15.02, $p < 0.01$). Additional analyses (not shown) reveal that individuals' perceptions of neighborhood collective efficacy alone are responsible for 30 percent of the explained variation. The size of the standardized partial regression coefficient (β) suggests that perceived collective efficacy has a moderate, statistically significant effect on procedural justice (β = 0.230, $p < 0.01$). In short, individuals who believe more informal social controls and social cohesion exist (i.e., collective efficacy) within their neighborhood are more likely to perceive the police as exercising their authority in procedurally fair manners. Conversely, this suggests that the anomic conditions created by lack of collective efficacy in a neighborhood makes it more likely for individuals to perceive police officers as procedurally unjust, regardless of individual demographic differences,

prior police contact, prior victimization, and perceptions of disorder or distributive injustice. The distributive injustice scale also reached statistical significance in the model ($\beta = -0.243$, $p < 0.01$). People who believe police officers unfairly distribute outcomes to the public (i.e., based on race or wealth) are less likely to view their actions as procedurally fair. This finding is consistent with a lengthy roster of process-based model studies (see, e.g., Sunshine & Tyler, 2003; Tyler, 1990; Tyler & Huo, 2002) and, therefore, lends confidence in the validity of our data. It is also worth mentioning that, on average, respondents who lived in the lower crime neighborhood viewed police officers as less procedurally fair ($\beta = -0.097$, $p < 0.05$) and older folks tended to evaluate the police as more fair ($\beta = 0.066$, $p < 0.05$).

The findings from Table 2 are important for several reasons. For one, individual perceptions of neighborhood collective efficacy "matter" in the explanation of evaluations of police procedural justice. Thus, the theoretical arguments made above appear to hold a grain of truth. Second, the effect of perceived collective efficacy on procedural justice is almost as strong as the influence of distributive injustice. This is telling because tests of Tyler's (1990) theory routinely reveal that distributive justice is a key predictor of procedural justice. Clearly, perceptions of one's neighborhood conditions set the stage for evaluations of the police. Finally, the results establish a basic requirement for detecting possible mediation in the analyses to follow (MacKinnon et al., 2000).

[Insert Table 2 here]

The analyses in Table 3 explore the independent and additive effects of procedural justice and perceived collective efficacy on evaluations of trust in the police. Model 1 provides a baseline ordered logistic regression equation that examines the effect of procedural justice on trust. As expected, the equation provides more explanatory power than would be expected by

chance alone (LR $\chi^2 = 372.46$, $p < 0.01$; McFadden's $R^2 = 0.183$). The ordered log-odds coefficient (*b*) indicates that individuals' evaluations of police procedural fairness are positively associated with their trust in local law enforcement officers ($b = 0.488$, $p < 0.01$). When examining these estimates it is important to remember that they correspond with the ordinal nature of the dependent variable. Therefore, the coefficients reveal that unit increases in a particular independent variable correspond with the respective ordered log-odds increase/decrease of being in a higher response category (compared to all lower response categories) on the dependent variable (i.e., strongly disagree, disagree, agree, and strongly agree)—a somewhat complicated interpretation indeed. A simplified interpretation involves examining the percent change in the odds for a one standard deviation increase in the independent variable (%StdX). Specifically, a one standard deviation increase in procedural justice increases the predicted odds of being more trusting of the police by over 286 percent, holding all other variables constant. The strong influence of procedural justice on trust in the police is consistent with the previous literature discussed earlier. In fact, the only other variable in Model 1 that reached statistical significance was perceived disorder ($b = 0.488$, $p < 0.01$). Regardless of perceptions of procedural justice, individuals who perceive more incivilities in their neighborhoods tend to have less trust in the police. Visible signs of disorder may be cognitive cues that the police are not doing a good job and, therefore, cannot be fully trusted.

[Insert Table 3 here]

Model 2 presents parameter estimates from an ordered logistic regression equation that examines the influence of perceived collective efficacy on trust in the police, net of statistical controls. In order to establish whether perceived collective efficacy has an independent effect on trust, Model 2 excludes procedural justice from the equation. Overall, the equation provides

more explanatory power than would be expected by chance (LR $\chi^2 = 120.73$, $p < 0.01$; McFadden's $R^2 = 0.063$). Consistent with our theoretical argument presented earlier, the ordered log-odds coefficient (*b*) indicates that individuals' perceptions regarding the amount of collective efficacy in their neighborhood are related to their trust in local police ($b = 0.059$, $p < 0.01$). Specifically, a one standard deviation increase in perceived collective efficacy is associated with a 53.7 percent increase in the predicted odds of being more trusting of the police. Therefore, lack of informal social controls and social cohesion in a neighborhood are associated with lack of trust in the police.

The exclusion of procedural justice from the ordered logistic equation seemed to allow several other significant relationships to be observed. As would be expected based on prior literature, distributive injustice is negatively associated with trust in the police ($b = -0.182$, $p < 0.01$) (Tyler & Huo, 2002). A one standard deviation increase in the distributive injustice scale corresponds with 23.2 percent reduction in trust. Additionally, individuals who perceived more incivilities in their neighborhood ($b = -0.047$, $p < 0.01$), individuals residing in the lower crime neighborhood ($b = -0.356$, $p < 0.05$), and racial minorities ($b = -0.278$, $p < 0.05$) tended to have less trust in the police. The "lower crime neighborhood" effect suggests that low levels of criminal activity in a neighborhood do not necessarily translate into a trusting relationship with the police. Perhaps those from higher socioeconomic and educational backgrounds are less inclined to believe that government agents such as the police always have the community's best interest in mind when making decisions. Finally, the finding that racial minorities tended to be less trusting of the police is consistent with prior research (see, e.g., Tyler, 2005).

Model 3 presents results from our full ordered logistic regression equation that examines the additive effects of procedural justice and perceived collective efficacy on trust, net of

controls. Several findings from the analysis merit attention. For starters, when compared to Model 2 the explanatory power of Model 3 is increased significantly with the inclusion of procedural justice (LR $\chi^2 = 354.48$, $p < 0.01$; McFadden's $R^2 = 0.191$). Consistent with the baseline equation (see Model 1), evaluations of procedural justice are associated with trust in the police in the expected direction ($b = 0.477$, $p < 0.01$). Individuals who believe the police treat people more fairly and with justice are significantly more likely to trust officer motives. Additionally, as evidenced by the magnitude of the standardized effect (%StdX = 273.0), procedural justice dominates the prediction of trust in the model. A single standard deviation increase in the procedural justice scale is expected to increase trust in the police by a factor of almost three. The other statistically significant effects come nowhere near the magnitude of the procedural justice effect which is a finding that squares well with prior research demonstrating the explanatory power of the construct (see, e.g., Tyler & Huo, 2002). In fact, a comparison of Models 2 and 3 reveals that accounting for perceptions of procedural justice renders the effects of distributive injustice, lower crime neighborhood, and racial minority to statistical insignificance (Tyler, 2005).

Finally, and most important for the present study, the ordered log-odds coefficient (b) for perceived collective efficacy is reduced in magnitude by 52.5 percent (from 0.059 in Model 2 to 0.028 in Model 3). Although perceived collective efficacy still has a significant effect on trust ($b = 0.028$, $p < 0.05$), the data clearly demonstrate that a large portion of the connection is explained by evaluations of procedural justice. That is to say, folks who perceive less collective efficacy in their neighborhood are less likely to feel police behave fairly (see Table 2) and, as a partial consequence of this procedural injustice, are less trusting that law enforcement can make good decisions for their communities. At the same time, regardless of process-based evaluations,

peoples' social-psychological cognitive landscapes are partially responsible for shaping their level of trust in the police.[4]

DISCUSSION

The process-based model of regulation holds that compliance, cooperation, and empowerment from the public are more likely to occur when the public perceives authority figures as trustworthy and legitimate (Tyler, 1990; Tyler & Huo, 2002). While scholars have devoted a great deal of attention to the sources and consequences of legitimacy, trust remains largely unexplored. The present study demonstrated that perceived collective efficacy partially shapes levels of trust among citizens. However, when perceptions of procedural justice are taken into consideration, the effect of perceived collective efficacy is largely mediated. Both of these findings fill important gaps in the process-based literature. Strict adherence to Tyler's process-based model would suggest that procedural justice should completely override (i.e., mediate) the effect of perceived collective efficacy on levels of trust among citizens. Yet, our data reveal that perceived collective efficacy retains significance even after accounting for procedural justice. This suggests that: (1) procedural justice is a primary antecedent of trust and (2) perceived collective efficacy, though not as strong as procedural justice, is important to the explanation of trust in its own right. For that reason, future research should not overlook the effect of citizen

[4] A problem often encountered when using ordered logistic regression is that the parallel-lines (i.e., proportional-odds) assumption is violated (Williams, 2006). That is, one or more coefficients in the model may differ across values of the dependent variable. The Brant (1990; see also, Long & Freese, 2006) test was used to determine whether each of the regression coefficients estimated in the ordered logistic models were similar across categories of trust in the police. One variable—procedural justice—in Model 3, Table 3 marginally violated the parallel-lines assumption. In such instances, Williams (2006) advocates estimating a generalized ordered logit equation using Stata's *gologit2* command. Using the partial proportional odds model, generalized ordered logit allows some of the regression coefficients to be the same across all values of the outcome variable and others to differ. The relaxation allows different coefficients to be estimated for procedural justice across categories of trust in the police. Allowing all parameter estimates to vary across values of the dependent variable would result in a model equivalent to the multinomial logit but such a model lacks parsimony and interpretability (see, e.g., Breen, Luijkx, Müller, & Pollak, 2009; Williams, 2006). To check the robustness of our results we reestimated the trust in police equations using generalized ordered logit models. The findings from these analyses left our substantive conclusions unchanged. Given that the slight violation of the proportional-odds model does not bias the results and for ease of interpretation we report findings from the ordered logit models.

perceptions regarding collective efficacy when examining trust in the police. With that said, several theoretical and practical implications require further discussion.

For starters, our findings advance the procedural justice literature in several important ways. First, our data reveal that perceptions of neighborhood collective efficacy are associated with variation in evaluations of procedural justice. Individuals situated in environments with anomic conditions (i.e., low collective efficacy) appear less inclined to view police actions as procedurally fair. The important task for future research is to explore this relationship in further detail. Specifically, it is necessary to uncover whether breakdowns in neighborhood collective efficacy result in normlessness perceptions that lead to legal cynicism or if such neighborhoods are simply policed differently. Klinger (1997), for instance, posits that police officers will less vigorously respond to crime problems in communities with higher levels of crime. Perhaps lack of police attention to community problems causes people in neighborhoods with lower levels of collective efficacy to provide lower evaluations of procedural justice. Exploring the causal process between perceived collective efficacy and procedural justice is an essential next step for future inquiry.

Second, the present study offered evidence that perceptions of procedural fairness are associated with greater trust in local law enforcement. This finding expands on the rather limited, yet growing, literature on the antecedents of trust in the police (Jackson et al., 2012; Sargeant et al., 2013; Tyler, 2005; Tyler & Huo, 2002). Procedural fairness—respect, neutrality, and status recognition—appears to play a central role in individuals' normative evaluation process regarding the level of trust given to law enforcement authorities. While distinct concepts, our results indicate that the process-based model explains citizen trust in the police much like it explains evaluations of police legitimacy. That is, perceptions of procedural justice are more

important than other relevant factors such as distributive justice, contact with the police, prior victimization, perceptions of neighborhood context, and demographic characteristics in explaining normative beliefs about the trustworthiness of police officers. Along these lines, thoughtful theorizing and rigorous research are needed with respect to the distinction between trust and legitimacy. Scholars such as Tankebe (2013; see also Bottoms & Tankebe, 2012) and Jackson and colleagues (2012) have begun questioning Tyler's (1990; see also Tyler & Huo, 2002) conceptualization of legitimacy. Emerging empirical research suggests that trust and legitimacy are distinct (Gau, 2011, 2013; Reisig et al., 2007) but limitations in theoretical conceptualization currently preclude a complete understanding of specific differences between the concepts. We encourage continued research in this area to improve our overall understanding of the process-based model of policing and the extent to which trust and legitimacy are separate normative attitudes regarding law enforcement. It will also be important to determine if trust and legitimacy have different effects on compliance, cooperation, or empowerment.

The current study's second implication is related to Sampson and Jeglum-Bartusch's (1988) demonstration that macro-level conditions influence attitudes toward the police. In short, there is an ecological taxonomy whereby cognitive landscapes emerge. Residents of disadvantaged neighborhoods are more likely to be cynical of the law and the police. Our findings suggest that a similar process may be operating at the individual level. That is, one's *perception* of his/her surroundings functions as a social-psychological mechanism that shapes his/her cognitive orientation toward law enforcement. This is important because it expands on existing macro-level research and specifies a potential mechanism by which neighborhood conditions influence normative evaluations of formal social control agents. In sum, perception of neighborhood context is reality and it manifests itself in evaluations of police trustworthiness.

Relatedly, one of the most important findings from this study was that procedural justice mediated much of the link between perceived collective efficacy and trust. A close reading of Tyler's (1990; Tyler & Huo, 2002) process-based model of policing would seem to suggest that procedural justice is the most important antecedent of trust in the police and that it should render other demographic and contextual influences less meaningful (i.e., it should mediate those effects). Accordingly, our findings partially support Tyler's framework—more than half of the relationship between perceived collective efficacy and trust is explained by perceptions of procedural fairness. Nonetheless, perceived neighborhood collective efficacy remained a statistically significant predictor of level of trust in the police after accounting for variation in procedural justice perceptions. The take away message is that failing to account for evaluations of procedural justice will artificially inflate the observed influence of perceived collective efficacy on trust; however, one's social-psychological orientation toward neighborhood circumstances is still important in explaining trust even after accounting for the effect of procedural justice. The present study, therefore, demonstrates the potential utility of integrating individual perceptions of neighborhood context into the overall process based model of policing.

Consistent with previous process-based model research, our findings have important policy implications. Chief among them is that procedural fairness matters far more than anything else we accounted for in shaping levels of trust in the police. Our results suggest that evaluations of procedural justice partially override the influence that negative neighborhood and social environments may have on citizens' trust in the police. This finding is important with respect to policing efforts because officers spend much of their time in neighborhoods characterized by concentrated disadvantage and low levels of collective efficacy (Klinger, 1997; Sampson & Jeglum-Bartusch, 1998; Smith, 1986). In such areas, it is imperative that police officers exercise

their authority in a procedurally fair manner because residents of these neighborhoods appear to have less favorable attitudes toward the police to begin with. While residents of these neighborhoods are more likely to be distrusting of authorities, our findings suggest that trust can be established between such individuals and the police if officers maintain a high level of respect, politeness, and fairness during their duties. Conversely, if officers fail to be polite or treat citizens in these areas disrespectfully, levels of mistrust could be exacerbated. This has real consequences for police officers because lack of trust breeds less compliance with the law and officer directives, less cooperative behavior (e.g., offering information relevant to criminal investigations), and less willingness to empower local police with greater resources.

The results of this study are not without limitations. For one, we were unable to account for compositional effects on trust in the police by measuring neighborhood-level characteristics. Unfortunately we only had survey data from respondents who lived in four neighborhoods, which is insufficient to conduct multilevel analyses (Rabe-Hesketh & Skrondal, 2008).

The results of our study, however, suggest that it is important for future research to explore the simultaneous (i.e., additive) effect of macro-level and perceptual indicators of neighborhood context on evaluations of the police. This will allow for a richer understanding of whether context or *perceptions* of context matter more in explaining trust in local law enforcement. Additionally, our measure of trust in the police captured only "motive-based" trust. Future work could help move this line of inquiry forward by examining the influence of perceived collective efficacy and procedural justice on different conceptual forms of trust (e.g., institutional trust) or scales that capture various components of trust (see, e.g., Tyler & Huo, 2002). Finally, our data were unable to speak about potential differences in the effects of procedural justice and perceived collective efficacy on trust in the police between Whites and ethnic minorities. The

city from which the current sample was drawn is almost equally represented by Whites and African-Americans and, therefore, offers limited ability to examine trust in the police among Hispanics. Future research could move the procedural justice literature forward by examining the applicability of the process-based model to Hispanic's and other ethnic minorities' evaluations of law enforcement (see, e.g., Sargeant et al., 2013).

In conclusion, individuals' social-psychological orientation toward their neighborhoods is important. This finding suggests future researchers may wish to explore the difference between macro- and individual-level (i.e., perceptional) neighborhood indicators on trust and legitimacy evaluations (as well as other attitudes toward the police). For example, simply because one resides in a disadvantaged neighborhood does not necessarily imply that he/she will perceive it as disorganized or dangerous (and vice versa). If true, the question for researchers is to explain why such differences in perception of neighborhood conditions develop in the face of objective indicators. Additionally, how do differences in subjective perceptions of neighborhood context and objective measures of context explain individuals' behaviors and evaluations of the legal authorities? That is, do compositional effects matter more or does perception of one's neighborhood reflect reality? Furthermore, because the present study was concerned only with sources of trust—future researchers might wish to explore its potential consequences. That is, are cooperation, compliance, and empowerment more likely to occur when residents are trusting of the police? And, does trust in law enforcement explain more of these outcomes than subjective or objective neighborhood indicators? In the end, our results underscore the predictive accuracy and explanatory power of Tyler's process-based theory. We add to the literature by demonstrating its utility in explaining trust in the police—something relatively unexplored in detail to date. Additionally, we advance the literature by demonstrating that perceived

neighborhood collective efficacy is also an important antecedent of trust evaluations. Future research should continue to test the limits of the process-based model of policing especially in light of the potential practical importance of the framework.

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Table 1. Descriptive statistics

	Mean	SD	Min	Max
Trust in the police	2.853	0.648	1	4
Procedural justice	12.506	2.361	4	16
Perceived collective efficacy	28.356	5.620	10	40
Distributive injustice	3.904	1.473	2	8
Perceived disorder	3.656	3.886	0	18
Prior victimization [a]	0.228	0.474	0	3.367
No police contact	0.682	0.466	0	1
Citizen-initiated police contact	0.205	0.404	0	1
Lower crime neighborhood	0.305	0.460	0	1
Police-initiated contact	0.113	0.317	0	1
Education	3.242	0.907	1	4
Racial minority	0.411	0.492	0	1
Female	0.661	0.474	0	1
Age	57.838	16.363	19	96

Note: [a] Natural log transformation.

Table 2. The effect of perceived collective efficacy on procedural justice

Variable	Procedural justice [a]			
	b	SE	β	*t*-test
Perceived collective efficacy	0.084	0.014	0.230	5.83**
Distributive injustice	-0.344	0.053	-0.243	-6.52**
Perceived disorder	-0.038	0.020		-1.87
Prior victimization [b]	-0.276	0.151		-1.83
No police contact [c]	0.088	0.200		0.44
Citizen-initiated police contact [c]	0.070	0.230		0.30
Lower crime neighborhood	-0.320	0.154	-0.097	-2.08*
Education	0.099	0.077		1.27
Racial minority	-0.196	0.154		-1.27
Female	0.186	0.125		1.50
Age	0.009	0.004	0.066	2.20*
Intercept	10.818	0.663		16.32**
F-test	15.02**			
R^2	0.189			

Note: Entries are unstandardized partial regression coefficients (*b*), robust standard errors, and standardized partial regression coefficients [β]. [a] Ordinary least squares regression equation. [b] Natural log transformation. [c] "Police-initiated contact" is the reference category. * $p < 0.05$; ** $p < 0.01$ (two-tailed test).

Table 3. Ordered logistic regression estimates for the effects of procedural justice and perceived collective efficacy on trust in the police

	Model 1[a]			Model 2[a]			Model 3[a]		
	b (SE)	[%StdX]	*t*-test	*b* (SE)	[%StdX]	*t*-test	*b* (SE)	[%StdX]	*t*-test
Procedural justice	0.488 (0.036)	[286.5%]	13.56**	--	--	--	0.477 (0.037)	[273.0%]	13.03**
Perceived collective efficacy	--	--	--	0.059 (0.012)	[53.7%]	4.73**	0.028 (0.013)	[24.6%]	2.16*
Distributive injustice	-0.024 (0.051)		-0.48	-0.182 (0.052)	[-23.2%]	-3.47**	-0.019 (0.051)		-0.38
Perceived disorder	-0.047 (0.016)	[-15.7%]	-2.93**	-0.047 (0.017)	[-22.2%]	-2.85**	-0.038 (0.016)	[-14.6%]	-2.30*
Prior victimization [b]	-0.026 (0.125)		-0.21	-0.110 (0.128)		-0.85	-0.011 (0.125)		-0.09
No police contact [c]	0.219 (0.171)		1.28	0.247 (0.176)		1.40	0.247 (0.171)		1.45
Citizen-initiated police contact [c]	0.104 (0.201)		0.51	0.143 (0.198)		0.72	0.110 (0.201)		0.55
Lower crime neighborhood	-0.172 (0.148)		-1.17	-0.356 (0.149)	[-14.8%]	-2.39*	-0.242 (0.154)		-1.58
Education	-0.139 (0.075)		-1.86	-0.093 (0.069)		-1.35	-0.159 (0.075)	[-14.8%]	-2.12*
Racial minority	-0.221 (0.146)		-1.52	-0.278 (0.141)	[-17.2%]	-1.97*	-0.222 (0.146)		-1.53
Female	0.149 (0.118)		1.26	0.198 (0.116)		1.70	0.136 (0.118)		1.15
Age	-0.006 (0.004)		-1.71	-0.001 (0.004)		-0.42	-0.007 (0.004)		-1.79
LR χ^2		372.46**			120.73**			354.48**	
McFadden's R^2		0.183			0.063			0.191	

Note: Entries are unstandardized ordered log-odds coefficient (*b*), percent change in the odds for a one standard deviation increase in the independent variable [%StdX], and robust standard errors in parentheses. [a] Ordered logistic regression equation. [b] Natural log transformation. [c] "Police-initiated contact" is the reference category. * $p < 0.05$; ** $p < 0.01$ (two-tailed test).