

Procedural Justice and Legal Compliance

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Daniel S. Nagin, Cody W. Telep

Abstract

This article reviews the evidence on whether procedurally just treatment of citizens by agents of the criminal justice system, usually the police, has the effect of increasing the citizen's compliance with the law. In brief we find that perceptions-based studies consistently show that citizen perceptions of procedurally just treatment are closely tied to perceptions of police legitimacy, and that with only a few exceptions perceptions of legitimacy are strongly associated with legal compliance. However, what has not been established is whether these associations reflect a causal connection whereby changes in policies that are effective in changing actual procedurally just treatment of citizens by police and others lead to changes in legal compliance and perceived legitimacy. Three priority areas for future research are identified: (1) devising and testing a theory of the cumulative effects of experience and community and situational context on perceptions of procedurally just treatment and perceptions of legitimacy, (2) filling out and testing a theory of the circumstances where improved perceptions of legitimacy translate into greater legal compliance, and (3) designing and evaluating policies and training protocols that are effective in translating the constituent components of procedurally just treatment into improved legal compliance.

Keywords: Procedural justice, legitimacy, legal compliance, police

1. Introduction

This essay is written in the aftermath of controversies about police-citizen interactions triggered by high visibility video recordings of police use of lethal force against Black men in multiple jurisdictions across the United States. These incidents have not only rekindled longstanding controversy over police mistreatment of disadvantaged minorities, particularly Blacks, but also have reopened the longstanding question of how police in a democratic society should interact with the public that they are sworn to protect.

It is in this contemporary context that we review the evidence on the relationship between perceptions of procedurally just treatment of citizens by agents of the criminal justice system, usually the police, and the citizenry's compliance with the law. For more than a quarter of a century Tom Tyler and colleagues (Tyler, 1988, 1990, 2003; 2006; Tyler & Huo, 2002) have argued that perceptions of procedurally just treatment of citizens by agents of the criminal justice system is foundational to public perception of the system's legitimacy which in turn forms the foundation for legal compliance. The essence of Tyler's (1990: 4) theory is: "[I]f [citizens] regard legal authorities as more legitimate, they are less likely to break any laws, for they believe that they ought to follow them, regardless of potential for punishment."

As we describe, this theory has been very influential in guiding policing research and in so doing has spawned a large body of evidence showing that perceptions of fair treatment by the police are closely associated to perceptions of their legitimacy. Perceptions of legitimacy in turn are generally associated with legal compliance. Police scholars routinely describe the impact of procedurally just treatment on compliance with the law as settled (cf. Barkworth & Murphy, 2015; Bottoms & Tankebe, 2012; Tyler, 2011; Tyler et al., 2015; Mazerolle et al. 2012, 2013b; Higginson & Mazerolle, 2014).

This consensus has not gone unnoticed in policy circles. It shaped many of the recommendation of the President's Task Force on 21st Century Policing (2015). At its outset, the reports states: "People are more likely to obey the law when they believe those who are enforcing it have the right—the legitimate authority—to tell them what to do" (p. 5). The report goes onto to state: "Research demonstrates that [the] principles [of procedural justice] lead to relationships in which the community trusts that officers are honest, unbiased,

benevolent, and lawful. The community therefore feels obligated to follow the law....” (emphasis added, p. 10). Similarly, the website of the National Initiative for Building Community Trust & Justice, an initiative funded by the US Department of Justice states: “Research shows that when communities view police authority as legitimate, they are more likely to cooperate with police and obey the law.”

This review takes as given that as a matter of principle, citizens are deserving of fair treatment by the police and other authority figures within the criminal justice system (CJS) (Lum and Nagin, 2016; National Research Council [NRC], 2004) irrespective of whether that treatment fosters compliance with the law. As the NRC (2004: 291) states: “...police fairness is an end in itself. In a democracy where citizens are policed by consent, the exercise of state power must be seen as an expression of the community and not an action against it.” Our focus instead is on the empirical evidence on the hypothesized linkage between procedurally just treatment and legal compliance.

In brief our review brings us to the same conclusion that has been reached by many prior reviews of the evidence on procedural justice and legal compliance (e.g., Donner et al., 2015; Jackson et al., 2015; Tyler, 2004; Tyler et al., 2015)—studies consistently find that perceptions of procedurally just treatment are closely tied to perceptions of police legitimacy, and that with only a few exceptions, perceptions of legitimacy are strongly associated with legal compliance. Where we depart from the conclusion of prior reviews is on the question of whether it has been credibly established that these associations are reflective of causal connections. Some prior reviews include cautions about causal interpretation (e.g., Cook, 2015; MacCoun, 2005). Our conclusion is more emphatic in this regard and much of the discussion that follows is committed to elaborating on why a credible case for causality has not been made.

To be clear we are not concluding the predictions of the theory are wrong or have been disproven but only that they have not been credibly established. The essence of our argument stems from the observation that perceptions of procedurally just treatment and legitimacy cannot be directly manipulated. What instead can potentially be manipulated is how agents of the criminal justice system **actually** interact with the public. A demonstration of an exogenous manipulation of actual behavior affecting perceptions of procedurally just treatment and perceptions of legitimacy and ultimately legal compliance is necessary for establishing causality.

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Without such a demonstration the above-stipulated associations may be reflective of reverse causality or third common causes. As we describe, evidence of exogenous manipulations of affecting citizen perceptions and behavior is in short supply.

Our conclusion about the dearth of evidence of a causal linkage of procedurally just treatment and compliance with the law may surprise some because at one level the concept underlying procedural justice is self-evident. Hostile and disrespectful behavior on the part of authority figures is likely to provoke an angry response or only grudging compliance with their orders. Indeed third-party observation studies of police-citizen interactions consistently reach this conclusion. The theory's predictions, however, go far beyond complying with an immediate order of a representative of the criminal justice system to predicting a causal chain whereby procedurally just treatment leads to enhanced perceptions of legitimacy which in turn leads to compliance not only with immediate orders of legal authorities, but also with the criminal law more generally as it pertains to the protection of person and property. Perceptions of procedurally just treatment and of legitimacy, however, are reflective of an accumulation of a lifetime of cultural, community, and familial influences not just one or more interactions with the police or other representatives of the CJS. Particularly in the most disadvantaged communities where crime often concentrates, separating out the impact of procedurally just treatment on legitimacy perceptions and legal compliance from other influences such as extreme poverty, racial isolation, and various forms of social dysfunction is a daunting challenge that in our judgment no study has yet even come close to achieving.

This conclusion also has important implications for policy. Our review leads us to the conclusion that there is no demonstrated policy, for example a specific type of training, that has been shown to be effective in affecting citizen perceptions and behavior. Instead we find that research that attempts to encourage procedurally just treatment by police either through training or experimental manipulation finds no consistent relationship between the treatment and citizen perceptions of legitimacy. Even more importantly, no study provides a direct test of the link between procedurally just treatment, manipulated either by policy or experiment, and legal compliance. Thus, police departments that are presently adopting programs aimed at improving the procedurally just treatment of citizens by police officers should recognize that no training program has yet been demonstrated

to be effective in altering citizen perceptions and behavior. In this regard our conclusions are not novel.

Skogan et al. (2015:321) similarly observe: “virtually no research of any flavor has been done on procedural justice training, despite this being a necessary precursor to turning the theory into practice.”

2. The Theory of Procedural Justice and the Scope of the Review

While in social science research the term procedural justice has become synonymous with the work of Tyler and colleagues, Tyler’s (1990) conception of procedural justice builds upon prior foundational work of other scholars, particularly Thibaut and Walker (1975) and Leventhal (1980). Tyler’s precise characterization of what constitutes procedural justice has evolved over time, but a constant is that it is a perceptual phenomenon. For our review we use the definition in Tyler (2011:73) where he states that procedural justice reflects an individual’s “evaluation of the fairness of decision making (neutrality, transparency, factuality, allowing opportunities for input) and of interpersonal treatment (treatment with respect or dignity, respect for rights).” Mazerolle et al. (2014:11) provide a useful variant of Tyler’s (2004, 2011) definition that we also rely upon: “Procedural justice in action can be broken down into four key elements or principles. These are: dignity and respect, trustworthy motives, neutrality, and voice.”

Our focus on procedurally just treatment and legal compliance limits the scope of our review in important ways. We do not take on the larger literature on why people comply with the directives of authority figures outside the legal system. Procedurally just behavior by legal authorities, particularly the police, may also have valuable spillovers beyond encouraging compliance related to cooperation with police efforts to solve and prevent crime. Our review does not assess the evidence on such spillover effects.

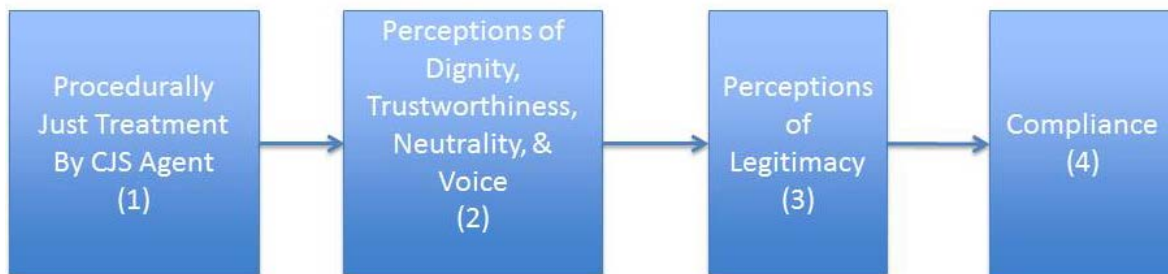
Figure 1 is a schematic representation of Tyler and colleagues’ theory of procedural justice as we understand it. The causal chain begins with agents of the CJS acting in a trustworthy and neutral manner, their treating citizens with dignity, and their providing citizens the opportunity to explain their actions (voice). The other three stages in the causal sequence pertain to the citizens who were the subject of the agent’s attention. The theory of procedural justice assumes that if citizens are treated in procedurally just ways, citizens will perceive that they have been treated fairly. Such perceptions in turn increase the citizen’s perceptions of the legitimacy of CJS agents, which in turn increases compliance with the law. We also rely on Tyler’s (1990) conception of

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legitimacy, which has typically been measured through questions about obligation to obey the law (or directives from authorities) and trust in the law and legal authorities even as we are cognizant of the ongoing debate in the literature on defining and measuring legitimacy (e.g., Gau, 2011; Tankebe, 2013; Tyler & Jackson, 2013).

We also recognize that some might take issue with the specific form of our representation, for example by arguing that there may a direct linkage between procedurally just treatment and legal compliance unmediated by legitimacy. The purpose of our review, however, is not to arbitrate competing conceptions of the exact mechanism by which perceptions of fair treatment may ultimately influence legal compliance. Instead it is to elaborate upon the implications of our initial observation that perceptions cannot be directly manipulated by experiment or policy. Figure 1 is a convenient vehicle for organizing our discussion about this observation, even as in our judgment it is a fair representation, if perhaps overly simplified, of theoretical arguments advanced in the procedural justice literature.

Figure 1: A Schematic of Representation of the Theory of Procedural Justice



Two features of the research and theory on procedural justice guide our evaluation of the research evidence. One concerns the paramount importance of perceptions. The theory of procedural justice is a theory of how perceptions of fair treatment by legal authorities affect compliance. Accordingly, one central focus of our evaluation is the origins and impact of those perceptions on behavior. The second concerns policy. The theory of

procedural justice has manifest implications for public policy. Thus, we focus on the state of knowledge about how policy can affect perceptions of just treatment by legal authorities.

We organize the review around four questions:

- 1) What is the relationship between perceptions of procedurally just treatment and perceptions of legitimacy (Box 2 → 3), and are perceptions of procedurally just treatment related to actual treatment in this regard (Box 1 → 2)?
- 2) What is the relationship between perceptions of legitimacy and legal compliance (Box 3 → 4), and is this relationship credibly interpreted as causal?
- 3) What is the relationship of third party assessments of procedurally just treatment and legal compliance (Box 2 External → 4)?
- 4) Are procedural justice enhancing policies effective in (i) altering procedurally just treatment, (ii) improving citizen perceptions of legitimacy, and (iii) ultimately fostering legal compliance?

3. Perceptions of Procedurally Just Treatment and Legitimacy

In this section we summarize the large body of research on the relationship of the four dimensions of perceptions of procedurally just treatment with perceptions of legitimacy. This research corresponds to the second arrow in Figure 1. We also discuss the far smaller body of research on the association of actual treatment with perceptions thereof, which corresponds to the first arrow in Figure 1.

The studies of the second arrow in Figure 1 are based on surveys of citizen perceptions of the relevant qualities. Most work of this type use overall assessments of police fairness to predict legitimacy. Tyler, Schulhofer, and Huq (2010), for example, examined the association of perceived procedural justice among Muslim-Americans with their perceptions of police legitimacy. A scale-based measure of perceived procedural justice in encounters was strongly associated with perceived legitimacy, explaining 23 percent of the variance in legitimacy perceptions. Wolfe et al. (2016) examined the extent to which the perceived procedural justice-perceived legitimacy relationship varied based on individual and situational factors. A procedural justice scale combining the four indicators we have focused on was significantly associated with perceived legitimacy, as measured both by trust in the police and obligation to obey the police. Nix et al. (2015) focused in particular on

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predictors of trust in police using the same data. They again found strong evidence that perceived procedural justice is linked to trust, even with perceptions of collective efficacy included in the regression model.

These findings from the U.S. have generally been replicated in international contexts with both juvenile and adult samples. Hinds (2007), for example, found in an Australia-based study that global procedural justice, measured based on the perceived fairness of police treatment, was the strongest predictor of legitimacy perceptions (see Hinds & Murphy, 2007). Findings were similar in a sample of students in Jamaica (Reisig & Lloyd, 2009).

In a study in Israel Jonathan-Zamir and Weisburd (2013) found evidence for the importance of perceived procedural justice in predicting trust in police, even in a context where police performance would be expected to be more important. They focused in particular on 405 respondents in a small Israeli city with a large number of security threats. While they found that police performance played a greater role in predicting legitimacy in this city relative to other Israeli cities, perceived procedural justice was still highly influential. Further, the key antecedent for predicting police legitimacy remained procedural justice across all cities surveyed.

Two studies have examined legitimacy perceptions among offender or delinquent populations. Piquero et al. (2005) examined the procedural justice-legitimacy relationship among adjudicated adolescents. Using group-based trajectory analysis to examine legitimacy longitudinally over 18 months, they found evidence that procedural justice scores aligned with legitimacy trajectories. More recently, White, Mulvey, and Dario (2016) found a strong association between global perceptions of procedural justice and perceptions of police legitimacy among an arrestee sample in Arizona.

A small number of studies have examined the link between procedural justice and police legitimacy based on particular police-citizen encounters. Gau (2014) examined both overall perceptions of procedural justice and views of specific police-citizen encounters. Global perceptions of procedural justice predicted trust, which in turn predicted obligation to obey. Specific procedural justice also mattered, but its impact on trust was much smaller than global views.

Braga and colleagues (2014) examined citizen perceptions of video clips of police-encounters. They found that perceptions were strongly influenced by cues about the social context (e.g., whether citizens were told

the jurisdiction had good or poor community relations) and the respondent's prior interactions with police.

Citizens who reported that their most recent actual interaction with police as being low in procedural justice were more likely to view the police as acting wrongly and deserving of punishment when viewing the same video clip as respondents who did not give a low rating to their most recent encounter (see Brandl et al., 1994).

Similar results were found in a survey experiment conducted by Lowrey et al. (2016) with 179 undergraduate students. Students who viewed a video of a hypothetical traffic stop where the officer acted with procedural justice felt more obligated to obey the officer and reported higher levels of trust in the officer relative to a control group that saw a standard traffic stop with no procedural justice elements present. There was only a significant impact on these encounter-specific outcomes and not on more general views about the police.

Maguire et al. (forth.) conducted a larger-scale, three group survey experiment, with 546 students. One group saw a hypothetical traffic stop where the officer acted neutrally (control group), the second where the officer acted with procedural justice, and the third where the officer acted with procedural injustice. Encounter-specific results were consistent with the theory, with students watching the procedural justice clip more likely to report trust in the officer and an obligation to obey, while those watching the procedural injustice clip reporting the opposite (see also Barkworth & Murphy, 2015). The impact of watching the clip on more global views about the police was less consistent., although there was some evidence of significant differences between the procedural justice and injustice conditions.

Studies of citizen perceptions consistently find that indices that combine the four dimensions of procedurally just treatment are positively associated with perceptions of legitimacy. Less well studied are the individual contributions of dignity, trustworthiness, neutrality, and voice to perception of legitimacy. They tend to be fairly highly correlated, and are typically combined to form a single indicator of procedural justice. As Worden and McLean (forth.) note, this likely suggests some combination of officers engaging (or failing to engage) in multiple indicators of procedural justice simultaneously or citizens perceiving (or not perceiving) multiple components of procedural justice at the same time. Thus, it is not possible to draw strong conclusions about their relative importance to perceptions of legitimacy. Limited research that separates quality of

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interpersonal treatment (dignity and trustworthy motives) from quality of decision-making (participation and neutrality) is inconsistent in which is more influential (see Bates et al., 2016; Tyler & Huo, 2002).

Do perceptions of procedurally just treatment accord with independent assessments of actual treatment? This brings us to the first arrow in Figure 1 and the second part of question 1. Research on the relationship of actual behavior to perceptions thereof is limited. Just one recent study (Worden & McLean, 2014) provides an opportunity to compare citizen perceptions of procedural justice to “objective” assessments of police behavior derived from researcher coding of audio/visual footage from stops. Trained observers coded 539 police-citizen interactions based on video from in-car cameras for indicators of officers’ acting in both a procedurally just and unjust (e.g., not considering citizen views, interrupting the citizen, insulting the citizen) fashion.

The correlation of objective and subjective measures of procedural justice was only .16. However, there was a stronger negative correlation between third party assessment of procedural injustice and citizen perceptions of procedural justice, -.31. These findings are in line with Skogan’s (2006) work on asymmetry, which suggests that negative police-citizen interactions are far more influential in damaging citizen views of police than positive interactions are in improving those views (see Li et al., 2016). This is but one study but its conclusion makes clear the potential fragility of the assumption that perceptions of fair treatment are tightly associated with the actual treatment received. This point is central to our conclusions.

Recent experimental work by Mazerolle et al. (2012, 2013a), MacQueen and Bradford (2015), Langley (2014), and Sahin et al. (in press) involves a direct manipulation of officer behavior through a script or protocols to be used during traffic stops or the airport screening process. These studies thus provide an opportunity to compare citizen perceptions to what officers were *supposed* to do in encounters. We describe these studies in greater detail below but across studies no consistent relationship is found between the treatment received, which varied in subtle ways, and subject perceptions of it, a finding consistent with Worden and McLean (2014).

The reason for the generally poor correlation between actual and perceived treatment is uncertain but one possibility is that there is a connection but it is a reflection of an accumulation of a person’s interactions and vicarious interactions (Augustyn, 2016; Rosenbaum et al., 2005). The studies cited above all involve the response to only a single interaction.

4. Perceptions of Legitimacy and Legal Compliance

We turn now to the third arrow in Figure 1. The same survey evidence cited above generally finds that more positive perceptions of legitimacy are associated with reduced self-reported offending. Examples include Fagan and Tyler (2005), Fagan and Piquero (2007), Reisig et al. (2007), Jackson et al. (2012), Papachristos et al. (2012), Tyler and Jackson (2014), and Reisig et al. (2014).

Much of the most prominent work in this area has been completed by Tyler and his colleagues. Tyler's (1990) initial test of the theory used a two-wave panel survey of Chicago residents interviewed one year apart. He found a positive relationship between legitimacy and legal compliance among all respondents, and that the more legitimate residents saw legal authorities, the more likely they were to comply with the law, even when controlling for a variety of sociological (e.g., peer disapproval, personal morality) and background factors (e.g., sex, race, age, income).

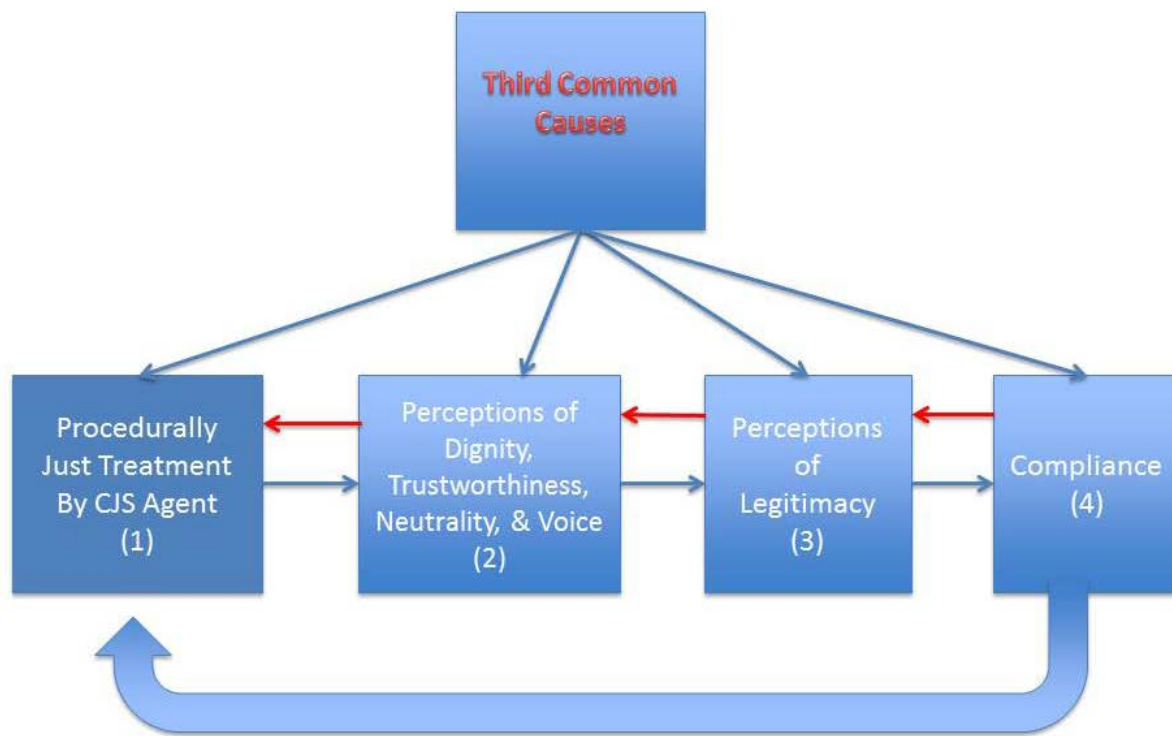
Tyler and Huo (2002) used data from 1,656 residents of Oakland and Los Angeles who had had recent personal experience with the police or a judge. They found that both procedural justice and distributive justice influenced acceptance of decisions by legal authorities, but procedural justice concerns, and in particular trusting the motives of authorities, were more important. Using two surveys of New York City residents, Sunshine and Tyler (2003) found that perceived legitimacy was a key predictor of self-reported offending. They also argued that risk of being caught and distributive justice were less powerful predictors.

Work in this area, however, is not universally supportive of the link between procedural justice, legitimacy, and compliance behavior. Findings from some studies raise questions about the model (Augustyn, 2015; Cavanagh & Cauffman, 2015; Hough et al., 2013; Penner et al., 2014; Slocum et al., 2016) and others studies conclude that there are cross-cultural differences in the applicability of the theory (Bottoms & Tankebe, 2012; Tankebe et al., 2016).

Can the evidence supportive of the procedural justice model credibly be interpreted as reflecting a causal relationship whereby perceptions of legitimacy are influencing legal compliance above and beyond other possible explanations for the positive association of perceived legitimacy and legal compliance? Stated differently can other plausible alternative interpretations of the association be credibly ruled out?

Figure 2 is a schematic depicting two alternative interpretations—third common causes and reverse causality. Concerning the third common cause interpretation, one possibility is that persons with higher “stakes in conformity” (Toby, 1957) or investments in conventional social bonds as defined by Hirschi (1969) not only are more legally compliant but also perceive fairer treatment by and greater legitimacy of the agents responsible for enforcing legal compliance. After all, these enforcement agents are the officially anointed guardians of the social structure that legally compliant citizens are invested in.

Figure 2: A Schematic of the Challenge of Making Causal Inferences About the Theory's Predictions with Observational Data



Still another possible source of third common causes is community context. Given the history of ill treatment of disadvantaged minorities, particularly Blacks, by the police and other agents of the CJS and the high degree of residential segregation by race, community effects undoubtedly shape perceptions of legitimacy and fair treatment of individual citizens within the community, independent of personal experience with the police and other agents of the CJS.

Also shown in Figure 2 are arrows pointing left, not right. These arrows are intended to depict reverse causality whereby compliance increases perceptions of legitimacy, perceptions of legitimacy increase perceptions of fair treatment, which in turn may precipitate improvements in actual fair treatment. One possible explanation for leftward pointing arrows is the concept of neutralization that is central to Sykes and Matza's (1957) theory of delinquency. The left pointing arrows might reflect the rationalization that legal non-compliance is justified because the legal authorities are not legitimate and do not treat citizens fairly. Still another possible source of reverse causality is reflected in the arrow pointing from compliance to actual treatment. Citizen compliance with orders of agents of the CJS may affect their treatment by those agents. At the community level, game theorists might model police-citizen interactions as a two-sided game in which the police and citizens are anticipating the behavior of the other party and responding accordingly. The resulting equilibrium, whether involving cooperative or oppositional behavior on each side, is a reminder of the difficulty of inferring causality in bi-directional interactions even in interactions where one party has more authority than the other.

To varying degrees studies attempt to control for "third common cause" effects. For example, McLean and Wolfe (2016) found support for the importance of procedural justice and a direct association between procedural injustice and increased self-reported offending. This effect, however, became non-significant when they controlled for indicators of techniques of neutralization. Reisig, Wolfe, Holtfreter (2011) found a positive association between perceptions of legitimacy of police and the courts and self-reported offending in a college-aged sample, even when controlling for respondent level of self-control.

For several reasons statistical controls such as these do not create an adequate basis for credibly interpreting the positive association between perceived legitimacy and compliance as causal. Many of these surveys are cross-sectional. It has long been understood that casual inference based on cross-sectional analyses such as these cannot rule out a third common cause or reverse causality (Maguire & Johnson, 2010). A smaller number of studies are based on panel data but regressions relating legal compliance in period t to legitimacy perception in a prior period do not solve the third common cause problem because both can still be affected by the enduring impact of the third common cause. In some circumstances the addition of person and time fixed

affects may resolve the third common cause problem, but no study that we have reviewed included such statistical controls. The addition of lags also does not solve the reverse causality problem because feedback over time creates a dynamic process whereby legitimacy perceptions and legal compliance are mutually affecting each other. The simple addition of lags into the regression model does not solve this problem (Hsiao, 1986). Finally, as noted above, perceptions cannot be directly manipulated which in and of itself poses a fundamental challenge to a causal interpretation of whatever association is measured.

5. Third Party Assessments of Procedurally Just Treatment and Compliance

As already noted, an inherent weakness of the survey studies is that they rely solely on the respondent's perceptions of how they were treated. There is no independent assessment of whether the respondent's treatment (Box 1) was in accord with the principles of procedural justice. Here we summarize the evidence on third party assessments of procedurally just treatment and compliance. While these studies do not assess legitimacy perceptions and thus leave out Box 3 in Figure 1, they still represent partial tests of the larger theory. Indeed, Tyler (2004; Tyler et al., 2015) has cited these and other studies as directly examining a procedural justice-compliance link (see Murphy & Tyler, 2008). .

Mastrofski et al. (1996) examined citizen on-site compliance with police requests in specific encounters in Richmond, Virginia. Third-party observers assessed whether the officer showed respect or disrespect to the citizen. Police disrespect significantly decreased the odds of compliance, but police making a special effort to show respect did not significantly affect compliance, in line with Skogan's (2006) conception of asymmetry. As Mastrofski et al. (1996: 296) conclude, "Our police may be able to do little to enhance their cause but a great deal to hurt it."

McCluskey and colleagues (1999) analyzed encounters in Indianapolis, Indiana and St. Petersburg, Florida. The same dimensions of procedurally just treatment as in Richmond were assessed. Like in Richmond, compliance was less likely when officers showed disrespect. However, unlike in Richmond efforts by officers to show respect significantly increased the odds of compliance.

Dai, Frank, and Sun (2011) analyzed encounters in Cincinnati, Ohio. Quality of interpersonal treatment was measured by indicators of whether police provided assistance, showed disrespect, and used force (see Jonathan-Zamir et al., 2015 for an argument against using force as a procedural justice indicator). Quality of police decision making was measured by whether citizens had a voice in the process and whether citizen attempts to participate were ignored. Only giving citizens a voice significantly reduced the likelihood of noncompliance. Dai and colleagues (2011: 166) conclude that “the effects of procedural justice factors on citizens’ behavior are limited and inconsistent.”

It is difficult to draw strong conclusions from these studies. The results do suggest, not surprisingly, that negative police-citizen interactions provoke negative citizen assessments. Beyond that the results are inconsistent and all focus only on compliance with an officer’s on-scene directive not on longer term compliance with the law and future police orders. Their interpretation is also complicated by deep uncertainties about the parsing of cause from effect. Human interactions are bi-directional (see Dai et al., 2011; Reisig et al., 2004). Just as the citizen’s response to a police officer’s order depends on the manner in which the order is made, the manner in which the police officer makes the order will also depend on the actions and demeanor of the citizen (Reiss, 1971). In making this observation we are cognizant of the power asymmetry in police-citizen interactions. Still, sorting out cause and effect relationship in this context is very difficult.

6. Effectiveness of Procedural Justice Enhancing Policies

6.1 Altering procedurally just treatment

We identified six quasi-experimental or experimental studies of the effectiveness of procedural justice training in fostering improvements in procedurally just treatment. Two involved the Chicago Police Department. Rosenbaum and Lawrence (2013) report the findings of a randomized experiment testing the effectiveness of the Quality Interaction Program (QIP). QIP involved about 20 hours of recruit training that integrated procedural justice protocols into training modules on cultural awareness, interpersonal communication skills, and good decision-making skills. Recruits were randomly assigned to receive the QIP infused training or the standard academy curriculum. Officers completed pre-post surveys, and a subsample were videotaped in role-playing scenarios.

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Survey results indicated no significant impact of the training on officer respect towards civilians or on perceptions of the importance of quality of treatment in traffic stops. However, officer behavior in the videotaped scenarios suggested a significant treatment effect, whereby officers receiving the additional training were more likely to demonstrate respectful and supportive behavior. However, the post-training sample of videotaped officers was very small ($n=34$).

Skogan, Van Craen, and Hennessy (2015) examined the effects of the Chicago Police Department's day-long training program on procedural justice. The program, distinct from the QIP but based on similar principles included five modules that focused on legitimacy, procedural justice, cynicism, and race. More than 9,000 officers received the in-service training. A quasi-experimental evaluation compared survey responses from officers who completed a survey prior to training to those who completed an identical survey post-training. Officers in the post-training group had significantly higher scores on various indicators of procedurally just treatment. A second less rigorous analysis found evidence that these effects were sustained longer term.

An evaluation of the short-term impacts of a similar day-long procedural justice training administered in the Louisville, Kentucky Metro Police Department also suggested positive changes in officer attitudes (Schaefer & Hughes, 2016). Pre-post surveys administered to 938 officers showed mean increases in officer support for all four components of procedural justice following completion of the training.

Robertson and colleagues (2014) examined the effectiveness of a program similar to Chicago's QIP in Scotland. The study examined a non-randomized group of 95 police recruits who received nine sessions of procedural justice training over 12 weeks and 64 control group officers. The survey findings were mixed with treatment group officers reporting improved scores in communication skills, but a decreased score on the item "people should be treated with respect, regardless of their attitude" post-training. In scenarios, officers receiving treatment were more likely to score "good" than the control group officers in terms of their use of procedural justice in practice, but the differences were not statistically significant.

None of these studies examined actual officer behavior in the field. Two recent randomized trials examine behavior in the field. One took place in Manchester, UK where Wheller and colleagues (2013) randomly allocated officers to one of three treatment groups or a comparison group. Small sample sizes made it

difficult to differentiate between treatments. Like with the Chicago evaluations, after training, officer attitudes were significantly different between the treatment groups and the control group on some indicators of interest (e.g., building empathy and rapport, fair decision making), but not others (e.g., perceived value of procedural justice and perceived level of public cooperation). Scenario coding indicated officers in the treatment groups had higher quality of contact scale scores. This study went on to evaluate behavior in the field but only towards victims not suspected perpetrators. There were some positive impacts of the training on victim perceptions, although these effects were not consistent across measures of procedurally fair treatment or large in magnitude.

Owens et al. (2016) examined the impact of randomly assigned procedural justice infused training on officer behavior. Officers assigned the treatment, which involved an interactive meeting with their supervisor focused on incorporating procedural justice into contacts with citizens, were less likely to resolve incidents with an arrest and were less likely to be involved in incidents where force was used. They were not, however, less likely to engage in contacts with citizens (i.e., there was no evidence of de-policing).

The bottom line is that knowledge about the effectiveness of procedural justice training is limited and findings are not consistent across studies. Also, except for a limited attempts by Wheller et al. (2013) and Owens et al. (2016) none of the studies have assessed the extent to which training impacts officer behavior in the field. No training evaluations have yet incorporated the technique of systematic social observation used in the third party observer studies. While the findings of Wheller et al. and Owens et al. studies show encouraging signs of effectiveness, there is no strong evidence on the appropriate content, dosage, or method of delivery for procedural justice training. Unless policies can be devised that reliably change behavior of police officers and other agents of the criminal justice system the potential for procedurally just treatment to affect citizen confidence in the criminal justice system and compliance with the law as hypothesized will be out of reach.

6.2 Procedural Justice Policy and Perceptions of Legitimacy

Four randomized field experiments involving traffic stops and airport screening test the linkage between procedural justice policy and perceptions of legitimacy. We describe these as “policy studies” because the randomized treatment can be thought of as a policy on how officers should interact with citizens.

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The first of these trials, the Queensland (Australia) Community Engagement Trial (QCET), was conducted by Mazerolle and colleagues (2012, 2013a). The experiment involved 60 roadblocks administering a random breathalyzer test for drunk driving. The roadblocks were randomly assigned to an experimental condition in which officers used a script enhanced with language that explicitly incorporated neutrality (by telling drivers they were stopped at random), trustworthiness (by showing concern for the problem of drunk driving), citizen participation (by encouraging citizens to share what they did to prevent crime) and dignity/respect (by thanking citizens for their time).

After the stop, drivers received a survey to assess their perceptions of the stop and the police more generally. The response rate was low—13.2% of the 20,985 surveys distributed were returned. Mazerolle and colleagues (2012) found that drivers receiving the experimental treatment reported higher levels of perceived procedural justice than those in the control condition, were more likely to report that their views of the police had changed as a result of the stop (although the direction of that change was not measured), and were significantly more likely to report complying with police requests during the stop, although the effect was small because most drivers in both groups reported compliance.

Mazerolle et al. (2013a) extend these findings by examining the effect of stops on more general views of the police. They found evidence that the procedural justice script impacted not only perceptions of the police during the encounter, but also more general views of how procedurally fair the police are. Mazerolle and colleagues (2013a: 55) concluded that these short police-citizen interactions in traffic stops can be highly influential and that, “a little bit of being nice goes a long way.”

Variations of the Queensland design and dialogue have been conducted in Turkey (Sahin et al., in press), England (Langley, 2014) and Scotland (MacQueen & Bradford, 2015). Langley (2014) adapted the QCET protocol to the airport security setting. Passengers were randomly assigned to receive a procedural justice-based treatment or an experienced utility treatment. The procedural justice treatment involved application of a checklist based on the QCET script modified for an airport security setting. The experienced utility treatment involved either providing incentives to passengers (e.g., a fast track security lane voucher) or an offer of an escort to their gate. There was no treatment group receiving standard security processing.

A telephone survey with a 52% response rate was used to compare perceptions across treatment groups. Few significant differences between groups emerged, although respondents in the procedural justice group were more likely to report that the security officer listened to them during the stop. Procedural justice group respondents, however, did not report higher overall levels of perceived procedural justice. This may have been due to treatment contamination. There was a small and nonsignificant impact of the procedural justice treatment on perceptions of legitimacy.

Sahin and colleagues (in press) adapted the QCET protocol for use in police stops for speeding in a randomized trial in Adana, Turkey. The drivers were randomly allocated to a treatment group in which the QCET-based script was administered or to a control group who underwent the standard protocol for a speeding traffic stop. Analysis was based on 500 completed driver surveys. Drivers in the procedural justice treatment group reported higher levels of perceived procedural justice, trust, and satisfaction and also reported they were treated more respectfully by police during the stop. There was no significant difference between the treatment groups in perceptions of the neutrality of police during the stop. In contrast to the Mazerolle et al. (2013a) findings, the experimental group drivers did not report higher general levels of respect, neutrality, trust, or overall procedural justice in the Turkish National Police. However, experimental group drivers were more likely to report they were satisfied with the police. Sahin (2014: 164) concluded that “a ‘quick fix’ is not possible when it comes to the issue of people’s broader views about the police.”

The closest replication of QCET was conducted by MacQueen and Bradford (2015) in Scotland. Notable differences were that the random stops were made not only to identify drunk drivers but also to advance traffic safety. Also, the officer did not use set scripts. Instead officers in the procedural justice group were given a series of key messages to deliver to the driver, which offered greater flexibility in their communication.

Drivers were given a survey after the stop and asked to return it. The response rate of only 6.6% was even lower than in QCET. Results overall offered no support for the efficacy of the flexible procedural justice script. If anything, the intervention had backfire effects on citizen perceptions of police legitimacy. MacQueen and Bradford (2015: 438) conclude “procedural justice theory does not in and of itself provide a guide to effective and appropriate policing practice and nor does the literature available to date.”

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We take away several important lessons from these studies. One is that even in a very controlled setting, involving average citizens in a routine interaction with a police officer, materially altering the citizen's perception of the interaction is not easy. We suspect that in more confrontational interactions with citizens, especially if they were suspected to have committed a crime, altering those perceptions would be even harder (but see Mastrofski et al., 2016). Second, perceptions of the police, whether positive or negative, are undoubtedly the outcome of a lifetime of personal experience and influences of others. Thus, it would be surprising if one single interaction, especially as inconsequential as a traffic stop, would materially alter overall perceptions (see Worden & McLean, forth.).

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We know of no study that provides a direct test of whether a procedural justice-infused policy can affect legal compliance. We thus discuss three studies that provide an indirect test. One involves domestic violence and the other two involve an intervention to reduce gun violence in Chicago.

The domestic violence study by Paternoster et al. (1997) used data from the Milwaukee domestic violence experiment (Sherman et al., 1992) in which police responding to a misdemeanor domestic violence call randomly assigned the suspect to one of two mandatory arrest conditions or to a non-arrest condition. Paternoster et al. (1997) used data from 479 interviews with domestic violence suspects assigned to the mandatory arrest conditions, coded arrest incidents for their level of procedural justice as perceived by the arrestee, and then examined their associations with reoffending. Indicators of perceived procedural justice included whether the suspect had an opportunity to tell his side of the story (representation), whether he expected to be arrested (consistency), and whether the police listened to both the victim and offender's stories (impartiality). The representation indicator aligns with our conception of participation, and the impartiality measure could be seen as an indicator of neutrality. The consistency indicator is less tied to our definition of procedural justice. Results were supportive of a salutary effect of perceptions of procedurally just treatment on re-offending. Arrest in general increased recidivism relative to offenders who had received only a warning, but individuals reporting high perceived levels of procedural justice during their arrest had recidivism rates

comparable to the warned group, suggesting a suppression effect whereby higher levels of perceived procedural justice counterbalanced the criminogenic impact of arrest.

We describe this study as an indirect test of the policy-compliance linkage for two reasons. First, as Paternoster et al. themselves make clear, the experiment did not include procedural justice as a treatment condition. Thus, treatment according to a procedurally just treatment protocol was not randomly assigned or manipulated in any way. Second, there were no third-party observers assessing officer treatment. Measures of procedurally just treatment were based solely on the arrestees' perceptions, which may be related to recidivism due to a third unobserved feature of the offenders.

Wallace et al. (2016) examined the impact of offender notification forums infused with procedural justice on recidivism. The forums were implemented as part of a Project Safe Neighborhoods intervention in Chicago. The forums lasted one hour and sent a message to individuals recently released from prison with a history of violence that further violence would no longer be tolerated. The message was explicitly designed to focus not just on deterrence, but also on emphasizing individual choice, respect, and fairness. The Wallace et al. analysis built on an earlier study by Papachristos, Meares, and Fagan (2007) which concluded that the forums were effective in reducing crime. That analysis, however, did not examine the effect of the forum on actual participants. Wallace et al. took on that task. The evaluation compared re-incarceration rates between parolees in two police districts receiving forums to parolees in two comparison districts where there were no forums. Hazard models suggest a significant intervention effect both within neighborhoods (i.e., comparing forum attenders to non-attenders in the same precinct) and between neighborhoods (i.e., comparing forum attenders to non-attenders in comparison precincts). Parolees attending a forum had a longer time on the street (and out of prison), on average, than non-attendees. Additionally, forum attendees had lower hazards of committing weapons offenses or murder compared to non-attendees. Effects for violent crime overall and violent property crime were less consistent. We note that because participation in the forums was not randomly assigned these associations may be contaminated by selection bias.

Wallace et al. (2016) and Papachristos et al. (2007) are both important because they analyze the impact of an actual policy intervention addressing a serious crime problem that was directed at individuals with

extensive criminal histories. The difficulty of interpretation involves parsing out the contribution of procedural justice to a multi-pronged intervention involving focused deterrence and access to social service components as prominent features of the intervention package. Interventions such as this bring into sharp relief the difficulty of making a determination of the contribution of individual components of the program to its overall effectiveness.¹

7. Summary of Findings

Perception-based studies consistently find that perceptions of procedurally just treatment are closely tied to perceptions of police legitimacy. These same studies also generally find that perceptions of legitimacy are strongly associated with legal compliance. What has not been established is whether these associations reflect a causal connection between procedurally just treatment and perceived legitimacy and compliance.

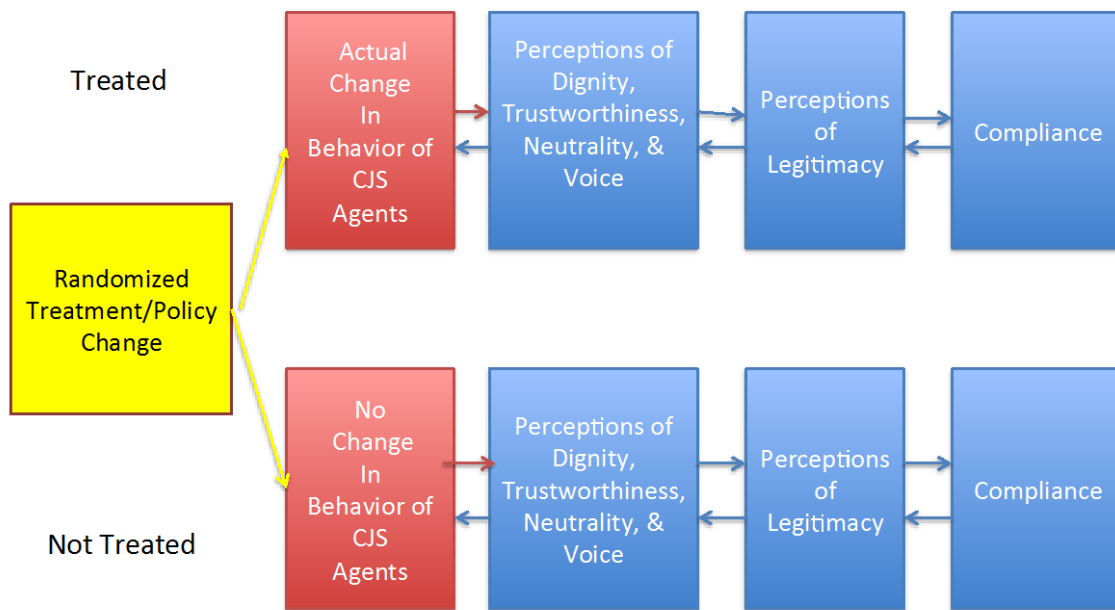
There are several reasons for the uncertainty about causality. First, associations among perception of procedurally just treatment, perceptions of legitimacy, and compliance may be a reflection of third-common causes such as individual stakes in conformity or community effects. They may also reflect reciprocal effects whereby criminal behavior affects perceptions of legitimacy and perceptions of procedurally just treatment due, for example, to norm neutralization. Second, perceptions of procedurally just treatment may be poorly related to actual treatment as the limited evidence on this linkage suggests. Third, and most important, is that perceptions cannot be directly altered. What can potentially be manipulated is the way in which agents of the CJS interact with citizens. Research that attempts to encourage procedurally just treatment by police either through training or experimental manipulation is scant and that which has been conducted finds no consistent relationship between the intended treatment and perceptions of legitimacy. We know of no such study that provides direct evidence of effects on legal compliance.

This third point is fundamental both for inferences about causality and conclusions about policy. Figure 3 is a revised version of Figure 1 that elaborates the third point. It includes two arms, one depicting improved

¹ While we have focused on field trials, experiments are also possible in the laboratory setting. Much of the early work on procedural justice comes from laboratory studies (Thibaut & Walker, 1975; Lind & Tyler, 1988). Social psychology experiments continue to find evidence supportive of the importance of procedural justice in predicting compliance and cooperation (e.g., De Cremer & van Knippenberg, 2002; van Prooijen et al., 2008; van Dijke & Verboon, 2010), although these studies do not focus on interactions with agents of the CJS.

procedurally just treatment and another depicting no change in such treatment. It also bifurcates the first stage of Figure 1 with two stages. The first is labeled “Randomized Treatment /Policy Change,” referring to a treatment or change in policy designed to improve procedurally just treatment of citizens by CJS actors. The second stage highlights the importance of the effectiveness of stage 1. There is no possibility for the treatment/policy to change citizen perceptions and behavior unless it is successful in actually changing the behavior of CJS agents.

Figure 3: Identifying the Causal Impact of Procedurally Just Treatment



If treatment is successful in altering CJS agent behavior, the stage is set for testing the predictions of the theory in terms of effects on citizen perceptions and behavior. This is done by comparing perceptions of procedurally just treatment, perceptions of legitimacy, and compliance with the law between the treated in the upper arm and the controls in lower arm of Figure 3. The differences in these measure the causal effects of improved *actual* procedurally just treatment.

Also, included in Figure 3 are bi-directional arrows between the second and third, third and fourth, and fourth and fifth stages in both arms. Even if such bi-directionality is present, it would not compromise evidence showing that exogenous manipulation of procedurally just treatment positively affected perceptions of

legitimacy and/or compliance. Instead the bi-directionality of the arrow would only imply that the underlying mechanism of the change is complex.

Figure 3 can also be interpreted as measuring the impact of policy change. Just as in an experiment, the relevant metric for measuring the impact of a policy change is the change in outcomes that were brought about by implementation of the policy. Also, just as in an experiment, perceptions cannot be directly changed by policy. What policy can directly change is how CJS actors actually interact with citizens.

Is it possible to obtain credible evidence of the effectiveness of procedurally just treatment outside of a randomized experiment? Yes but it requires what has come to be called a “natural experiment.” Natural experiment-based studies come in many forms, including instrumental variable regression studies, regression discontinuity studies, and some types of before and after studies (Cook et al., 2008; Shadish et al., 2008). Their shared characteristic is that nature or policy has effectively provided a randomized experiment whereby some people/places are treated or not by a process that is argued to be effectively random. The analyses by Papachristos et al. (2007) and Wallace et al. (2016) are examples of studies in this tradition. Both studies attempt to create the with/without treatment arms of Figure 3 by comparing people and geographic areas that were and were not treated by offender forums, a process that they assume is effectively random.

For our purposes here we distinguish “natural experiment” studies from studies based solely on citizen perceptions of procedurally just treatment and legitimacy because such studies cannot credibly claim that those perceptions were effectively randomly assigned. As a consequence, observed associations of perceptions of legitimacy and of perceptions of procedurally just treatment with compliance are inescapably vulnerable to bias due to third common causes or reverse causality. They also provide no guidance on policies that might be effective in altering those perceptions.

Our conclusions differ from the more affirmative conclusions of Mazerolle and colleagues (Mazerolle et al. 2012, 2013b; Higginson & Mazerolle, 2014). Mazerolle et al., 2013b: 266) for instance conclude that their “review provides evidence that legitimacy policing is an important precursor for improving the capacity of police to prevent and control crime.”

The difference in conclusions is attributable to several factors. One is the time span of the reviews. These earlier reviews covered studies published through April 2009 whereas ours examines studies published through September 2016. Much of the intervention literature we reviewed has been published since 2009. Second, the reviews by Mazerolle and colleagues took a more expansive view of studies that constitute tests of the effects of legitimacy policing. They included any study meeting other technical inclusion criterion (e.g., reported data required to measure effect sizes) that stated that one of its purposes was to improve police legitimacy or which articulated an objective that was consistent with Tyler's conception of procedurally just treatment.

Their expansive inclusion criteria for studies that constitute a test of legitimacy policing have several important consequences. One is that it leaves unspecified the sources of perceptions of legitimacy. As we have noted, definitions of what constitutes procedurally just treatment vary across studies. For example, Bottoms and Tankebe (2012: 129) argue that it is the quality of dialog between the citizen and the police officer that is crucial: "legitimacy needs to be perceived as always dialogic and relational in character." Such differences in emphasis are important because they are not only crucial to pinning down and testing the sources of perceptions of legitimacy but also to designing policies that are effective in promoting legitimacy.

Another consequence of an expansive inclusion criterion is that the legitimacy enhancement objective was only one among many objectives of the interventions included in the review. Thus, while we have focused entirely on interventions designed to enhance procedural justice through scripts or training, the Mazerolle et al. (2012, 2013b) review included a variety of intervention types, including community policing, Weed and Seed, and restorative justice (see Higginson & Mazerolle, 2014). These intervention types include elements of procedural justice, but also cover a far broader range of activities than is implied by our definition of procedural justice (see Gill et al., 2014 for a review of the community policing literature). As a consequence, it is difficult to sort out what part of program benefits are attributable to the procedural justice component of the intervention.

Weed and Seed, for example, includes a mix of enforcement activity (weeding) and service provision (seeding) (Dunworth & Mills, 1999). While a community participation element is part of these efforts, it is difficult to attribute program success to procedural justice, as compared to the federal prosecution of high rate

offenders or efforts to revitalize neighborhoods. Disentangling the contributors to effective policing interventions is a common problem (Telep & Weisburd, 2016), but one we have tried to minimize by narrowing the focus to interventions with a clear procedural justice element.

8. Future Research

Our review has led us to the conclusion that there are three important empirical and theoretical gaps in the procedural justice literature. The first involves devising and testing a theory of the cumulative effects of experience and community and situational context on perceptions of procedurally just treatment and perceptions of legitimacy. The second involves filling out and testing a theory of the circumstances where improved perceptions of legitimacy translate into greater legal compliance. A third involves the design and evaluation of policies and training protocols that are effective in translating the constituent components of procedurally just treatment into improved perceptions of legitimacy and additionally improved legal compliance.

We separately consider the sources of perceptions of procedurally just treatment and legitimacy and the effect of changes in those perceptions on legal compliance because each is separately important in advancing values that are fundamental to democratic society. Citizens deserve to be treated in a fair and just manner by agents of the CJS, and it is important to their welfare that they perceive that they are being treated as such. Citizens also deserve to live in a society in which their person and property is secure from criminal victimization. If citizen perceptions of procedurally just treatment increase their legal compliance, another important value is advanced. However, if procedurally just treatment were only successful in advancing the former objective, societal welfare is still improved (Lum & Nagin, 2016; National Research Council, 2004). This point should not be lost in discussions about the benefits of procedurally just treatment.

i) The Origins of Perceptions of Procedurally Just Treatment and Legitimacy

We earlier observed that perceptions of procedurally just treatment and legitimacy are the product of an accumulation of personal experiences, the experiences of influential others such as family and friends, and more generally community influences. Yet only limited qualitative research has focused on the cumulative effects of direct or vicarious experience of procedurally just and unjust treatment (e.g., Barragan et al., 2016; Carr et al.,

2007; Gau & Brunson 2010) and little attention has been given to community influences on perceptions of said treatment and legitimacy.

There is a counterpart issue in the perceptual deterrence literature concerning the formation of sanction risk perceptions that provides useful guidance on how research on the formation of procedural justice perceptions might proceed. Studies of formation of sanction risk perceptions examine how the accumulation of personal and vicarious experience with apprehension or not following commission of a crime affects perceptions of risk of apprehension (see Anwar & Loughran, 2011; Lochner, 2007; Pogarsky et al., 2004; Matsueda et al., 2006).

Many of these studies are theoretically grounded in the Bayesian updating model, which might usefully be adapted to the procedural justice setting. The value-added of the Bayesian updating model and related models such as the adaptive expectation model is that they provide a formal structure for calibrating the impact of increments of new information on perceptions (Nagin, 1998). Generally speaking the size of the impact of new information is inversely related to size of the stock of accumulated information. In the context of procedural justice research this inverse relationship implies that for people with limited experience with agents of the CJS, initial interactions, whether favorable or unfavorable, will have a large impact on perceptions. In contrast, for individual with long experience with system actors, a single new experience is less likely to materially alter their prior perceptions.

The Bayesian updating perspective provides useful insight into why research focusing on citizen response to a single incident generally finds limited impacts on generalized perceptions of legitimacy. More generally, the framework may be helpful in answering questions such as: Is there an interaction between the positive or negative valence of the current interaction with a CJS agent and the sign of the valence for the overall stock of prior experience? As personal experience grows, does the relative weight given to community influences decline?

ii) Changed Perceptions of Legitimacy and Legal Compliance

In our view it is important to distinguish between compliance with a direct order of an agent of the CJS, which technically may also be legally required, and compliance with the criminal law more generally. We make

this distinction because it is self-evident to us that, at least in some circumstances, the quality of the interaction between a citizen and an agent of the criminal justice will affect whether the citizen complies with the agent's order. To us the interesting question is what facets of the interaction have the most influence on compliance.

It is not, however, self-evident to us why and under what circumstance procedurally just treatment will enhance compliance with the criminal law writ large. Many of our most important criminal laws involving the security of person and property are reflective of deeply rooted cultural and moral taboos. Elaboration on why and under what circumstances unfair treatment by CJS agents will erode the force of those taboos is necessary.

Like with perceptions of fair treatment and legitimacy such a theoretical elaboration will probably require an appeal to cumulative experiences and community influences. The focus of the theory of procedural justice is the impact of individual experience on perceptions and behavior. Larger societal influences are left in the background. However, perceptions of legitimacy and legal compliance are also likely affected by perceptions of the overall legitimacy of political and influential social and religious institutions. For example, work on legal cynicism, which focuses on how individuals internalize norms about the law, suggests the salience of neighborhood structural disadvantage in explaining why the law and legal actors come to be seen by some as illegitimate (Kirk & Matsuda, 2011; Sampson & Bartusch, 1998; Trinkner & Cohn, 2014). While legal cynicism is distinct from perceptions of legitimacy, the two are closely related (Carr et al., 2007; Gau, 2015). Eisner and Nivette (2014) provide a useful review of macro-level research on legitimacy that might inform a theoretical expansion that recognizes the potential role of broader societal institutions.

iii) Policies that Are Effective in Improving Procedurally Just Treatment

To test the predictions of the theoretical elaborations described above will require analysis based on randomized experiments and/or policy interventions that are designed to alter the actual treatment of citizens by CJS agents. In the area of policing, randomized experiments are becoming increasingly routine and are particularly well-suited for testing the effectiveness of training protocols designed to improve procedurally just treatment by officers. In other parts of the criminal justice system randomized experiments are less common but Sherman and colleagues have demonstrated their feasibility in a court setting in testing the effectiveness of restorative justice (Sherman et al., 2015; Strang et al., 2013). We emphasize, however, that experiments are

desirable but not necessary for devising and testing whether policies are effective in delivering procedurally just treatment.

Policies to affect such behavior need not include only training, although training may be the easiest for agencies to alter and expand. Other efforts could include incentive structures designed to reward procedurally just treatment (e.g., promotion), holding officers accountable for procedurally unjust treatment (e.g., supervisor reprimand), and feedback systems whereby citizens can communicate instances that they perceive to involve either procedurally just or unjust treatment.

We have few specific recommendations for the types of policies that should be tested because this is a largely undeveloped research domain. As we earlier noted Skogan et al. (2015:321) observe: “virtually no research of any flavor has been done on procedural justice training, despite this being a necessary precursor to turning the theory into practice.”

One specific recommendation, however, stems from our observation that little attention has been given to the individual contributions of respectful treatment, voice, and trustworthiness, and neutrality to perceptions of legitimacy. Future research should attempt to partial out the contributions of each component. This will serve two valuable purposes: more rigorously testing the details of theory and informing the design of training protocols to most effectively improve citizen perceptions of fair treatment.

9. Concluding Statement

At the outset of we noted that this review was being written in a tumultuous time for American policing (Cook, 2015; Lum & Nagin, 2016; Weitzer, 2015). Deadly uses of force by the police have led to protests, heated debates, and riots. Video footage has exposed instances of bad policing widely to the American public. The focus of the recommended reforms from the President’s Task Force (2015) was improving citizen trust and confidence in the police with efforts to enhance police legitimacy, reduce implicit bias, and increase transparency.

In this context, we recognize that some may be disappointed and possibly troubled by our conclusions concerning the strength of the evidence in support of the predictions of the theory of procedural justice. Public policy, however, is not served by mistaken reliance on conclusions that are not sustained by the evidence. Our

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generally negative view of the supporting evidence does not mean that the predictions of procedural justice theory as it relates to perceptions of legitimacy and legal compliance are incorrect but that they have yet to be credibly demonstrated.

We also emphasize that our conclusions do not imply that agents of the criminal justice system should not strive to treat citizens fairly. To the contrary, as emphasized at the outset, we strongly affirm that citizens deserve such treatment regardless of impacts on their compliance with the law. These same agents also have a responsibility to citizens to help secure a safe and orderly society for them to live in. The literature on legal compliance and procedural justice has been interpreted as showing that both these responsibilities are mutually reinforcing. We are less certain.

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Response to “Procedural justice and policing: A rush to judgment?”

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We begin by thanking Tom Tyler for taking the time to prepare a thoughtful response to our review. We are struck by how much we mutually agree upon. We mutually agree that police legitimacy is important in its own right. At the outset of our essay we stipulate: “This review takes as given that as a matter of principle, citizens are deserving of fair treatment by the police and other authority figures within the criminal justice system irrespective of whether that treatment fosters compliance with the law.” Another important point of agreement concerns the procedural justice literature focusing on legal compliance. For reasons elaborated upon in the full essay, we do not take on the entire procedural justice literature. Instead we focus on the literature pertaining to the criminal justice system. Concerning that part of the literature Professor Tyler concurs with our conclusions. At the outset of his essay, he observes: “I agree with Nagin & Telep that there is not a great deal of currently available research evidence in the arena of policing supporting the role of procedural justice in shaping legitimacy and their joint role in shaping compliance with the law.” We also surmise from various acknowledgements by Professor Tyler about important limitations of the procedural justice and legal compliance literature involving both theory and empirics that he is supportive of the research agenda that we lay out. That agenda involves research on the origins of perceptions of procedurally just treatment and legitimacy, the linkage between changed perceptions of legitimacy and legal compliance, and identification of policies that are effective in improving procedurally just treatment. Concerning the final suggestions, one of us (Telep, 2016), has argued that procedural justice research in the domain of policing has been severely handicapped by the dearth of rigorous research on its effectiveness in affecting officer behavior in the field and the impact of such behavioral change on the attitudes and legal compliance of citizens. Our reading of Professor Tyler’s response leads us to the conclusion that he too would agree with this assessment. We return to this point below.

There are, however, some important points upon which we disagree with Professor Tyler and we want to take this opportunity to discuss them briefly. One concerns our conclusion that the well-documented

associations of perceptions of procedurally just treatment and of perceived legitimacy with legal compliance do not credibly establish causality. In our view the Tyler response conflates one method for establishing causality, the randomized experiment, with the concept of causality itself. In our use of the term, the concept of causality builds from the comparison of counterfactual states. In the context of the subject of this exchange, the counterfactual states involve a world in which police or other CJS agents interact with citizens in accord with the principles of procedural justice versus a world in which such treatment is not in accord with those principles or falls short in important ways. Such worlds could be compared on many dimensions but the central focus of our review was on two outcomes—citizen perceptions of the legitimacy of the police and also their compliance with the law. As we try to make clear, a randomized experiment is but one method for making this counterfactual comparison.

Professor Tyler evidently agrees with us on this methodological point because he cites much evidence based on non-experimental evidence that he concludes provide support for the causal claims that underlay the theory of procedural justice. Readers will have to make their own judgments about Professor Tyler's assessment of that evidence. We are not, however, convinced because no amount of meditational analysis or other form of multivariate analysis can avert the challenges to causal inferences based on perceptions alone. It is necessary to provide evidence suggesting that those perceptions are susceptible to change based on changes in the actual behavior of the police or other agents of the criminal justice system. Such evidence may be indirect. For example the large body of evidence showing the effectiveness of hot spots policing or increases in police numbers due to terror alerts or attacks strongly suggests that police presence affects perceptions of apprehension risk (see Braga, Papachristos, & Hureau, 2014; Chalfin & McCrary, 2017; Nagin, 2013). We are not aware of comparable evidence providing direct or indirect support for the predictions of the theory of procedurally justice as it pertains to fair treatment by agents of the criminal justice system. As we elaborate in our review, without such evidence the associations of perceptions with legal compliance are likely contaminated by biases due to third common causes or reverse causality. Such biases, in our view, stand in the way of making credible causal inferences.

It is also our view that these biases stand in the way of relying heavily on this evidence in policy deliberations. The Tyler response is critical of our review because we offer no policy alternative to procedurally just treatment as a response to the present crisis in police legitimacy particularly among disadvantaged minorities. The purpose of our review was not to develop policy alternatives but one of us has discussed policy responses to the present crisis elsewhere (Lum & Nagin, 2017). However, this point of clarification is secondary to the second important point of disagreement with Professor Tyler. In his conclusions he observes: “Telling authorities to wait for 5-10 years until experimental research can be conducted is not a good sell to national, state or local authorities pressed by the public to address important and immediate social problems such as police shootings. Faced with this situation policy makers have been drawn to the strongest existing model in this area.”

We concur that policy makers must act based on the present state of knowledge, however, incomplete. We also agree that an expanded rigorous evidence base requires the cooperation of police agencies. On this front, we are optimistic about the current landscape of policing, which has seen an expansion of the use of field experiments in recent years (Braga et al., 2014). Indeed, one of us, Telep, is involved in a new experiment designed to test the effects of procedural justice training for officers working in crime hot spots on crime, officer behavior, and perceptions of legitimacy among residents and those who have contact with police. Where we disagree with Professor Tyler is on how the research community communicates with policy-making community. Policy makers naturally gravitate to strong scientific conclusions.. When strong policy conclusions are not supported by comparably strong science, bad policy choices often ensure. Examples include concealed carry laws, mandatory minimum sentencing, and scared-straight programs.

The example of procedural justice training is important in this regard. We recognize, as Professor Tyler notes, that most procedural justice training is new. We are encouraged by ongoing projects that include an evaluation component, such as the National Initiative for Building Community Trust and Justice. What concerns us, however, is policing agencies jumping to adopt existing training models under two faulty assumptions. One is that the theory of procedural justice has been demonstrated in the context of criminal justice policy as is suggested by the quotes from the National Initiative website and the report of the President’s Task Force on 21st Century Policing cited in the introduction of our essay. The second is that extant training programs have been

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shown to have beneficial impacts on citizen perceptions of legitimacy and their legal compliance. The fact is that presently, there is no evidence that training programs can successfully improve perceptions of police legitimacy or reduce crime. Indeed, evidence that such programs are successful in even altering the behavior of police officers in the field is nearly non-existent. Policy choices based on such faulty assumptions not only runs the risk of deploying ineffective policy but may also retard research aimed at identifying effective policy options. It for these reasons that we hold the view that public policy is not served by the misperception that there are proven policies for positively affecting the fair treatment of citizens by the police that translate into improved citizen perceptions of legitimacy and compliance with the law.

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