The Impact of Procedural Injustice During Police-Citizen Encounters:

The Role of Officer Gender

by

Katharine Leigh Brown

A Thesis Presented in Partial Fulfillment
of the Requirements for the Degree
Master of Science

Approved April 2019 by the
Graduate Supervisory Committee:

Michael Reisig, Chair
Kristy Holtfreter Reisig
Cody Telep

ARIZONA STATE UNIVERSITY

May 2019

ABSTRACT

This study examined the effects of procedural injustice during hypothetical police-citizen encounters. Specifically, the main effects of procedural injustice on emotional responses to police treatment, components of police legitimacy, and willingness to cooperate with the police were assessed. Importantly, this study also tested whether the effect of procedural injustice was invariant across officer gender. A factorial vignette survey that consisted of two different police encounter scenarios (i.e., potential stalking incident and traffic accident) was administered to a university-based sample (N = 525). Results showed that the effect of procedural injustice during such encounters had a powerful and significant influence on participants' emotional responses (e.g., anger), legitimacy perceptions, and the willingness to cooperate. These effects appeared to be consistent regardless of whether the treatment was doled out by a male or female police officer. Implications of the findings in terms of theory and future research are discussed.

TABLE OF CONTENTS

LIST OF TABLES

iv

Introduction

Procedural justice, defined broadly as the use of fair treatment by authorities, is a concept that has been well studied over time (Leventhal, 1980; Thibaut & Walker, 1978; Tyler, 1989; Tyler & Lind, 1982). In policing, procedural justice has been applied to better understand the implications of police behavior during interactions with members of the public. Tyler's (2006) process-based theory suggests that procedural justice positively influences perceptions of legitimacy and future cooperation with the police. Recent vignette-based studies that have examined the impact of procedurally-just and unjust police behavior support this argument. For example, when citizens are exposed to disrespectful or biased behavior by the police, they are less likely to perceive the police as legitimate and are less willing to cooperate with them (Maguire, Lowrey, & Johnson, 2017; Reisig, Mays, & Telep, 2018). Overall, both theory and research suggest that unfair police processes have deleterious effects on police-citizen relations.

While research has provided insights on the influence of procedural justice in policing, the effects of police officer gender on how citizens react to police treatment has remained understudied. The "invariance thesis" posits that procedural justice (or injustice) should be equally influential, regardless of situational (or extralegal) factors, because the nature of police treatment matters most (Wolfe, Nix, Kaminiski, & Rojek, 2016). Accordingly, officer gender should not moderate the relationship between how police treat the citizens they come into contact with and the outcome variables of interest (e.g., emotional reaction and police legitimacy). However, Murphy (2017) argues that perceptions of procedural justice can be dependent on citizens' preconceived trust of the police prior to an encounter occurring, suggesting that there are factors that condition the

procedural justice effect. This study examines the role of officer gender on perceived legitimacy and cooperation. Role congruity theory proposes that because women generally occupy the lower status in the gender hierarchy, they are perceived less favorably than males in leadership roles and their behavior is evaluated more negatively (Eagly & Karau, 2002). Due to the hypermasculine nature of policing, this incongruity between gender and occupational role may be exacerbated. Moreover, women may face issues receiving legitimation via willingness to comply due to a lack of cultural support for females in positions of authority (Correll & Ridgeway, 2003). This suggests that the negative effect of poor treatment by female officers may be more detrimental in terms of reducing perceived police legitimacy and the sense of willingness to cooperate.

This study posed two primary questions. First, what are the direct effects of procedural injustice on emotional response (i.e., anger), elements of legitimacy (i.e., perceived obligation to obey, institutional trust, and moral alignment), and cooperation with the police? Second, does police officer gender moderate the relationship between procedural injustice, emotional response, legitimacy, and cooperation? The research questions were addressed using a factorial vignette design that posed two different hypothetical scenarios in a pencil and paper survey to a university-based sample. Students received one of two hypothetical scenarios describing a police-citizen interaction with two experimental conditions: police officer treatment (just or unjust) and officer gender (male or female). The results shed light on the invariance thesis and the influence of gender socialization during police-citizen encounters.

Review of Literature

The Process-Based Model

Tyler's (2006) process-based model emphasizes the role of interpersonal treatment and the decision-making process in shaping perceptions of legal authorities and the law. Procedural justice has evolved overtime to contain four primary tenants: participation (or voice) allotted to the citizen, neutrality of the decision maker, dignity and respect granted to the citizen, and trustworthy motives of the legal actor (Lind & Tyler, 1988; Tyler & Blader, 2003). Procedural justice is posited to influence the perceived legitimacy of legal authorities. Put simply, when legal actors exercise their authority in a procedurally-just manner, they are more likely to be perceived as legitimate with consequences for immediate and future compliance.

In his influential study, Tyler (2006) applied the idea of legitimacy to the criminal justice system (i.e., police and courts). Legitimacy can be defined as "a property of an authority or institution that leads people to feel that that authority or institution is entitled to be deferred to and obeyed" (Sunshine & Tyler, 2003, p. 514). What this means for police is that citizens who see them as legitimate authorities believe that the police have the right to make decisions and that citizens have a duty to obey them. Tyler (2004, p. 7) advocates a legitimacy-based strategy for policing because of its ability to be "self-regulatory." In other words, people are motivated by personal values to voluntarily obey the law, thus negating the need for coercive tactics from legal authorities to maintain social order.

Perceived legitimacy is commonly conceptualized as a three-dimensional concept. First, obligation to obey specifically refers to a "content-free" duty to obey the directives of police and the law because there is an understanding that they are representative of

3

aligned interests (Jackson & Gau, 2016, p. 51). Second, trust in the police refers to the notion that police power is used in a manner that is appropriate, right for the community, and not used in an arbitrary manner. Lastly, normative alignment signifies the extent to which citizens feel police are using their power in a manner reflective of societal norms. In combination, obligation to obey, trust, and normative alignment form the core of perceived police legitimacy, which in turn influences compliance-oriented behaviors among citizens that are beneficial to the police. Legitimate power is incredibly reliant on the behavior of police, with implications that extend well beyond the immediate interactions that form legitimacy.

　　According to the process-based model, legitimacy influences general compliance (i.e., willingness to follow authorities' directives, obey laws, and mobilize legal authorities in the future; Tyler, 2003). General compliance begins on an interactional level, with perceived legitimacy implicating immediate compliance in an interaction. When legal authorities are viewed as legitimate, citizens feel a voluntary duty to obey police directives and, more broadly, the law being enforced. Put simply, citizens demonstrate compliance by not breaking the law. Interactions that conform to the principles of procedural justice should not require the use of coercive tactics by the police because their authority is perceived to be legitimate. The implications of this extend onto a third outcome, future cooperation. Citizens who feel the police have used their power in a legitimate manner are more likely to cooperate with the police in the future (e.g., calling them for assistance).

　　A key feature of the process-based model is the invariance thesis, which states that the role of procedural justice in shaping supportive values—police legitimacy—and

general compliance are consistent (or invariant) across different situations and social groups. This suggests three things about procedural justice judgments during police-citizen interactions. First, the effect of procedural justice is not situational. Across police-citizen encounters, treatment should be the primary driver of legitimacy perceptions. Second, the role of procedural justice should not be dependent on the characteristics of the citizen interacting with the police. Therefore, no matter the race, gender, age, or other personal traits of citizens, the influence of procedural justice should be consistent (Wolfe et al., 2016). Lastly, the impact of procedural justice is not dependent on the personal characteristics of police officers; gender, race, age, and other personal traits should not influence how citizens feel about the treatment they receive when encountering the police. The invariance thesis speaks to the generality of procedural justice across social sub-groups and contexts, and suggests that across interactions with legal authorities, treatment should be the primary concern in their efforts to establish legitimacy.

Prior Process-Based Research

Empirical literature assessing the link between procedural justice and legitimacy is bountiful. Methods ranging from survey research to randomized controlled trials frequently find that procedural justice has a direct effect on perceived legitimacy (Mazerolle, Antrobus, Bennett, & Tyler, 2013; Reisig, Bratton, & Gertz, 2007; Sargeant, Antrobus, Murphy, Bennett, & Mazerolle, 2016; Sunshine & Tyler, 2003; see Tankebe, 2014 for a review). Using a nationally representative sample from the United States, Tyler and Jackson (2014) found that procedural justice judgements were related to police legitimacy, which was operationalized as a three-dimensional scale (i.e., obligation to obey, trust in the police, and normative alignment). The authors also found that

legitimacy was correlated with various compliance-oriented outcomes (e.g., calling the police to report a crime). Similar findings have been reported using survey data from England and Wales (Jackson et al., 2012; also see Reisig & Bain, 2015). There has been some controversy surrounding the conceptualization and measurement of legitimacy.[1] However, previous literature has clearly established the Tyler-Jackson three-dimensional approach as a new standard for measuring police legitimacy.

Quasi-experimental designs using vignette methodologies have recently been used to gauge the effect of police behavior during police-citizen interactions. Studies using variations of this methodological approach have concluded that procedural injustice has deleterious effects on a number of outcomes (Barkworth & Murphy, 2015; Flippin, 2018; Johnson, Wilson, Maguire, & Lowrey-Kinberg, 2017; Lowrey, Maguire, & Bennett, 2016). Procedural injustice is not a lack of procedural justice. Rather, it is the inverse of procedural justice, where the opposite of the four components of procedural justice may occur in a police-citizen interaction (i.e., no participation in allotted to the citizen, bias occurs in the decision-making process, the citizen may be disrespected, and the motives of the officer do not seem trustworthy). Reisig, Mays, and Telep's (2018) vignette study tested the effect of procedural injustice during two types of police-citizen encounters— a noise complaint and a traffic stop. Respondents who received the procedural injustice condition reacted more negatively, stated that the situation should have been handled differently, said they would be less likely to follow police officer directions, and reported they were less willing to accept the decision of the police officer. In a similar study,

---

[1] Bottoms and Tankebe (2012) and Tankebe (2013) raise issues regarding the three-dimensional conceptualization of legitimacy, suggesting that a dialogic approach (emphasizing the variable role that dimensions of legitimacy can have across societies) is best for measuring legitimacy in the criminal justice system (see Tankebe, Reisig, & Wang, 2016).

Maguire, Lowrey, and Johnson (2017) used video vignettes to assess the effects of procedural justice and procedural injustice during traffic stops. The authors found that participants who were assigned the procedural injustice stimulus were significantly less willing to cooperate with the police, felt lower obligation to obey the law, and reported lower levels of trust in the police. This growing body of research demonstrates that the manner in which police exercise their authority during encounters with the public likely influences a host of important outcomes.

Procedural injustice has also been conceptualized as a precursor to the emotion response associated with public encounters with the police. The research indicates that emotions regarding procedurally unfair interactions tend to be more negative—anger and frustration—than encounters characterized by high levels of fairness in procedural terms (Beijersbergen, Dirkzwager, Eichelsheim, Van der Laan, and Nieuwbeerta, 2015; Murphy & Tyler, 2008). For example, using longitudinal data and experimental vignettes Barkworth and Murphy (2015) that procedural injustice promoted anger, frustration, and anxiety, and subsequently reduced one's willingness to comply. In contrast, procedurally-just treatment decreased negative emotions and increased willingness to comply. If a primary goal of legal authorities is to promote immediate and future compliance, then the relationship between procedural injustice and emotions is worthy of further study.

Few studies have tested the invariance thesis. In one of the few systematic tests, Wolfe et al. (2016) used mail survey data and found that the effect of procedural justice on police legitimacy was relatively invariant across individuals from different age groups, formal education achievement, racial backgrounds, and gender—the one exception being prior victimization (i.e., the effect of procedural justice on trust in law enforcement is

7

stronger for recently victimized individuals). However, in her assessment of the invariance thesis, Murphy (2017) found that trust in the police moderated the effect of procedural justice on legitimacy outcomes. In other words, preconceived notions of trust in the police generated variability in the relationship between procedural justice and legitimacy (also see Braga, Winship, Tyler, Fagan, & Mears, 2014; Johnson et al., 2017). In sum, research on the invariance thesis provides mixed support for the proposition that the effect of procedural justice on police legitimacy is invariant across subgroups.

Gender and Procedural Justice

In general, research suggests that female police officers use different skills (i.e., emotional labor, listening, communication, nurturing, empathy; see DeJong, 2005; Rabe-Hemp, 2009; Schuck, 2014) and are less likely to issue threats and use physical restraints when compared to male officers (Rabe-Hemp, 2008). When judged using the four tenants of procedural justice, one might infer that female officers will generally be evaluated more favorably than their male counterparts. But this speaks only to the role that treatment has on such judgments– it does not provide much insight into whether male and female officers are differentially judged for treating people similarly.

Role theory suggests that gender differences in beliefs, values, and experiences uniquely position females and males as to how they should fulfill the policing role (Sun, 2007). Women police will differ from their male counterparts because gender socialization shapes the way they will carry out their duties. This is but one example of the difference approach to gender in criminology, which "explicitly allows for gender to shape occupational attitude" (Poteyeva & Sun, 2009, p. 513). The difference approach also supports variability in how female and male officers are perceived due to gender bias

8

and stereotypes. As noted by Gossett and Williams (1998), female officers report they experience covert gender discrimination from citizens. Such discrimination may alter the way in which individuals who come into contact with the police judge the treatment they receive, resulting in female officers being evaluated differently.

Research in the field of psychology helps explain the way individuals' perceptions of behavior are gendered. For example, when people interact with authority figures (i.e., managers, supervisors, and professors), gender stereotypes often influence the way behavior (Algoe, Buswell, & DeLamater, 2000; Rudman & Glick, 2001; Schein, 1975) and emotions (Barrett & Bliss-Moreau, 2009; Plant, Hyde, Keltner, & Devine, 2000) are perceived. Specifically, Bauer and Baltes (2002) found that students who held traditional stereotypes of female college professors ranked them more negatively when compared to male professors. These findings underscore the influence of gender bias and how judgments of authority figures' behavior are gendered. Stereotypes related to gender roles begin in childhood. As noted by Etaugh and Folger (1998), children are more likely to interpret mothers who work full-time differently (i.e., less nurturing) than fathers because they are deviating from traditional gender roles. In the context of policing, this suggests that female officers will be perceived more negatively when doling out unjust treatment because they are deviating from traditional gender norms.

Extant research suggests that females in positions of authority are perceived more negatively than males, likely because they have adopted nontraditional gender roles. Policing is a hypermasculine environment wherein ideas like the "heroic male" are entrenched (Silvestri, 2018; see also Acker, 1990). The hypermasculine nature of policing is reinforced by the variety of subcultures in a police department and how they are

9

described. For instance, Herbert (1998) notes that officers are labeled as one of two types in the Los Angeles Police Department. The first type being hardchargers, who are described as "police warriors," who "exemplify masculine characteristics," (Herbert, 1998, p. 356). The second type are the station queens, which is a label intended to feminize officers who fail to meet the level of strength necessary to meet the masculine norms of the job, suggesting a negative connotation to the feminine officer. Labeling in a manner that creates gendered subcultures has been shown to have negative consequences for female officers. Haarr and Morash (1995) note that female officer stress levels are partially explained by "workplace problems due to subculture status" (p. 132), specifically regarding language harassment and sex jokes (these did not predict male officer stress). Research also suggests that generally females are highly devalued in performance evaluations when working in male-dominated fields (Eagly, Makhijani, & Klonsky, 1992). One might expect female officers to pay a higher price in terms of how citizens react to officers who unjustly treat them due to the hypermasculine field they work in. Put differently, fueled by gender bias and stereotypical occupational roles, officer gender should moderate the strength of procedural injustice on emotions, legitimacy, and future cooperation with the police.

Current Focus

While the policing literature on procedural justice is abundant, there are gaps with regards to the potential influence of officer gender. In particular, little research has examined the role of officer gender in police encounters, nor has research investigated whether officer gender moderates the relationship between procedural injustice and emotional reactions (i.e., anger), perceived legitimacy, and future cooperation. Not

having an understanding of the potential role of officer gender could impact the utility of fairness-based policing tactics across officer gender. This study tested whether there was a direct effect of procedural injustice on anger, perceived legitimacy, and future cooperation. This study also tested whether officer gender moderated these relationships. Guided by process-based theory, role theory, and prior research, this study used vignette-based methods to test three hypotheses:

H_1: The procedural injustice stimulus will result in more intense feelings of anger and lower levels of police legitimacy (i.e., obligation to obey, normative alignment, and trust in the police).

H_2: Participants who perceive the police as more legitimate will express a greater willingness to cooperate with the police in the future.

H_3: The procedural injustice stimulus will result in more intense feelings of anger, lower levels of police legitimacy, and lower willingness to cooperate with the police when the officer described in the scenario is female.

Methods

Sample

The data for this study came from self-administered surveys distributed to a university-based sample. With respect to gender, 67.8% of the sample identified as female and 32.1% as male. Regarding age, 41.8% were 18 years old, 28.6% were 19 years old, 10.7% were 20 years old, and 18.9% were 21 years or older. In terms of race and ethnicity, 39.2% were white, 45.9% were Latino, 4.6% were African-American, 3.8% were Asian, 2.2% were Native American, and 4.4% self-reported the "other" racial category. Relative to the broader undergraduate demographics of the university in Fall

11

2018, these data were similar in terms of racial diversity, but had a higher frequency of female respondents than frequency of female students on campus[2].

Procedures

Data collection occurred during September, October, and November 2018. Students in fifteen lower-division criminology and criminal justice classes were invited to participate in the study. All of the surveys were shuffled to help achieve randomization prior to administration. The surveys were anonymous and participation was completely voluntary. After providing general instructions, a member of the research team was available to answer questions. The entire process took approximately 20 minutes to complete. Survey protocols were approved by the university's Institutional Review Board. A total of 529 surveys were obtained. However, four participants failed the narrative check and were dropped from the sample, resulting in an analysis file of 525 complete cases.[3]

Treatment

The vignettes used in this study featured two different hypothetical scenarios (i.e., a stalking incident and a traffic incident; see Appendix A for details), thus employing a 2 x 2 experimental design. Vignettes provide a unique approach for survey research to hypothetically place respondents in a police-citizen interaction and gauge their responses to their experience. Moreover, they provide an opportunity to pose questions regarding

---

[2] The university demographics in Fall 2018 were: 49.1% White, 24% Latino, 4.2% African-American, 7.4% Asian, 1.3% Native American, and 14% other; and 47.8% female and 52.2% male (Institutional Analysis, 2018).

[3] A narrative check was conducted to ensure that participants thoroughly read their vignettes. To accomplish this, participants were asked to identify the reason they mobilized the police in their assigned vignette ("In the scenario, you called the police because of a …? Loud party? Car accident? Potential stalker?). Surveys were removed from the sample (n = 4) when respondents did not select the correct response.

officer gender, which traditional survey research does not because of the lack of female police officers within police departments. Instead of oversampling female officers as suggested by Nix, Pickett, Wolfe, and Campbell (2017), this study uses vignette methodology to provide data that is gender diverse in nature.

Two experimental conditions were created in this study. The first manipulation, procedural injustice, involved police officers behaving in ways inconsistent with the principles of procedural justice. The first scenario involved a potential stalking situation. During the encounter, the participant asks the police officer to make the alleged stalker leave. The police officer responds in one of two ways. The following represents parts of each condition: (1) "I can't do that because unless you are blind as a bat you can see they're just walking on the sidewalk, and that's a public space. Why don't you just lock your door?" (experimental condition), or (2) "They sure seem to be hanging around. But legally I can't make them leave because they're in a public space. To be safe, be sure you lock door after you go back inside." (control condition). The second scenario involved the participant reporting a hit and run they witnessed. Upon arrival, the police officer responded in one of two ways. Aspects of each condition are as follows: (1) "Could you have picked a more inconvenient spot to wait for me?" (experimental condition), or (2) "Hi, I assume you called about the hit-and-run?" (control condition). The experimental conditions represent clear examples of procedural injustice in the police-citizen interactions (i.e., participation, neutrality, dignity and respect, and trustworthy motives). A binary coding scheme was used to designate which participants received the procedural injustice manipulation (1 = yes, 0 = no). A second experimental manipulation involved referring to the police officer with female or male pronouns. A binary coding scheme was

also used to indicate that a *male officer* was featured in the scenario each participant

received (1 = yes, 0 = no).

Measures

Six measures were used to gauge the respondents' emotional response to police

treatment, police legitimacy, and cooperation. For emotional response, respondents were

asked how they felt about the way the police officer treated them. *Angry* was coded as a

binary variable (1 = yes, 0 = no). The three elements of perceived police legitimacy were

captured: *obligation to obey* ("You would feel compelled to do what the police officer in

the scenario asked you"), *normative alignment* ("The police officer in the scenario has

values similar to yours*)*, and *trust in the police* ("You found the police officer in the

scenario trustworthy"). The closed-ended responses for these three items ranged from

"strongly disagree" (coded 1) to "strongly agree" (coded 4). *Police legitimacy* is

operationalized using factor scores and is coded so that higher scores indicate higher

levels of perceived police legitimacy (i.e., greater sense of obligation, normative

alignment, and trust in the police; Cronbahch's alpha = 0.88). Finally, *future cooperation*

was a single item measure ("How likely would you be to call the police if something like

this happened again in the future?"). Summary statistics for the study variables used in

each hypothetical scenario are provided in Table 1.

Table 1

Summary Statistics for Study Variables

	Mean	SD	Min	Max
Stalking Incident (n = 263)				
Angry	0.44	--	0	1
Obligation to Obey	2.61	0.87	1	4
Normative Alignment	2.15	0.95	1	4
Trust in Police	2.30	1.03	1	4
Police Legitimacy[a]	0.00	0.94	-1.34	1.80
Future Cooperation	2.90	1.13	1	4
Hit and Run Incident (n = 262)				
Angry	0.40	--	0	1
Obligation to Obey	2.48	0.83	1	4
Normative Alignment	2.06	0.92	1	4
Trust in Police	2.21	0.97	1	4
Police Legitimacy[a]	0.00	0.92	-1.34	1.98
Future Cooperation	2.51	1.13	1	4

[a] Weighted factor score

Analyses and Results

Manipulation Checks

Several survey items were used to ensure that the procedural injustice stimuli were perceived as intended. These items captured the four components of procedural justice: neutrality of the decision maker ("The police officer in the scenario acted in a neutral and unbiased fashion"), dignity and respect ("The police officer in the scenario treated you with dignity and respect"), trustworthy motives ("The police officer in the scenario was clearly concerned with your well-being"), and participation ("The police officer in the scenario listened to what you had to say"). Close-ended responses for each of the four items ranged from "strongly disagree" (coded 1) to "strongly agree" (coded 4). One-way ANOVA models were conducted for each scenario to assess mean differences. As indicated by the significantly lower mean scores for those receiving the procedural injustice condition, participants perceived the experimental condition as unfair in both scenarios (also see Appendix B which suggest near randomization).

Table 2

One-way ANOVA Models Testing Procedural Injustice Manipulations

		Participation		Interpersonal Treatment		Neutrality		Trustworthy Motives	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Stalking Incident (n = 263)									
Procedural Injustice									
	Yes	1.64	0.81	1.40	0.61	1.65	0.80	1.35	0.64
	No	3.14	0.62	3.23	0.48	3.20	0.51	2.91	0.69
	F	267.02*		696.72*		334.84*		344.94*	
Hit and Run Incident (n = 262)									
Procedural Injustice									
	Yes	1.81	0.81	1.40	0.55	1.48	0.62	1.50	0.60
	No	3.09	0.67	3.05	0.61	3.02	0.61	2.50	0.72
	F	191.05*		510.09*		397.48*		143.45*	

* $p < 0.001$

17

Multivariate Logistic Regression Models

To test the effects of procedural injustice and officer gender, both binary and ordinal logistic regression techniques were used. For each dependent variable, two models were estimated—one for each hypothetical scenario—and each model contained two variables reflecting the experimental stimuli. SPost was used to calculate standardized partial regression coefficients (ß), which allowed for determining the relative impact of the stimuli both within and across multivariate models (Long & Freese, 2014). A series of Breusch-Pagan/Cook-Weisberg tests indicated that heteroskedasticity was present in all of the regression models. To account for this, robust standard errors were used to calculate z-tests. Unless otherwise noted, the ordinal logistic regression models that were estimated passed the parallel lines test. Stata 15 was used to estimate the multivariate regression models featured below.

Beginning with the emotional response dependent variable, angry was regressed onto procedural injustice and officer gender (see Table 3). With respect to the injustice stimuli, the results indicated that poor treatment on behalf of the police officer resulted in negative emotional responses. In both scenarios, participants who received the procedural injustice condition were significantly more likely to report being angry with the police officer than participants who received the control condition. Results for officer gender suggested a null effect. Overall, the results were supportive of Hypothesis 1.

Table 3

Binary Logistic Regression Models for Angry

Variables	Angry		
	b (s.e.)	ß	*z*-test
Panel A: Stalking Incident (n = 263)			
Procedural Injustice	3.07 (0.34)	0.65	8.91*
Officer Male	-0.34 (0.33)	-0.07	0.30
Likelihood Ratio χ^2		79.64*	
McFadden's R^2		0.32	
Panel B: Hit and Run Incident (n = 262)			
Procedural Injustice	2.30 (0.31)	0.54	7.51*
Officer Male	0.13 (0.30)	0.03	0.44
Likelihood Ratio χ^2		56.54*	
McFadden's R^2		0.20	

Note. Entries are unstandardized regression coefficients (*b*), robust standard errors in parentheses (s.e.), standardized regression coefficients (ß), and *z*-tests.

* *p* < 0.001

Table 4 features three dependent variables that capture the different dimensions of police legitimacy—obligation to obey, normative alignment, and trust in the police. Once again, each dependent variable was regressed onto two variables representing the experimental stimuli. In addition, the angry variable was also included in the model specification. As hypothesized, the effect of procedural injustice was negative and statistically significant on obligation to obey the police, normative alignment, and trust in the police. Importantly, these findings were consistent in terms of direction and statistical significance in both scenarios. As for the effect of anger, with but one exception (i.e., obligation to obey model in Panel A), angry participants were significantly less willing to obey the police, felt less normatively aligned with the police, and trusted the police far less than participants who were not angry. Once again, the gender of the officer did not appear to matter. Overall, the results supported Hypothesis 1.

Table 4

Multivariate Ordinal Regression Models Testing the Effect of Procedural Injustice and Angry on Legitimacy and Cooperation

Variables	Obligation to Obey			Normative Alignment			Trust in the Police			Future Cooperation		
	b (s.e.)	β	z-test	b (s.e.)	β	z-test	b (s.e.)	β	z-test	b (s.e.)	β	z-test
Panel A: Stalking Incident (n = 263)												
Procedural Injustice	-3.22 (0.47)	-0.63	-6.79*	-4.42 (0.56)	-0.68	-7.82*	-4.00 (0.48)	-0.64	-8.37*	-0.68 (0.44)	-0.15	-1.53
Officer Male	-0.09 (-0.25)	-0.02	-0.35	-0.07 (0.27)	-0.01	-0.27	0.09 (0.26)	0.02	0.36	-0.34 (0.25)	-0.08	-1.34
Angry	-0.50 (-0.38)	-0.10	-1.32	-1.38 (0.34)	-0.21	-4.04*	-1.48 (0.34)	-0.24	-4.39*	-0.11 (0.33)	-0.03	-0.34
Police Legitimacy	-- --	--	--	-- --	--	--	-- --	--	--	1.00 (0.25)	0.42	3.94*
Likelihood Ratio χ²	84.71*			99.33*			116.97*			71.98*		
McFadden's R²	0.23			0.37			0.35			0.14		
Panel B: Hit and Run Incident (n = 262)												
Procedural Injustice	-2.33 (0.34)	-0.49	-6.93*	-3.18 (0.39)	-0.60	-8.25*	-3.42 (0.44)	-0.62	-7.70*	-0.42 (0.34)	-0.09	-1.21
Officer Male	-0.21 (0.25)	-0.04	-0.82	-0.37 (0.26)	-0.07	-1.41	0.07 (0.25)	0.01	0.30	-0.19 (0.24)	-0.04	-0.79
Angry	-1.21 (0.33)	-0.25	-3.67*	-1.09 (0.31)	-0.20	-3.49*	-1.18 (0.32)	-0.21	-3.75*	0.19 (0.29)	0.04	-0.66
Police Legitimacy	-- --	--	--	-- --	--	--	-- --	--	--	1.25 (0.22)	0.52	5.77*
Likelihood Ratio χ²	99.50*			126.72*			118.04*			70.64*		
McFadden's R²	0.20			0.28			0.28			0.13		

Note. Entries are unstandardized regression coefficients (*b*), robust standard errors in parentheses (s.e), standardized regression coefficients (β), and *z*-tests. Threshold values indicating cut points in latent variables were estimated but not presented in the table.

* *p* < 0.001

21

The final dependent variable, future cooperation, was also regressed onto procedural injustice, officer male, and angry in Table 4. A fourth variable was included in the cooperation model to test the impact of police legitimacy (i.e., a three-item standardized factor). Interestingly, in both models the police legitimacy scale was statistically significant. In short, these findings provided support for Hypothesis 2. Moreover, the results shed light on the indirect impact of procedural injustice during police-citizen encounters in that it can ultimately lessen citizens' willingness to cooperate with the police in the future, via reduced police legitimacy.

Moderation Analyses

Binary and ordinal logistic models were estimated using split samples to test the potential moderating effect of officer gender on the relationship between procedural injustice and the outcomes of interest. A total of five models were estimated for both male and female officer subsamples in each hypothetical scenario. A few models in each scenario did not pass the parallel lines test. These models are identified in each table.

Results for the stalking incident scenario are presented in Table 5. The procedural injustice stimuli was associated with anger, sense of obligation, normative alignment, and trust in the police, in both the female and male officer vignette subsamples. Clogg, Petkova, and Haritou's (1995) difference in coefficient test was used to compare the effect sizes across the two subsamples for each model. The results indicated that the procedural injustice effect in model 2 was significantly different ($z = 1.86, p \leq 0.05$). Put simply, respondents receiving the injustice condition were significantly less likely to feel a sense of obligation to the police when the officer being unfair was male. This finding is contrary to Hypothesis 3. Importantly, the difference in effect size for models 1, 3, 4, and

5 were not significantly different. Overall, the weight of the evidence failed to support

Hypothesis 3.

Table 5

Binary and Ordinal Logistic Regression Models Testing the effect of Procedural Justice across Officer Gender – Stalking Incident.

Officer Stimuli	Female Officer			Male Officer		
	b (s.e.)	ß	z-test	b (s.e.)	ß	z-test
Model 1: Angry						
Procedural Injustice	3.60 (0.52)	0.71	6.87***	2.60 (0.45)	0.58	5.77***
Likelihood Ratio χ^2		47.22***			33.30***	
McFadden's R^2		0.41			0.24	
n		124			128	
Model 2: Obligation to Obey*						
Procedural Injustice	-2.88 (0.52)	-0.62	-5.56***	-4.41 (0.64)	-0.77	-6.89***
Likelihood Ratio χ^2		30.91***			47.41***	
McFadden's R^2		0.17			0.28	
n		122			127	
Model 3: Normative Alignment						
Procedural Injustice	-5.06 (0.70)	-0.81	-7.22***	-5.46 (1.03)	-0.83	-5.28***
Likelihood Ratio χ^2		52.07***			27.84***	
McFadden's R^2		0.37			0.32	
n		123			126	
Model 4: Trust in Police*						
Procedural Injustice	-5.41 (0.78)	-0.83	-6.94***	-4.14 (0.57)	-0.75	-7.92***
Likelihood Ratio χ^2		48.12***			53.14***	
McFadden's R^2		0.37			0.28	
n		124			128	
Model 5: Future Cooperation						
Procedural Injustice	-1.50 (0.70)	-0.33	-2.15**	-0.20 (0.52)	-0.05	-0.37
Police Legitimacy	0.78 (0.37)	0.32	2.10**	1.13 (0.34)	0.49	3.37***
Likelihood Ratio χ^2		44.94***			28.44***	
McFadden's R^2		0.18			0.11	
n		120			125	

Note. Entries are unstandardized regression coefficients (*b*), robust standard errors (s.e.), and standardized regression coefficients (β).

* Model 2 for female officers did not pass the parallel lines test. Neither version of model 4 passed parallel lines test.

*** $p \le .05$, ** $p \le 0.001$

Results for the hit and run scenario are presented in Table 6. Similar to the findings reported in Table 5, the effect of procedural injustice on angry, obligation to obey, normative alignment, and trust in the police was statistically significant. The equality of coefficient tests revealed that these four comparisons resulted in insignificant differences, indicating that gender does not moderate the effect of procedural injustice. The effect of procedural injustice is not significant in the future cooperation models. In addition, the difference in the injustice effect sizes for the cooperation models was not statistically significant. The results for the hit and run scenario failed to support Hypothesis 3.

Table 6

Binary and Ordinal Logistic Regression Models Testing the effect of Procedural Justice across Officer Gender – Hit and Run Incident.

Officer Stimuli	Female Officer			Male Officer		
	b (s.e.)	ß	z-test	b (s.e.)	ß	z-test
Model 1: Angry						
Procedural Injustice	1.87 (0.41)	0.46	4.50**	2.76 (0.46)	0.61	6.04**
Likelihood Ratio χ^2		20.40**			33.50**	
McFadden's R^2		0.14			0.27	
n		126			129	
Model 2: Obligation to Obey*						
Procedural Injustice	-2.95 (0.40)	-0.63	-7.35**	-2.71 (0.47)	-0.60	-5.77**
Likelihood Ratio χ^2		54.01**			33.32**	
McFadden's R^2		0.18			0.17	
n		125			128	
Model 3: Normative Alignment						
Procedural Injustice	-3.12 (0.46)	-0.65	-6.83**	-4.25 (0.59)	-0.76	-7.22**
Likelihood Ratio χ^2		46.58**			52.08**	
McFadden's R^2		0.21			0.32	
n		125			127	
Model 4: Trust in Police*						
Procedural Injustice	-4.02 (0.58)	-0.74	-6.89**	-3.79 (0.58)	-0.72	-6.48**
Likelihood Ratio χ^2		47.49**			41.96**	
McFadden's R^2		0.27			0.24	
n		126			129	
Model 5: Future Cooperation						
Procedural Injustice	-0.72 (0.47)	-0.16	-1.54	-0.00 (0.46)	-0.00	-0.01
Police Legitimacy	1.10 (0.28)	0.47	3.86**	1.36 (0.32)	0.55	4.25**
Likelihood Ratio χ^2		37.59**			29.74**	
McFadden's R^2		0.15			0.12	
n		124			126	

Note. Entries are unstandardized regression coefficients (*b*), robust standard errors (s.e.), and standardized regression coefficients (β).

*Model 4 for male officers did not pass the parallel lines test. Neither version of Model 2 passed the parallel lines test.

** $p < 0.001$

26

Discussion

The results of this study add to the mounting evidence that procedural injustice is associated with a variety of deleterious outcomes, including negative emotionality, low police legitimacy, and the reduced likelihood of cooperating with police in the future (albeit indirectly via police legitimacy). This study also investigated whether police officer gender moderated the effect of procedural injustice. The weight of the evidence suggested that officer gender does not condition the effect of unfair police tactics during public encounters, suggesting that this extralegal variable is less salient than the treatment citizens receive. These results have implications for theory, future research, and practice.

This study provides support for the invariance thesis. In nearly every instance, officer gender failed to moderate the influence of procedural injustice. It is worth noting that the one observation where gender did have a moderating was in the stalking scenario. This may suggest that other factors like incident type may affect the role of officer gender, but further research needs to be conducted before conclusions can be reached. Overall, the results showed that poor treatment is just as consequential for female officers as it is for male officers. Simply put, when it comes to procedural injustice, treatment appears to outweigh the effect of gender stereotypes that may influence how citizens perceive police treatment.

The results from this study point to a couple avenues for future studies. First, future research should further examine the relationship between emotions and procedural injustice, expanding on the mediating role that the former may play. This remains an understudied subject. Second, to better understand the link between officer gender and procedural justice, future researchers may want to consider the effect of officer gender on

receptivity to procedural justice training. The literature generally suggests that female officers possess different skill sets than their male counterparts, and that they are also more willing to engage in community policing (DeJong, 2005; Schuck, 2014; Rabe-Hemp, 2009). Therefore, females may be more supportive and receptive to in-service procedural justice training.

Future research should also consider using qualitative methodology that could provide a richer understanding of citizen perceptions of officer gender. One way to do this would be to conduct separate focus groups with individuals who responded to each experimental condition found in hypothetical vignettes (e.g., female officer violating the principles of procedural justice). Asking participants to describe the police officer in the scenario and how they feel about the interaction would provide much needed insights to how citizens perceive male and female officers. Moreover, using open ended questions will allow for candid answers from participants about perceptions of unjust treatment and elaboration on notions of gender and emotion. The use of qualitative methods may potentially help provide deeper understandings of the results generated by the survey data.

Two practical implications can be drawn from this study. First, existing procedural justice training does not seem to emphasize the link between procedural injustice and citizens' emotional responses (Antrobus, Thompson, Ariel, 2018; Skogan, Craen, & Hennessey, 2015). Educating officers on this relationship may prove beneficial. The second practical implication is to incorporate additional training on the invariance of procedural injustice to officers. Doing so will reinforce the importance of fair treatment, regardless of extralegal characteristics like officer gender, and the consequences for

emotions, legitimacy, and cooperation that procedural justice has in police-citizen encounters.

A few limitations need to be discussed. First, the study used a university-based sample, which was diverse in terms of gender and race, but may not be generalizable to other populations. Second, this study used vignettes to portray hypothetical scenarios and asked participants how they would react. Such responses do not reflect actual behavior. However, Azjen (1991) has noted that intended behavior is correlated to actual behavior, suggesting that the survey responses should be representative of citizen behavior to a similar police-citizen interaction. Although these limitations should be taken into account, the evidence presented provides meaningful contributions to process-based theory.

While the results of this study support gender diversity in policing (i.e., departments should not hesitate hiring females due to negative stereotypes) they do not lend themselves to gender equality in policing. Put simply, just because females and males are not perceived differently when using improper treatment, does not mean that females are generally treated equally by both citizens and departments in all situations (i.e., pay, opportunities for advancement, group integration). Moreover, given common stereotypes regarding the nurturing and caring status of females, the results may provide different findings if research were to look at the impact of procedurally just treatment. If females are stereotyped as having procedurally just behavior more generally, procedural justice may seem outside the norm for male officers and they may be perceived more just (i.e., they would be praised for good behavior). These are empirical questions that can only be answered via future research.

In closing, this study has demonstrated that citizens are not influenced negatively by stereotypes regarding gender roles when making judgements about police treatment. The effect of unfair treatment when practiced by female officers is highly similar to what happens when their male counterparts treat people likewise. The use of vignette methodology in this paper provided a unique opportunity to address officer gender empirically, given the limits to studying officer gender in police departments due to a lack of diversity. The evidence presented in this study speaks specifically to the importance of officer behavior and, more broadly, supports equitable perceptions of officer behavior in policing.

References

Acker, J. (1990). Hierarchies, jobs, bodies: A theory of gendered organizations. *Gender & society*, *4*(2), 139-158.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179-211.

Algoe, S. B., Buswell, B. N., & DeLamater, J. D. (2000). Gender and job status as contextual cues for the interpretation of facial expression of emotion. *Sex Roles*, *42*(3-4), 183- 208.

Antrobus, E., Thompson, I., & Ariel, B. (2019). Procedural justice training for police recruits: results of a randomized controlled trial. *Journal of Experimental Criminology*, *15*(1), 29-53.

Barkworth, J. M., & Murphy, K. (2015). Procedural justice policing and citizen compliance behaviour: The importance of emotion. *Psychology, Crime & Law*, *21*(3), 254-273.

Barrett, L. F., & Bliss-Moreau, E. (2009). She's emotional. He's having a bad day: Attributional explanations for emotion stereotypes. *Emotion*, *9*(5), 649-658.

Bauer, C. C., & Baltes, B. B. (2002). Reducing the effects of gender stereotypes on performance evaluations. *Sex Roles*, *47*(9-10), 465-476.

Beijersbergen, K. A., Dirkzwager, A. J., Molleman, T., Van der Laan, P. H., & Nieuwbeerta, P. (2015). Procedural justice in prison: The importance of staff characteristics. *International Journal of Offender Therapy and Comparative Criminology*, *59*(4), 337-358.

Bottoms, A., & Tankebe, J. (2012). Beyond procedural justice: A dialogic approach to legitimacy in criminal justice. *Journal of Criminal Law & Criminology*, *102*(1), 119-170.

Braga, A. A., Winship, C., Tyler, T. R., Fagan, J., & Meares, T. L. (2014). The salience of social contextual factors in appraisals of police interactions with citizens: A randomized factorial experiment. *Journal of Quantitative Criminology*, *30*(4), 599-627.

Clogg, C. C., Petkova, E., & Haritou, A. (1995). Statistical methods for comparing regression coefficients between models. *American Journal of Sociology*, *100*(5), 1261-1293.

Correll, S. J., & Ridgeway, C. L. (2003). Expectation states theory. In J. Delamater (Ed.), *Handbook of social psychology* (pp. 29-51). New York, NY: Kluwer Academic Publishers.

DeJong, C. (2005). Gender differences in officer attitude and behavior. *Women & Criminal Justice*, *15*(3-4), 1-32.

Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, *109*(3), 573-598.

Eagly, A. H., Makhijani, M. G., & Klonsky, B. G. (1992). Gender and the evaluation of leaders: A meta-analysis. *Psychological Bulletin*, *111*(1), 3-22.

Etaugh, C., & Folger, D. (1998). Perceptions of parents whose work and parenting behaviors deviate from role expectations. *Sex Roles*, *39*(3-4), 215-223.

Flippin, M. R. (2018). *The effect of procedural injustice on cooperation with 911 operators and criminal justice authorities: A factorial vignette-based study* (Master's thesis). Retrieved from ProQuest Dissertations & Theses Global. (Order No. 10785263)

Gossett, J. L., & Williams, J. E. (1998). Perceived discrimination among women in law enforcement. *Women & Criminal Justice*, *10*(1), 53-73.

Herbert, S. (1998). Police subculture reconsidered. *Criminology*, *36*(2), 343-370.

Institutional Analysis. (2018). *Facts at a glance 2018*. Retrieved from: https://uoia.asu. edu/sites/default/files/asu _facts_at_a_glance__fall_2018_final .pdf

Jackson, J., Bradford, B., Hough, M., Myhill, A., Quinton, P., & Tyler, T. R. (2012). Why do people comply with the law? Legitimacy and the influence of legal institutions. *British Journal of Criminology*, *52*(6), 1051-1071.

Jackson, J., & Gau, J. M. (2016). Carving up concepts? Differentiating between trust and legitimacy in public attitudes towards legal authority. In E. Shockley, T. M. S. Neal, L. M. Pytlik Zillig, & B. H. Bornstein (Eds.), *Interdisciplinary perspectives on trust: Towards theoretical and methodological integration* (pp. 49-69). Cham, Switzerland: Springer International Publishing.

Johnson, D., Wilson, D. B., Maguire, E. R., & Lowrey-Kinberg, B. V. (2017). Race and Perceptions of Police: Experimental Results on the Impact of Procedural (In) Justice. *Justice Quarterly*, *34*(7), 1184-1212.

Leventhal, G. (1980). What should be done with equity theory? New approaches to the study of fairness in social relationships. In K. Gergen, M. Greenberg, & R. Willis (Eds.), *Social exchange: Advances in theory and research* (pp. 27-55). New York, NY: Plenum Press.

Lind, E., & Tyler, T. R. (1988). *The social psychology of procedural justice*. New York, NY: Plenum Press.

Long, J. S., & Freese, J. (2014). *Regression models for categorical dependent variables using Stata* (3rd ed). College Station, TX: Stata Press.

Lowrey, B. V., Maguire, E. R., & Bennett, R. R. (2016). Testing the effects of procedural justice and overaccommodation in traffic stops: A randomized experiment. *Criminal Justice and Behavior*, *43*(10), 1430-1449.

Maguire, E. R., Lowrey, B. V., & Johnson, D. (2017). Evaluating the relative impact of positive and negative encounters with police: A randomized experiment. *Journal of Experimental Criminology*, *13*(3), 367-391.

Mazerolle, L., Antrobus, E., Bennett, S., & Tyler, T. R. (2013). Shaping citizen perceptions of police legitimacy: A randomized field trial of procedural justice. *Criminology*, *51*(1), 33-63.

Morash, M., & Haarr, R. N. (1995). Gender, workplace problems, and stress in policing. *Justice Quarterly*, *12*(1), 113-140.

Murphy, K. (2017). Challenging the 'invariance' thesis: Procedural justice policing and the moderating influence of trust on citizens' obligation to obey police. *Journal of Experimental Criminology*, *13*(3), 429-437.

Murphy, K., & Tyler, T. (2008). Procedural justice and compliance behaviour: The mediating role of emotions. *European Journal of Social Psychology*, *38*(4), 652-668.

Nix, J., Pickett, J. T., Wolfe, S. E., & Campbell, B. A. (2017). Demeanor, race, and police perceptions of procedural justice: evidence from two randomized experiments. *Justice Quarterly*, *34*(7), 1154-1183.

Plant, E. A., Hyde, J. S., Keltner, D., & Devine, P. G. (2000). The gender stereotyping of emotions. *Psychology of Women Quarterly*, *24*(1), 81-92.

Poteyeva, M., & Sun, I. Y. (2009). Gender differences in police officers' attitudes: Assessing current empirical evidence. *Journal of Criminal Justice*, *37*(5), 512-522.

Rabe-Hemp, C. (2008). Survival in an "all boys club": Policewomen and their fight for acceptance. *Policing: An International Journal of Police Strategies & Management*, *31*(2), 251-270.

Rabe-Hemp, C. E. (2009). POLICEwomen or policeWOMEN? Doing gender and police work. *Feminist Criminology*, *4*(2), 114-129.

Reisig, M. D., & Bain, S. N. (2016). University legitimacy and student compliance with academic dishonesty codes: A partial test of the process-based model of self-regulation. *Criminal Justice and Behavior*, *43*(1), 83-101.

Reisig, M. D., Bratton, J., & Gertz, M. G. (2007). The construct validity and refinement of process-based policing measures. *Criminal Justice and Behavior*, *34*(8), 1005-1028.

Reisig, M. D., Mays, R. D., & Telep, C. W. (2018). The effects of procedural injustice during police–citizen encounters: A factorial vignette study. *Journal of Experimental Criminology*, *14*(1), 49-58.

Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues*, *57*(4), 743-762.

Sargeant, E., Antrobus, E., Murphy, K., Bennett, S., & Mazerolle, L. (2016). Social identity and procedural justice in police encounters with the public: Results from a randomised controlled trial. *Policing and Society*, *26*(7), 789-803.

Schein, V. E. (1989). The relationship between sex role stereotypes and requisite management characteristics revisited. *Academy of Management Journal*, *32*(3), 662-669.

Schuck, A. M. (2014). Gender differences in policing: Testing hypotheses from the performance and disruption perspectives. *Feminist Criminology*, *9*(2), 160-185.

Silvestri, M. (2018). Disrupting the "Heroic" Male Within Policing: A Case of Direct Entry. *Feminist Criminology*, *13*(3), 309-328.

Skogan, W. G., Van Craen, M., & Hennessy, C. (2015). Training police for procedural justice. *Journal of Experimental Criminology*, *11*(3), 319-334.

Sun, I. Y. (2007). Policing domestic violence: Does officer gender matter? *Journal of Criminal Justice, 35*(6)*,* 581-595.

Sunshine, J., & Tyler, T. R. (2003). The role of procedural justice and legitimacy in shaping public support for policing. *Law & Society Review*, *37*(3), 513-548.

Tankebe, J. (2013). Viewing things differently: The dimensions of public perceptions of police legitimacy. *Criminology*, *51*(1), 103-135.

Tankebe, J. (2014). Police legitimacy. In M. D. Reisig & R. J. Kane (Eds.), *The Oxford handbook of police and policing* (pp. 238-259). Oxford, England and New York, NY: Oxford University Press.

Tankebe, J., Reisig, M. D., & Wang, X. (2016). A multidimensional model of police legitimacy: A cross-cultural assessment. *Law and Human Behavior*, *40*(1), 11-22.

Thibaut, J. & Walker, L. (1978). A theory of procedure. *California Law Review, 66*(3), 541-566.

Tyler, T. R. (1989). The psychology of procedural justice: A test of the group-value model. *Journal of Personality and Social Psychology, 57*(5), 830-838.

Tyler, T. R. (2003). Procedural justice, legitimacy, and the effective rule of law. *Crime and Justice, 30,* 283-357.

Tyler, T. R. (2004). Enhancing police legitimacy. *The Annals of the American Academy of Political and Social Science*, *593*(1), 84-99.

Tyler, T. R. (2006). *Why people obey the law*. Princeton, NJ: Princeton University Press.

Tyler, T. R., & Blader, S. (2003). The group engagement model: Procedural justice, social identity, and cooperative behavior. *Personality and Social Psychology Review, 7*(4), 349-361.

Tyler, T. R., & Jackson, J. (2014). Popular legitimacy and the exercise of legal authority: Motivating compliance, cooperation, and engagement. *Psychology, Public Policy, and Law*, *20*(1), 78-95.

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

Wolfe, S. E., Nix, J., Kaminski, R., & Rojek, J. (2016). Is the effect of procedural justice on police legitimacy invariant? Testing the generality of procedural justice and competing antecedents of legitimacy. *Journal of Quantitative Criminology*, *32*(2), 253-282.

APPENDIX A

HYPOTHETICAL VIGNETTES

Vignette 1: *Stalking Incident*

You've noticed recently that somebody is following you while walking to class. You've also been receiving anonymous text messages. Today, you see that the person who has been following you keeps walking by where you live. You call the police. When the officer arrives you ask him to make the person leave. He responds, *"I can't do that because unless you are blind as a bat you can see they're just walking on the sidewalk, and that's a public space. Why don't you just lock your door?"* You tell the officer that you would like to file a report in case this person continues to follow you. *"Fine,"* he says, *"but keep it short, I have real police work to do."* After taking notes for a few minutes the officer says, *"This is a waste of time. What do you expect us to do with this?"* The officer walks back to his car and leaves. (Control Condition) [Gender altered to reflect male and procedural injustice in 2 experimental conditions.]

Vignette 2: *Hit and Run Incident*

While walking to class you witness a silver car hit a parked vehicle. There is clear damage to both vehicles, but the driver of the silver car takes off. You call the police and minutes later a patrol car arrives. The officer walks over to you and she says, *"Could you have picked a more inconvenient spot to wait for me?* So, who's hurt?" You respond, "Nobody is injured." She says, "Let me get this straight, *I busted my ass getting over here and nobody's hurt? There's nothing but a scratch. How do you know that wasn't already there?"* You start providing her with details on what happened and about the vehicle that did it. You tell her you tried to approach the vehicle but it left too fast. She responds, *"I'll put this on file in case the owner of the car calls to whine about the scratch. Next time, call us when something important happens."* The officer walks back to her car and leaves. (Control Condition) [Gender altered to reflect male and procedural injustice in 2 experimental conditions.]

APPENDIX B

RESULTS FROM BALANCE TESTS

Appendix B

Balance Tests

	Stalking Incident						Hit and Run Incident					
	Female Injustice	Female Justice	Male Injustice	Male Justice	χ^2	p-value	Female Injustice	Female Justice	Male Injustice	Male Justice	χ^2	p-value
Gender					0.47	0.93					3.14	0.37
Male	31.15%	36.92%	34.38%	33.87%			35.94%	25.40%	24.59%	34.33%		
Female	68.85	63.08	65.63	66.13			64.06	74.60	75.41	65.67		
Age					9.82	0.37					8.83	0.45
18	45.9	26.15	40.62	25.16			39.06	44.44	47.54	46.27		
19	26.23	35.38	34.38	32.26			28.12	28.57	19.67	23.88		
20	8.2	16.92	7.81	9.68			17.19	9.52	11.48	4.48		
21+	19.67	21.54	17.19	12.9			15.62	17.46	21.31	25.37		
Race/Ethnicity					3.05	0.80					2.64	0.85
White	37.70	40.62	29.69	36.07			42.19	41.27	44.26	41.79		
Latino	42.62	46.88	51.56	44.26			45.31	50.79	44.26	41.79		
Racial Minority	19.67	12.50	18.75	19.67			12.50	7.94	11.48	16.42		

APPENDIX C

SUBSAMPLE STATISTICS

Appendix C

Summary Statistics for Study Variables by Subsample

	Female Officers		Male Officers	
	Mean	SD	Mean	SD
Stalking Incident (n = 263)				
Angry	0.47	0.50	0.42	0.50
Obligation to Obey	2.63	0.85	2.60	0.88
Normative Alignment	2.15	0.98	2.14	0.92
Trust in Police	2.27	1.05	2.32	1.02
Police Legitimacy[a]	-0.00	0.95	0.00	0.93
Future Cooperation	2.98	1.12	2.83	1.13
n	132		131	
Hit and Run Incident (n = 262)				
Angry	0.40	0.49	0.41	0.49
Obligation to Obey	2.50	0.89	2.46	0.77
Normative Alignment	2.12	0.95	2.00	0.88
Trust in Police	2.19	0.98	2.32	0.96
Police Legitimacy[a]	0.03	0.96	-0.03	0.88
Future Cooperation	2.56	1.14	2.47	1.11
n	132		130	

[a] Weighted factor score