

SHAPING CITIZEN PERCEPTIONS OF POLICE LEGITIMACY: A RANDOMIZED FIELD TRIAL OF PROCEDURAL JUSTICE*

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Exploring the relationship between procedural justice and citizen perceptions of police is a well-trodden pathway. Studies show that when citizens perceive the police acting in a procedurally just manner—by treating people with dignity and respect, and by being fair and neutral in their actions—they view the police as legitimate and are more likely to comply with directives and cooperate with police. Our article examines both the direct and the indirect outcomes of procedural justice policing, tested under randomized field trial conditions. We assess whether police

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can enhance perceptions of legitimacy during a short, police-initiated and procedurally just traffic encounter and how this single encounter shapes general views of police. Our results show significant differences between the control and experimental conditions: Procedurally just traffic encounters with police (experimental condition) shape citizen views about the actual encounter directly and general orientations toward the police relative to business-as-usual traffic stops in the control group. The theorized model is supported by our research, demonstrating that the police have much to gain from acting fairly during even short encounters with citizens.

Research exploring the relationship between procedural justice policing and citizen perceptions of police legitimacy is a well-trodden pathway (e.g., Reisig, Bratton, and Gertz, 2007; Tyler, 2003, 2004). Numerous studies using a variety of different methods of inquiry have identified how perceived fairness in policing is important for shaping people's willingness to obey police and cooperate with legal authorities (Tyler, 1990; Tyler and Fagan, 2008). If citizens perceive that the police act in a procedurally just manner—by treating people with dignity and respect, and by being fair and neutral in their actions—then the legitimacy of the police is enhanced (e.g., Mastrofski, Snipes, and Supina, 1996; Reisig and Lloyd, 2009; Sunshine and Tyler, 2003). These studies show that the legitimacy of authority is important for encouraging compliance and cooperation (Tyler and Fagan, 2008) and highlight the importance of community engagement in crime management (Huq, Tyler, and Schulhofer, 2011).

The process-based model of legitimacy (Tyler, 2003) proposes a direct and measureable relationship between how police treat people and then, in turn, what people think of police (see also Engel, 2005; Gau and Brunson, 2009; Murphy, Hinds, and Fleming, 2008; Murphy, Tyler, and Curtis, 2009). Yet whether procedurally just encounters with police influence generalized perceptions of police legitimacy, or influence only specific assessments of police pertaining to the encounter (or both specific and generalized perceptions), is less understood in the extant literature. We do know that when police are evaluated as exercising their authority fairly in a general manner, they are viewed as more legitimate (see also Elliott, Thomas, and Ogloff, 2011; Fischer et al., 2008; Murphy, Hinds, and Fleming, 2008; Reisig, Bratton, and Gertz, 2007). Yet these judgments of police by citizens are not linked explicitly to assessments of specific police–citizen encounters. Indeed, the link among encounters, citizen assessments of police, and their long-run, generalized views of legitimacy often is inferred rather than tested (see Dai, Frank, and Sun, 2011).

Our article uses the world's first randomized field trial of legitimacy policing—the Queensland Community Engagement Trial (QCET)—to test

directly the impact of an experimental manipulation of procedural justice during police–citizen encounters on both specific and global perceptions of police. We operationalized the four key components of procedural justice (citizen participation, dignity and respect, neutrality, and trustworthy motives) into a script delivered as the experimental condition by police to drivers during police-initiated random breath testing (RBT) traffic road-blocks. The experimental condition was compared with the business-as-usual mode of RBT traffic operations. Previous findings from QCET show that the experimental condition had a significant impact on citizen attitudes to drinking and driving as well as on their specific views of police in relation to the encounter, relative to the business-as-usual traffic stop (see Mazerolle et al., 2012).

The goal of this article is to test the influence of the experimental manipulation on both specific and generalized views of police legitimacy and how these views influence people’s satisfaction and willingness to cooperate with police. Drawing on the way past research has explored the relationship between specific assessments of police and generalized perceptions of police legitimacy (see Elliott, Thomas, and Ogloff, 2011; Fischer et al., 2008; Reisig, Bratton, and Gertz, 2007; Weitzer and Tuch, 2005), we use the QCET data to test our hypothesized model. Using structural equation modeling, we examine the effects of the experimental manipulation on specific citizen views about police and then assess how these views then condition their general views about the police.

We begin our article with a review of the extant literature informing our study. We then provide a brief overview of the QCET and present our data, measures, and analytic strategy, while teasing out the impact of the brief, police–citizen encounters on perceptions of both the encounter itself and citizens’ general perceptions of police. Our results support the theorized causal model: We show that a single, short, and positive encounter with police can influence citizen views and that this single, procedurally just experience can shape people’s general orientation toward the police. Our findings suggest that the police have a lot to gain from acting fairly during even very short traffic encounters with citizens. These findings are of particular importance given prior research that has questioned whether a favorable experience can improve general attitudes toward the police (see Skogan, 2006).

BACKGROUND LITERATURE

Police require voluntary cooperation from the public to be effective in controlling crime. They need citizens to comply with their directives and a tacit willingness to obey the law in general. A significant body of research during the last 20 years has shown that people obey the law and

cooperate with legal authorities primarily if and when they view those legal authorities as legitimate (Tyler, 2006). The legitimacy of social institutions, such as the police, is thus paramount for maintaining social order. Legitimacy is known to be a by-product of how the police treat people and make decisions when they are exercising their regulatory authority. Fairness in decision making, through neutral and nondiscriminatory behavior and fair interpersonal treatment that respects other people and their rights, is key to securing cooperation and gaining voluntary acceptance of the decisions made by legal authorities.

Legitimacy is thus “a property of an authority that leads people to feel that the authority or institution is entitled to be deferred to and obeyed” (Sunshine and Tyler, 2003: 514). Legitimacy, therefore, is considered to be particularly key for voluntary cooperation and compliance because it reflects an individual’s own values rather than a reliance on outcomes to regulate behavior (Hinds and Murphy, 2007; Tyler, 2001), signifying an important social value that can be called on to gain public compliance and cooperation (Tyler, 2006; Tyler and Huo, 2002).

In policing, the process-based perspective argues that perceptions of police legitimacy are affected by encounters with individual police officers (Skogan and Frydl, 2004; Tyler, 2003, 2004). Research on the antecedents to legitimacy has suggested that perceptions of procedural justice, or the fairness of police behavior and the processes through which police decisions are made, are of great importance to fostering legitimacy (Sunshine and Tyler, 2003). Procedural justice, as described in the literature, typically comprises four essential components: citizen participation (or voice), fairness and neutrality, dignity and respect, and trustworthy motives (Goodman-Delahunty, 2010; Murphy and Cherney, 2011; Tyler, 2008; Tyler and Huo, 2002). Research has found that police–citizen encounters that involve the use of procedural justice enhance the quality of police–citizen interactions, leading citizens to be more satisfied with the interaction and outcome (Mastrofski, Snipes, and Supina, 1996; McCluskey, 2003; Reiss, 1971; Tyler and Fagan, 2008; Wells, 2007). People who feel they have been dealt with in a procedurally fair way are less likely to believe that they have been personally singled out (e.g., racially profiled) and are more likely to accept the decisions (e.g., fine or sentence) made by authorities (Tyler and Wakslak, 2004).

The extant literature has demonstrated a direct link between procedurally just encounters and citizen perceptions of the police specific to the encounter. Yet whether positive encounters with police can influence more generalized beliefs about procedural justice and legitimacy of the police has not been as well understood in the extant literature. We do know that contact and experience with police shape citizens’ overall satisfaction with police (see Frank, Smith, and Novak, 2005; Lai and Zhao, 2010; Weitzer and Tuch, 2005). We also know that if the police are evaluated as exercising their authority fairly, then they are viewed as more legitimate (see also

Elliott, Thomas, and Ogloff, 2011; Fischer et al., 2008; Ivkovic, 2008; Murphy, Hinds, and Fleming, 2008; Reisig, Bratton, and Gertz, 2007). When authorities are viewed generally as procedurally unjust, their legitimacy is undermined, leading to support for disobedience and resistance (Fischer et al., 2008). Sunshine and Tyler (2003) explored the influence of general evaluations of police use of procedural justice on people's judgments about police legitimacy, finding that global views of procedural justice are a key antecedent of legitimacy. Overall, these judgments were not linked to specific police-citizen encounters but were considered general perceptions of police.

Skogan's (2006) analysis of survey data, however, found little support for the argument that the police can gain globalized feelings of legitimacy from the public by acting in a "satisfactory" manner, but the analysis did find that the police can lose it easily by acting in an unsatisfactory way. Using data from a 2003 survey of contacts and evaluations of the police in Chicago, as well as from seven other samples in different states and countries, Skogan's multivariate analyses indicated that the impact of having a bad experience with the police is much larger than a positive experience. Positive experiences, including experiences that encapsulated many of the components of a procedurally just approach, were found to have a very small and nonsignificant effect on Skogan's outcome measure of generalized confidence in the police. Skogan (2006) thus argued that professional treatment does not necessarily produce more public confidence in the police because there is an asymmetrical effect of negative compared with positive encounters with the police.

In response to Skogan's research findings, Bradford, Jackson, and Stanko (2009) used London Metropolitan Police Public Attitude Survey data to test Skogan's finding that contacts with the police largely have a negative impact on the public's confidence in the police. Skogan (2006) used an aggregated measure of confidence, including several items measuring the apparent effort the police put into the case, their politeness and fairness, and citizens' overall satisfaction with the experience. Bradford, Jackson, and Stanko (2009) extended this measure of "confidence" and assessed whether positively received police-citizen encounters could influence public confidence in the police positively in terms of police effectiveness, fairness, and community engagement. Using survey data, Bradford, Jackson, and Stanko (2009) concurred with Skogan, finding that contact with the police may have an asymmetrical negative impact on perceptions of police effectiveness. However, they also found that positive encounters with the police can improve confidence in police fairness and community engagement (Bradford, Jackson, and Stanko, 2009).

The criminological literature has suggested that preexisting opinions of the police have a lot to do with shaping citizen perceptions of their encounters with police (see Brandl et al., 1994; see also Rosenbaum et al.,

2005). Brandl et al. (1994: 119), for example, found that “global attitudes have substantial effects on specific assessments of police performance, and that the effects of specific assessments of police performance on global attitudes are modest in comparison.” Hawdon (2008: 187) argued similarly that “people are likely to form their general impressions of the police before they have any personal contact with them . . . that in turn influences the interaction between the individual and the police when such contact does occur.”

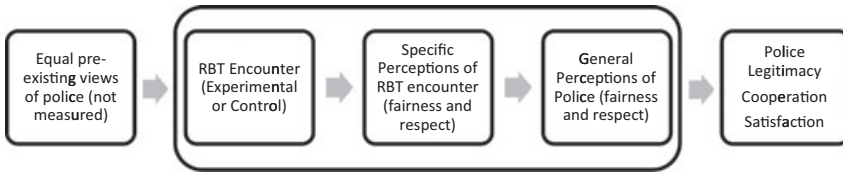
The vicarious experience perspective also suggests that stories that people hear about police from friends, family, and the media shape the way that citizens interpret and evaluate their own encounters with police (see Brunson, 2007; Gallagher et al., 2001; Hohl, Bradford, and Stanko, 2010; Reisig and Parks, 2003; Warren, 2011; Weitzer and Tuch, 2006). Indeed, Warren (2011: 369) found that people who “hear negative stories about police contacts from friends and family are approximately four times as likely to perceive disrespect during their own police encounter.”

Disentangling the relationship between 1) global, preexisting views of police; 2) citizen views of police following an encounter with police; 3) generalized views of police legitimacy; and 4) often-cited outcomes of legitimacy (satisfaction and cooperation) is difficult using survey-based correlational data. It is made even more difficult because of the lack of survey research that can control and differentiate the nature of the police–citizen encounter to determine how different encounters might shape generalized views of police. Our article seeks to understand these relationships more clearly using results from a randomized field trial. We compare and contrast two distinct types of police–citizen encounters and how they differentially influence citizen perceptions of police during the encounter as well as their more general orientations to police.

Drawing on the extensive legitimacy in policing literature, we explore, under randomized field trial conditions, how a brief yet positive encounter might impact people’s general orientations toward the police and how these views might influence their general feelings of satisfaction and cooperation with police. We use our randomized field trial to advance the existing literature by exploring how routine traffic stop encounters—where police use the principles of procedural justice—shape people’s perceptions of and attitudes toward police. We examine how people generalize from their personal experiences with police officers and how this shapes their satisfaction and willingness to cooperate with police. Conceptually, the hypothesized model we test in this article is depicted in figure 1.

As figure 1 shows, our hypothesized model assumes that variations in respondents’ preexisting views of the police will be distributed equally among

Figure 1. Conceptual Model of the Hypothesized Causal Relationship



the experimental and control participants. We propose that vicarious experiences (see Brunson, 2007; Hohl, Bradford, and Stanko, 2010; Warren, 2011; Weitzer and Tuch, 2006) and preexisting views of police (see Rosenbaum et al., 2005) vary in similar ways across the experimental and control groups in our study. Although we did not conduct a pretest of citizen general views of police, we note that in an experimental field trial, we would expect that these preexisting views of police before the RBT encounter would be distributed similarly across the experimental and control groups.

The remainder of the model depicted in figure 1, however, is directly testable using the QCET data. In this article, we use three steps to test the hypothesized model. We begin by proposing that the experimental intervention (using the principles of procedural justice) will shape not only citizen views about police during the encounter (see Mazerolle et al., 2012) but also their general views of police. We then hypothesize that these specific and general views of police will shape citizen perceptions of police legitimacy (see Reisig, Bratton, and Gertz, 2007). Finally, our theorized model allows for investigation of how legitimacy shapes cooperation and satisfaction with police in general, as well as the impact of specific and general procedural justice perceptions on willingness to cooperate with police and levels of satisfaction with police, drawing from previous research that found that perceptions of police legitimacy influence compliance and cooperation (e.g., Reisig, Bratton, and Gertz, 2007; Sunshine and Tyler, 2003) as well as feelings of satisfaction toward the police (Elliott, Thomas, and Ogloff, 2011; Goodman-Delahunty, 2010). In this final model, we also construct a direct path between satisfaction and cooperation, given that the alternative, instrumental perspective of police legitimacy suggests that police performance (i.e., how good a job they do) impacts people's willingness to support the police (see Hinds and Murphy, 2007; Sunshine and Tyler, 2003).

QUEENSLAND COMMUNITY ENGAGEMENT TRIAL

The QCET is the world's first randomized field trial that directly tests the impact of police–citizen encounters on citizen views of police. The field trial involved random allocation of 60 planned roadblocks, called RBT operations, to either the standard RBT operation (control condition) or the experimental condition, where the traffic police used a script that operationalized key elements of procedural justice. The 60 RBT roadblock operations in the trial involved police pulling over between 300 and 400 cars per operation. The police provided each driver in the field trial with a sealed envelope and let drivers know that the envelope contained a survey developed by researchers at the University of Queensland, that the survey was voluntary, and that it could be completed at a later time (see Mazerolle et al., 2012).

The business-as-usual encounter (control condition) involved police routine interactions with citizens during RBT traffic roadblocks. During RBTs in Australia, police randomly pull over blocks of 7 to 10 drivers at any one time and then use a calibrated instrument to test whether each driver is driving under the influence of alcohol. The police instruct each driver to open the window, they present the driver with a short plastic tube attached to a small handheld machine, and then the police instruct the driver to blow into the tube until they tell the driver to stop. RBT police–citizen encounters are very systematic and often devoid of anything but compulsory communication (i.e., the mandated message that officers are required to give to the driver for the purpose of obtaining a specimen of breath for the breath test). Police–citizen contact during standard RBTs averages 20 seconds in length for drivers whose initial reading is negative and involves minimal verbal exchange between the police and the driver.¹ If the driver blows over the alcohol limit (.05 g per 100 ml of blood), then the police ask the driver to step out of his or her car and then process the driver in an onsite caravan using more sophisticated breath testing equipment. The only alteration our trial process made to this standard procedure involved the officers, prior to obtaining a sample of breath, providing all motorists with a survey packet, regardless of the outcome of the RBT.

RBT operations in the experimental condition explicitly incorporated elements of procedural justice and community engagement into the existing RBT procedures. Working with senior police, we carefully operationalized the four elements of procedural justice: citizen participation, dignity and

1. From the observations of the RBT operations, more than 99 percent of drivers provided a negative reading. On average, there were only 2 positive tests per operation (range 0–10), resulting in a total of 111 positive tests during the course of the trial.

respect, neutrality, and trustworthy motives, into a script for our trial. The officers were briefed by their commanding officer before each operation about the required script to be followed, and each officer was provided with a small cue card with the key prompts clearly laid out (see appendix A in the online supporting information, which summarizes the cue card).² The officers expressed their “trustworthy motives” as to why they were doing RBT testing by informing each driver about the number of deaths from road accidents in the previous year and conveying that the police genuinely wanted to reduce the road toll. Likewise, the officers emphasized to motorists that they had been stopped randomly to reinforce the “neutrality” component of their actions. Although drivers were mandated by law to undertake the breath test and therefore did not have an opportunity to have their say in the police decision to pull them over, drivers were still given an opportunity to voice their viewpoints about the police in other ways. “Citizen participation” (or voice) was thus incorporated into the experimental procedure by patrol officers actively seeking to engage the driver in a short conversation, during which they asked the drivers for their ideas and advice about the priority problems facing police each month in their community. To help stimulate the conversation, all motorists in the experimental condition were provided with a community bulletin (highlighting the police priority problems, upcoming community events, and important contact information). The goal was to elicit feedback on what the drivers saw as priority problems, so the drivers were asked by officers to provide any input or feedback they thought would be helpful regarding police policies and practices (see also Hohl, Bradford, and Stanko, 2010). The officers executing the experimental condition also thanked the motorist at the end of the RBT and expressed gratitude for their time in an effort to convey “dignity and respect.” As in the control condition, all motorists pulled over during the experimental RBT operations were provided with a survey regardless of the outcome of the RBT. For both the control and the experimental conditions, drivers that blew over the blood alcohol concentration limit were processed on site as per standard operating procedures. These motorists also were provided with a survey pack.

On average, ten officers per RBT operation delivered either the standard ($N = 30$ RBT operations) or experimental intervention ($N = 30$ RBT operations). Senior sworn officers and research staff monitored the delivery integrity, and the senior supervising officer on site withdrew officers from the line if they did not deliver the experimental script in the spirit it was intended. These officers were “rested” for half an hour and assigned to other

2. Additional supporting information can be found in the listing for this article in the Wiley Online Library at <http://onlinelibrary.wiley.com/doi/10.1111/crim.2013.51.issue-1/issuetoc>.

tasks until they were reintegrated back onto the RBT line to deliver the script as assigned.

Field observations of the time taken to deliver the procedurally just experimental encounter revealed that this encounter was, by design, significantly longer than the time taken to deliver the control condition. The average length of the experimental encounter was 97.21 seconds (standard deviation [SD] = 30.00, minimum = 45.75 seconds, maximum = 160.06 seconds), whereas the control condition was, on average, 25.34 seconds (SD = 4.84, minimum = 17.62 seconds, maximum = 36.32 seconds). Thus, the experimental encounters were, on average, four times longer than the control encounters.

Mazerolle et al. (2012) reported elsewhere that the experimental treatment was delivered as planned and that the experimental group had higher mean ratings on perceptions of procedural justice ($M = 4.24$, $SD = .68$) than the control group ($M = 4.01$, $SD = .67$; $M_{diff} = .23$; $SE_{diff} = .03$, $d = .34$). Mazerolle et al.'s (2012) analysis of QCET also found significant differences between the experimental and control groups' views about the target behavior—drunk driving—and their specific views of police during the encounter. Drivers who received the experimental RBT encounter were 1.24 times more likely to report that their views on drinking and driving had changed than the control group, and the experimental respondents reported small but higher levels of compliance ($d = .07$) and satisfaction ($d = .18$) with police during the encounter than did their control group counterparts (Mazerolle et al., 2012). The QCET research team concluded in this previous paper that when police use the principles of procedural justice, during even brief exchanges, they can shape citizen attitudes specific to the encounter (Mazerolle et al., 2012; see also Mastrofski, Snipes, and Supina, 1996; McCluskey, 2003; Reiss, 1971; Tyler and Fagan, 2008; Wells, 2007).

DATA

Using the QCET study data, this article advances on previous findings reported in Mazerolle et al. (2012) by presenting and testing the theoretical model depicted in figure 1. We explicate the causal relationships between the experimental manipulation (police using the principles of procedural justice versus business-as-usual condition) and how perceptions of the specific encounter with police shape more generalized views of the police. Our article provides, for the first time, an experimental test of a holistic theoretical model that has been either inferred (see Dai, Frank, and Sun, 2011) or partially tested using observational methods (see McCluskey, 2003) and correlational survey methods (see Bradford, Jackson, and Stanko, 2009; Skogan, 2006). Specifically, our study directly tests, under field trial conditions, 1) the impact of police-initiated and procedurally just encounters

on citizens' specific attitudes and 2) how these specific attitudes shape generalized perceptions of legitimacy and global perceptions regarding cooperation and satisfaction with police.

DEMOGRAPHICS

In total, 2,762 of the 20,985 surveys distributed were returned (response rate = 13.16 percent), of which 2,746 were used in the analysis (response rate = 13.09 percent). Sixteen participants were removed from analysis for falling below the legal driving age (17 years) or for failing to respond to any items. The response rate for both groups was similar: 12.21 percent of the experimental ($N = 1,097$) and 13.74 percent of the control condition drivers ($N = 1,649$) returned surveys. Additionally, no significant differences in a variety of demographic features, including age, gender, and cultural identity (all $\chi^2 < 2.93$, all $p > .569$) were found between participants in the two conditions (see also Mazerolle et al., 2012). Gender breakdown revealed an approximately equal number of males and females: 1,337 males and 1,384 females (25 participants declined to give their gender; $M_{\text{age}} = 47.17$ years, $SD = 14.62$). Most of the sample identified as Australian (45.59 percent) or British/European (36.67 percent).

MEASURES

The survey provided to participants in both the experimental and control conditions asked about several elements related to perceptions of the police surrounding procedural justice (both specific to the RBT traffic encounter and of the police more generally), legitimacy, trust, and cooperation with the police in general. Univariate descriptives of these items and scales are presented in appendix B in the online supporting information. All responses were measured using 5-point Likert scales, with responses varying from 1, "strongly disagree" to 5, "strongly agree" (i.e., higher scores indicated higher agreement), with the exception of Cooperation items (measured from 1, "very unlikely" to 5, "very likely"). Composite scales were created by taking the average response across items.

PROCEDURAL JUSTICE—SPECIFIC TO ENCOUNTER

Procedural justice is traditionally operationalized as having components that assess dignity and respect, fairness and neutrality, and trustworthy motives of the officer in the encounter (e.g., Sunshine and Tyler, 2003; Tyler, 2004). These elements were all incorporated into the experimental procedure and measured through five items that were included in the model to reflect the latent variable labeled "procedural justice—RBT." Respondents were asked to indicate the extent of their agreement to several items on

5-point Likert scales ranging from “strongly disagree” to “strongly agree.” The overall scale had a mean of 4.06 (3 was neutral, with higher scores indicating higher perceptions of procedural justice in the encounter; $SD = .73$, $\alpha = .89$). Significant differences were observed between the experimental ($M = 4.21$; $SD = .72$) and control conditions ($M = 3.96$; $SD = .72$), $t(2,744) = -9.16$, $p < .001$) reflected in the model through the significant relationship of the experimental condition on the RBT-specific procedural justice latent variable,³ $\beta = .18$, $p < .001$ (as a result of the coding of the experimental manipulation variable where 1 represented the experimental condition and -1 represented the control condition, a positive beta-weight indicates higher ratings of specific procedural justice in the experimental than in the control condition). That is, participants who were involved in the experimental encounter perceived the encounter as more procedurally just (fairer, more respectful treatment by the officer involved) than those who had a standard encounter with the police (control).

PROCEDURAL JUSTICE—GENERAL

The perceptions of the procedural fairness of the police in general also were measured. As a more generalized measure, it also incorporated items largely related to fairness and respect analogous to the measures used for the specific procedural justice measure of the encounter. However, questions were directed at beliefs about the police in general rather than about the specific officer encountered during the RBT.

LEGITIMACY

Legitimacy is a complex construct that can comprise distinct constructs of law legitimacy, police legitimacy (see Jackson et al., 2011; Murphy and Cherney, 2012; Murphy, Tyler, and Curtis, 2009), and motivational posturing (Braithwaite, Murphy, and Reinhart, 2007). In this article, we operationalized legitimacy to include elements of a moral obligation to obey, the consistency of the law with the views of the public, and engagement with the police (reverse coded) (Tankebe, 2008; Tyler, 2004). The elements “obligation to obey” and “engagement” also reflected the items called “commitment” and “disengagement” in the literature on motivational postures (e.g., Braithwaite, Murphy, and Reinhart, 2007). Motivational postures are the way that individuals present themselves toward authorities. These postures are derived from the beliefs, attitudes, and preferences that an individual

3. Mazerolle et al. (2012) used a different measure of procedural justice (specific to the encounter) than the procedural justice latent variable used in this article. In this study, we used five items (rather than the seven used in the previous paper) to focus on fair and respectful treatment.

holds toward a regulator; these factors are integrated within the individual and result in compliance or noncompliance with the authority (Braithwaite, Murphy, and Reinhart, 2007). They represent a core component of the belief system that underpins legitimacy perceptions. Primarily, it is suggested that when an individual feels that an authority or group is legitimate, he or she is more likely to defer to its directions, and to demonstrate greater levels of compliance and cooperation. As such, motivational postures represent a good indication of the degree of compliance that an individual may feel toward an authority (see also Cherney and Murphy, 2011).

To reduce the number of overlapping items represented within the model, the three elements of the legitimacy latent variable were identified through an exploratory factor analysis (results presented in appendix C in the online supporting information). The factor analysis was conducted on the items included in the survey that represented traditional aspects of legitimacy (i.e., moral obligations to obey), as well as several items surrounding motivational postures (e.g., Braithwaite, Murphy, and Reinhart, 2007) as a result of the overlap of some of these items across the legitimacy and motivational postures constructs. For example, the item “I feel a moral obligation to obey police” reflects aspects previously considered as part of legitimacy (e.g., Tyler and Huo, 2002), as well as previously being included as an item representing a “committed” motivational posture (Braithwaite, Murphy, and Reinhart, 2007). The results revealed the three-factor solution that is presented within the model (see appendix B in the online supporting information for items). Two items (“The law does not protect my interests” and “I sometimes question the laws I am asked to obey”) were not included because of cross-loadings (less than .40) on all factors.

Research has shown that legitimacy influences public support for the police (e.g., Sunshine and Tyler, 2003). Therefore, we expected that both satisfaction and cooperation with the police would be influenced by police legitimacy. In addition, perceptions of how the police treat people also would be likely to impact satisfaction with police conduct but would not impact cooperation directly when legitimacy is in the equation (Murphy and Cherney, 2012; Sunshine and Tyler, 2003).

COOPERATION

Cooperation with the police was the key outcome variable of interest and included four items asking how likely it would be that respondents were willing to cooperate with the police in general. This measure has been used in both Australian and international research (see, for example, Murphy, Hinds, and Fleming [2008] and Sunshine and Tyler [2003], respectively).

SATISFACTION

Satisfaction with the police in general also was measured as an outcome of interest and was measured by one item asking participants how much they agreed that they were satisfied with the way police conduct themselves on the job.

ANALYTIC APPROACH

We used structural equation modeling (SEM) using the AMOS program (Arbuckle and Wothke, 1999) to assess the impact of the experimental manipulation on perceptions of police in terms of procedural justice (related to both the specific encounter with police and the more general beliefs about the procedural fairness of police), police legitimacy, and willingness to cooperate and satisfaction with the police through three models that build on one another. Less than 6 percent of the data set was missing, and data were estimated using the expectation maximum algorithm (Tabachnick and Fidell, 2007).

Model 1 first assessed the central components of the hypothesized model presented in figure 1, assessing the effect of the experimental condition on perceptions of procedural justice specific to the RBT encounter, as well as the subsequent relationship of specific procedural justice perceptions and general perceptions of procedural justness of police. Model 2 then extended this model to examine the impact of these procedural justice perceptions on perceptions of police legitimacy. Finally, model 3 examined the impact of procedural justice and legitimacy on general satisfaction and cooperation with police.

To reduce the number of variables in the model and, thus, reduce problems of multicollinearity when using multiple measures of specific constructs, composite scores were used as indicator variables for several latent variables. Scales were created for fairness and respect (as elements of procedural justice—specific to the RBT context, as well as to the police in general), cooperation and satisfaction with the police, and elements of police legitimacy (obligation to obey, consistency of views, and engagement with police). Scales of fairness and respect were then included in the model as indicators of procedural justice, and the scales of obligation, consistency of views, and engagement with police were included as indicators of police legitimacy. Bivariate correlations among all model variables are presented in table 1.

Bootstrapping procedures (with 1,000 bootstrap samples) were used to obtain bias-corrected confidence intervals for the indirect effects of the encounter on general perceptions of procedural justice, legitimacy, satisfaction, and cooperation. Indirect effects were assessed using bias-corrected

Table 1. Bivariate Correlations between Measured Scales in the Model (N = 2,746)

Variable	1	2	3	4	5	6	7	8	9	10	Cronbach's Alpha
1. Experimental condition		.18***	.12***	.06*	.05*	.01	-.02	.01	.04*	.02	—
<i>Procedural Justice—RBT</i>			.70***	.56***	.53***	.43***	-.32***	.29***	.49***	.32***	.84
2. Fairness—RBT				.47***	.50***	.42***	-.31***	.27***	.47***	.31***	.92
3. Respect—RBT					.77***	.53***	-.39***	.39***	.70***	.39***	.88
<i>Procedural Justice—General</i>						.48***	-.36***	.34***	.66***	.29***	.85
4. Fairness—general								.45***	.51***	.44***	.87
5. Respect—general								-.34***	-.36***	-.36***	.78
<i>Legitimacy</i>									.38***	.28***	.79
6. Obligation to obey										.36***	—
7. Negative orientation											.88
8. Consistent views											
9. Satisfaction											
10. Cooperation											
Mean	-.20	3.88	4.34	3.55	3.51	4.44	2.03	3.96	3.82	4.50	
Standard deviation	.98	.83	.73	.83	.85	.57	.72	.70	.92	.61	

*p < .05; ***p < .001.

confidence intervals (95 percent) as recommended by MacKinnon, Lockwood, and Williams (2004). The fit of the model was evaluated against Pearson χ^2 goodness-of-fit, adjusted goodness-of-fit (AGFI), the comparative fit index (CFI), the root mean-square error of approximation (RMSEA), and the standardized root mean-square residual (SRMR). A small, nonsignificant χ^2 value indicates optimal fit, and values higher than .95 for the CFI and AGFI indicate that the tested model provides an adequate fit to the data, as does RMSEA and SRMR values of less than .05 (Hu and Bentler, 1999). The Akaike information criterion (AIC) is a relative goodness-of-fit measure used for model selection. The model with a lower AIC value is the preferred model (Byrne, 2010; Hu and Bentler, 1999).

FINDINGS

From the outset, we sought to test how the experimental manipulation (procedural justice encounter versus business-as-usual) shaped citizen views of the encounter and then how these views influenced more general views of police (model 1—see table 2). We also sought to test how generalized views of police might drive 1) citizen perceptions of police legitimacy (model 2—see table 2) and 2) the relationships between these general views of procedural justice and legitimacy with cooperation and satisfaction with police in general (model 3). Finally, figure 2 presents the coefficients attached to the analysis (model 3) of our full-theorized model developed from the extant literature.

Our modeling follows the causal path proposed in figure 1. Overall, our first component of the hypothesized model had adequate fit (see table 2 for coefficients). Although the sensitive χ^2 value was statistically significant, $\chi^2(4, N = 2,746) = 70.03, p < .001$, indicating that the model produced a variance-covariance matrix that was different from the original variance-covariance matrix, this is likely a result of the large sample size. The other indices indicated adequate fit of the model: CFI = .99, AGFI = .96, RMSEA = .08, and SRMR = .02, AIC = 92.03.

Beyond the impact of the experimental manipulation on specific perceptions of procedural justice of the encounter, these specific perceptions were predicted to impact general perceptions of procedural justice of the police. The results of model 1 indicated this was indeed the case. The model revealed that perceptions of the fairness/neutrality and dignity and respect of the police officer conducting the RBT loaded well on the procedural justice—RBT latent variable (.89 and .78, respectively), and perceptions of fairness/neutrality and dignity and respect of police in general loaded well on the procedural justice—general latent variable (.88 and .87, respectively).

Table 2. Results of Path Models Testing the Relationships between Specific and General Procedural Justice (Model 1), and Police Legitimacy (Model 2) as a Result of the Experimental Manipulation

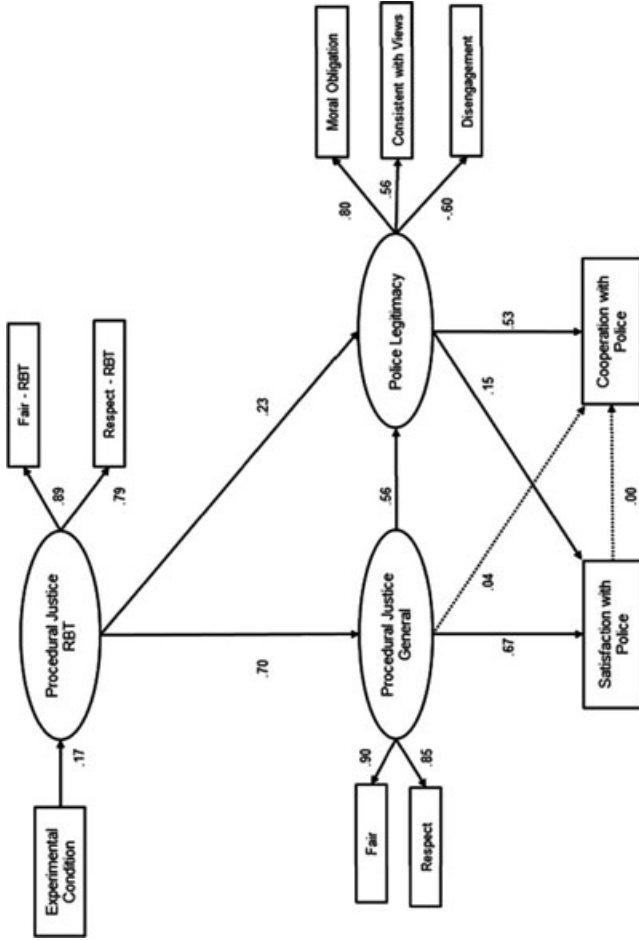
Predictor	Criterion	Model 1		Model 2	
		Standardized Coefficient	(Unstd. Error)	Standardized Coefficient	(Unstd. Error)
Experimental condition			—		—
	Procedural justice—RBT ^a	.18	.53	.18	.52
Procedural justice—RBT ^a	Fair—RBT	.89	.14	.89	.14
	Respect—RBT	.78	.21	.79	.20
	Procedural justice—general ^a	.69	.28	.69	.29
	Legitimacy ^a	—	—	.22	.09
Procedural justice—general ^a	Fair—general	.88	.15	.90	.13
	Respect—general	.87	.18	.85	.20
	Legitimacy ^a	—	—	.57	.09
Legitimacy ^a	Obligation to obey	—	—	.80	.12
	Negative orientation	—	—	-.60	.33
	Consistent views	—	—	.56	.34

NOTES: All coefficients are significant at $p < .001$. N for both models = 2,746.
 *Indicates latent variables.

The experimental manipulation of the RBT encounter was found to impact significantly perceptions of procedural justice specific to the RBT encounter (consisting of perceptions of police fairness, neutrality, dignity, and respect), $\beta = .18, p < .001$. Citizens in the experimental condition reported higher perceptions of procedural justice in the specific RBT encounter than did citizens receiving the standard RBT procedure. This finding is consistent with Mazerolle et al.’s (2012) previous findings of how the experimental manipulation influenced specific views of police. Yet what is critical to this article is that we find, in the tested model, that perceptions of procedural justice in the specific context also impacted more general beliefs about how procedurally just the police are, $\beta = .69, p < .001$; the more procedurally just the RBT encounter was perceived to be, the more procedurally just the police in general were observed to be.

Model 2 extended the effects of procedural justice onto perceptions of police legitimacy. The model also had good fit: $\chi^2(17, N = 2,746) = 116.28, p < .001$; CFI = .99, AGFI = .98, RMSEA = .05, and SRMR = .02,

Figure 2. Path Model (Model 3) of the Relationships between Specific and General Procedural Justice, Legitimacy, and Satisfaction and Cooperation with the Police, as a Result of the Experimental Manipulation



NOTES: To simplify the presentation, error terms are not shown. Ellipses represent latent variables with indicators within the model. Rectangles represent scales entered directly into the model. Standardized coefficients are shown. All coefficients represented by bold lines are significant at $p < .001$. Coefficients represented with broken lines have $p > .356$.

AIC = 154.28. The effects of the variables (both latent and measured) that had previously been included in model 1 changed very little. The indicators of police legitimacy, moral obligations to obey, consistency of views, and engagement with police in general loaded well on the police legitimacy latent variable (.80, .56, and $-.60$, respectively).

General perceptions of procedural justice were related to perceptions of police legitimacy, $\beta = .57$, $p < .001$, indicating that improving perceptions of procedural justice can indeed increase perceived police legitimacy. Although originally we predicted that the effect of procedural justice specific to the encounter would only impact police legitimacy indirectly through general perceptions of police procedural justice, the direct path between specific procedural justice and perceptions of legitimacy was significant ($\beta = .22$, $p < .001$). Testing the model with the path included from specific procedural justice to legitimacy ($\chi^2(17) = 116.28$), compared with the nested model without this path ($\chi^2(18) = 167.57$), revealed a significant difference between the two models, $\Delta\chi^2(1) = 51.29$, $p < .001$, indicating that the model including this path explained the data better (Yuan and Bentler, 2004). However, the indirect effect of specific perceptions of procedural justice on police legitimacy also was still significant (indirect effect [IE] lower 95 percent confidence interval [CI] = .35, upper 95 percent CI = .45, $p < .002$).

Model 3 then built on models 1 and 2 by including the key outcomes of interest: satisfaction and cooperation. That is, in model 3, we expected that general perceptions of procedural justice and legitimacy of the police would influence citizen satisfaction and cooperation with the police both directly and indirectly. We note that by including paths from general perceptions of procedural justice to the outcomes of satisfaction and cooperation (particularly satisfaction), our models fit the data well. Theoretically, this direct path is well justified in the literature where general perceptions of procedural justice have been previously linked to satisfaction with police (see Murphy, Hinds, and Fleming, 2008; Sunshine and Tyler, 2003). We note, however, that the relationship between generalized views of procedural justice and cooperation is typically less robust than the relationship between legitimacy and cooperation (see Murphy and Cherney, 2011). Figure 2 shows the main path of the full extended model (see table 3 for a decomposition of the effects).

Overall, figure 2 shows that our hypothesized model fit the data well. Although the sensitive χ^2 value was statistically significant, $\chi^2(29, N = 2,746) = 153.35$, $p < .001$, indicating that the model produced a variance-covariance matrix that was different from the original variance-covariance matrix, this is likely a result of the large sample size. The other indices indicated good fit of the model: CFI = .99, AGFI = .98, RMSEA = .04, and SRMR = .02, AIC = 205.35.

Table 3. Decomposition of Causal Effects for Path Model 3 (N = 2,746)

Predictor	Criterion	Unstandardized			Standardized		
		Error Variance	Direct Effect	Standard Error	Direct Effect	Indirect Effect	Standardized Indirect Effect
Experimental condition →	Procedural justice—RBT	.51	.13**	.02	.17**	—	—
	Procedural justice—general	.27	—	—	—	.09**	.12**
	Legitimacy	.09	—	—	—	.05**	.11**
	Satisfaction	.32	—	—	—	.09**	.10**
Procedural justice—RBT →	Cooperation	.26	—	—	—	.04***	.06***
	Procedural justice—general	—	.71**	.03	.70**	—	—
	Legitimacy	—	.15**	.02	.23**	.25**	.39***
	Satisfaction	—	—	—	—	.71**	.56***
Procedural justice—general →	Cooperation	—	—	—	—	.30**	.36***
	Legitimacy	—	.35**	.02	.56**	—	—
	Satisfaction	—	.83***	.04	.67***	.10**	.08**
	Cooperation	—	.03	.04	.04	.24**	.29**
Legitimacy →	Satisfaction	—	.30**	.06	.15**	—	—
	Cooperation	—	.70**	.06	.53**	-.001	-.001

NOTES: Two-tailed significance levels based on bias-correct bootstrapped estimates.

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

The latent construct of perceptions of legitimacy impacted satisfaction with the police, $\beta = .15, p < .001$, and desire to cooperate with the police, $\beta = .53, p < .001$. The more legitimate the police were perceived to be, the more likely people were willing to cooperate with the police. General perceptions of the procedural justness of the police also were related to satisfaction, $\beta = .67, p < .001$, but not cooperation, $\beta = .04, p = .313$, such that higher perceptions of general procedural justice were related to higher satisfaction levels but did not impact willingness to cooperate with the police.

Using bias-corrected bootstrapping procedures (with 1,000 resamples), the indirect effects of the RBT encounter (i.e., the experimental condition) on general perceptions of procedural justice, legitimacy, satisfaction, and cooperation also were assessed (see table 3). All indirect effects were found to be significant ($ps < .002$). Through perceptions of the specific RBT experience, the experimental condition was related to increases in general perceptions of procedural justice (standardized IE lower 95 percent CI = .09, upper 95 percent CI = .15), legitimacy (IE lower 95 percent CI = .08, upper 95 percent CI = .13), satisfaction (IE lower 95 percent CI = .07, upper 95 percent CI = .12), and cooperation (IE lower 95 percent CI = .05, upper 95 percent CI = .08).

Overall, our analysis suggests that model 1 seems to be the best fitting model (i.e., AIC = 92.03 for model 1 compared with 153.35 for model 3). We note, however, that very little change in any of the coefficients is observed within both models (see table 2 and figure 2—no coefficient changed more than .02 between the models). We propose, however, that the extended model (model 3) still provides good fit to the data and contains variables of theoretical importance for understanding the impact of procedurally just encounters on specific and generalized views of police, perceptions of police legitimacy, and the key outcomes of satisfaction and cooperation.⁴

DISCUSSION AND CONCLUSIONS

The central goal of our article was to examine, under randomized field trial conditions, whether the process-based model of legitimacy (Tyler,

4. Additionally, we did fit several different models to assess the impact of the experimental manipulation on specific and general perceptions of procedural justice on the outcomes related to legitimacy, satisfaction, and cooperation. Importantly, when we added more complexity and paths to the theoretical model presented and tested in this article (model 3), the addition of these extra paths (or changing the direction of the paths) did not change the substantive results. That is, we found consistently that the experimental manipulation influenced both specific and general views and that the experimental condition more strongly influenced specific views than generalized views and that alternative paths did not alter this finding.

2003) leads to a direct and measureable relationship between how police treat people and how these encounters shape not only what people think about the police they engaged with during the encounter (see also Engel, 2005; Gau and Brunson, 2009; Murphy, Hinds, and Fleming, 2008; Murphy, Tyler, and Curtis, 2009) but also how people think more generally about police. That is, we sought to understand the relationship between citizen views of police specific to the encounter and how these views influence generalized perceptions of police legitimacy. This link between assessments of police pertaining to a specific encounter and generalized perceptions of police has not been well understood in the extant literature (see Tyler and Fagan, 2008; Tyler and Huo, 2002) and has never before been tested under field trial conditions. Thus, our article seeks to advance our understanding of police legitimacy in two important ways: First, it uses, for the first time, an experimental manipulation to understand more completely the impact, pathways, and processes of procedural justice and perceptions of legitimacy. Second, we focus on how the experimental intervention shapes specific views of police and the pathways that then influence more generalized perceptions of police.

Previous research has relied on survey, observational, and secondary administrative data to understand these relationships (for an exception, see Schuck and Rosenbaum, 2011). Our article, in contrast, uses field experimental methods to operationalize the four key ingredients of procedural justice and examine how two contrasting police–citizen encounters shape specific as well as general perceptions of police. We created a contrast between two types of routine police traffic stops of citizens during random breath testing operations: In the experimental condition, we carefully operationalized the key ingredients of procedural justice while the control condition was executed as the business-as-usual approach to testing drivers for driving under the influence of alcohol. We sought to understand more completely the impact of these two different encounters on citizen perceptions of the police specific to the encounter and how these different encounters then shaped more generalized perceptions of police legitimacy.

Drawing from our posttreatment survey of drivers, we created several theoretically and empirically valid measures well known in the legitimacy literature. In our article, procedural justice was measured in two separate ways: through perceptions of the fairness, neutrality, and respectful treatment that the officer demonstrated within the police stop, as well as through the participants' views of the police in general on these same measures. Legitimacy was operationalized from the results of our factor analysis to include elements of motivational postures, in addition to the traditional measures of obligation and willingness to obey the authority, strengthening our understanding of the reasons underpinning people's assessments

of the police as legitimate. Our model then tested the impact of the experimental manipulation on citizen views about the specific police officer during the RBT encounter and whether perceptions of the specific officer flowed onto perceptions of police in general. We then tested how these specific and general views shaped perceptions of legitimacy, cooperation, and satisfaction.

The key finding of our analysis shows that perceptions of procedural justice in the specific context not only influence specific attitudes about police, but also more general beliefs about the police: Citizens who perceived the RBT traffic encounter to be procedurally just had more positive specific as well as generalized views of police (model 1). Model 1 was the simplest model presented and fitted the data better than the more complex models, which is interesting in itself: It shows that specific views of police, derived from a very short encounter with police, can shape generalized views of police.

Our subsequent models (models 2 and 3), built on model 1, demonstrated that perceptions of procedural justice also were related to perceptions of police legitimacy. Indeed, the indirect effects of the experimental RBT encounter on general perceptions of procedural justice, legitimacy, satisfaction, and cooperation were found to be significant. Through perceptions of the specific RBT experience, the experimental encounter was related to increases in general perceptions of procedural justice, legitimacy, satisfaction, and cooperation. Overall, our findings show that the more “procedurally just” the police strive to make even a short encounter, the more likely citizens are to perceive the police as legitimate. Put simply: A little bit of being nice goes a long way.

We also found that although the effect of encounter-specific perceptions on perceptions of legitimacy was considerably smaller than the impact of general perceptions, this effect was significant. It seems that perceptions of procedural justice could be expected to have a short-term effect on legitimacy, although this is likely to dissipate over time, whereas the effect of the specific encounter on general perceptions flowing through to legitimacy could have a long-term effect. Clearly, we do not have follow-up longitudinal data at this point to support this idea, but it seems a plausible explanation.

The inclusion of paths from general perceptions of procedural justice to legitimacy-related outcomes (satisfaction and cooperation) showed that satisfaction was directly related to perceptions of procedural justice, whereas cooperation was only indirectly related through legitimacy. This finding suggests that, at least in the Australian context, performance-based, instrumental factors influence citizen satisfaction with police (see also Hinds and Murphy, 2007). However, satisfaction with the way police do their job was not found to impact the willingness to cooperate, suggesting that the

legitimacy of the police is the guiding factor for willingness to cooperate. The importance of legitimacy both of the police and of the law itself is reflective of the findings from Murphy and Cherney (2012), who found that some minority groups will only cooperate with institutions (like the police) if they agree with the legitimacy of the laws enforced.

Our study challenges Skogan's (2006) finding that police have little to gain from positive encounters with the public and a lot to lose from negative encounters. In our study, we find that the police have a lot to gain from even very short, positive encounters. Not only did citizens feel well treated by the police during the experimental encounter, but these positive encounters also engendered more positive feelings about the police in general. That is, in our study, citizens who received the experimental treatment had higher ratings of the procedural justice of the specific officer. These ratings of the specific officer also translated into enhanced perceptions of the procedural justness of police in general and higher reported perceptions of police legitimacy and satisfaction with the police. Citizens who received the experimental encounter also indicated that they would be more likely to cooperate with the police. Given that all indirect paths from the experimental condition were significant, this result indicates that this single encounter had far-reaching effects on the way citizens perceive and act toward the police. This study shows that police have a lot to gain from using procedurally just approaches in even very short, police-initiated traffic encounters with citizens.

Although our study provides some important insights into the immediate and potentially long-term benefits of police engaging citizens in procedurally just ways, our field trial only assesses the effects of police-citizen encounters in one type of forum: in our case, traffic stops where the police conducted breath tests to determine whether people were driving under the influence of alcohol. Clearly, the wide range of police-citizen encounters is likely to influence citizen perceptions in a variety of ways. Our study is thus limited in that it demonstrates only the outcomes of procedurally just encounters in just the one type of setting. Other types of settings might generate different results. We suggest, therefore, a series of replication studies of this trial, using similarly operationalized scripts undertaken in different field settings. For example, we would be very interested to observe whether the same results could be found in police responses to domestic violence calls for service or during face-to-face street encounters in entertainment districts or as part of any problem-oriented policing intervention. We recognize, of course, the challenges of conducting replication studies in settings that are less controlled than the RBT traffic operations used in our field trial.

We also recognize the limitations of how we operationalized the key constructs of procedural justice: dignity and respect, voice, trustworthy

motives, and neutrality. Each of these constructs was turned into a script (with prompts) for the police to use during the experimental encounters. We acknowledge that because of the nature of RBTs—it is compulsory by law in Australia that drivers do the test—citizen “voice” and participation in the decision-making process was not possible for the RBT encounter. Nonetheless, the script executed by the officers did indeed give drivers a chance to have a voice by asking them for their thoughts on what were the priority problems for the community. Clearly, future research in different types of encounters could operationalize the constructs of procedural justice in more precise ways.

Despite the shortcomings of the QCET trial reported in this article, the complete absence of research that tests, under field trial conditions, the impact of a procedurally just encounter on citizens’ perceptions of legitimacy and cooperativeness with the police in general is somewhat surprising. Procedural justice and legitimacy of the police have been areas of great interest to both police agencies and researchers during the past 30 years. Our results clearly show, under field trial conditions, that even a single, short, positive encounter with police directly shapes citizen views about the actual encounter as well as their general orientations toward the police. As such, we demonstrate that the police have much to gain from acting fairly during even very short encounters with citizens.

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SUPPORTING INFORMATION

Additional Supporting Information may be found in the online version of this article at the publisher's web site:

Appendix A. Cue Card Provided to Police Officers in the Experimental Condition

Appendix B. Survey Measures

Appendix C. Results of Exploratory Factor Analysis of Legitimacy Components

