CITIZENS' PERCEPTIONS OF DISTRIBUTIVE AND PROCEDURAL INJUSTICE DURING TRAFFIC STOPS WITH POLICE

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This article examines the hypothesis that citizens' perceptions of injustice are based on normative factors (i.e., perceptions of equity and fairness) rather than instrumental factors (i.e., the outcomes received) by examining citizens' perceptions of injustice after traffic stops by police. The factors that predict citizens' perceptions of injustice are assessed using data collected for the Bureau of Justice Statistics (BJS)–sponsored Police-Public Contact Survey, a national survey of citizens regarding their contacts with police, collected in 1999. Using multinomial logistic regression, the influences of the normative and instrumental perspectives are examined while controlling for citizens' characteristics and race-interaction terms, along with legal, situational, and other control variables. The findings support Tyler's proposition that citizens are concerned with issues of fairness in addition to the actual outcomes they receive from criminal-justice officials. The findings also show significant differences in citizens' perceptions of distributive and procedural injustice by race. The implications for policy and future research are explored.

Keywords: *injustice; distributive justice; procedural justice; police; traffic stops; racial profiling*

As tensions between citizens and criminal-justice officials (particularly the police) began to rise in the 1960s, a crisis of legitimacy ensued. In 1967, the National Advisory Commission on Civil Disorders (aka, the Kerner Commission) reported that there was a national crisis in race relations, including profound and deep-seeded hostility between minority citizens and

police officers (Williams and Murphy 1990). The Kerner Commission report made clear that citizens' perceptions of, satisfaction with, and legitimacy toward police officers differed significantly by race. As a result, extensive research was conducted that examined the relationships between citizens' characteristics (particularly their race) and their attitudes and satisfaction with police. This line of research has continued to the present day, and findings overwhelmingly support the conclusions of the Kerner Commission that minority citizens have more negative attitudes toward police than do White citizens (for review, see Decker 1981; Hurst and Frank 2000; Webb and Marshall 1995).

Some recent studies, however, have called these research findings into question by suggesting that neighborhood context rather than individual race and ethnicity is a stronger predictor of citizens' attitudes toward police (Frank et al. 1994; Jesilow, Meyer, and Namazzi 1995; Reisig and Parks 2000; Sampson and Bartusch 1998; Weitzer 2000). Other research has suggested that it is not citizens' race or neighborhood, but rather their perceptions of fairness that have the most influence over their attitudes toward criminal justice officials (Tyler 1990, 2001; Tyler and Folger 1980). Specifically, Tyler (1990, 2001) has proposed a "normative" perspective of justice, where citizens' conceptions of justice are based on perceptions of fairness and equity. The normative perspective suggests that citizens are concerned with two types of justice: distributive and procedural. The concept of "distributive justice" implies that citizens are concerned about the *fairness* of *outcomes*, whereas the concept of "procedural justice" suggests that citizens are concerned with the *fairness* of the *procedures* used to achieve outcomes. Both of these justice concerns are viewed as independent from the "instrumental" perspective that citizens are concerned strictly with the *favorableness* of the outcomes they receive (Tyler 1990:5, 2001; also see Tyler and Folger 1980; Tyler et al. 1997).

Tyler's conceptions of distributive and procedural justice can be examined within the larger context of understanding and explaining "social justice" (Rawls 1971, 1999). In the current study, the concepts of "justice" and "injustice" are thoroughly discussed to establish a theoretical framework to guide the empirical inquiry. Thereafter, the current research examining citizens' perceptions of justice and injustice is reviewed. Tyler's (1990, 2001) proposition that citizens' perceptions of justice and injustice are based on normative rather than instrumental factors is empirically examined while simultaneously controlling for citizen characteristics during traffic stops by police. The factors that predict citizens' perceptions of distributive and procedural injustice during traffic stops are assessed using data collected for the Police-Public Contact Survey, a national survey of citizens regarding their contact with police, collected in 1999. Using multinomial logistic regression, the

influences of the normative and instrumental perspectives are examined while controlling for citizens' characteristics and race interaction terms, along with legal, situational, and other control variables. The findings generally support Tyler's proposition that citizens are concerned with issues of fairness of the procedures and outcomes they receive, rather than strictly the favorableness of outcomes. The findings also show significant differences in citizens' perceptions of distributive and procedural injustice by race. The article concludes with a discussion of the implications for future research and policing policies.

UNDERSTANDING AND DEFINING "JUSTICE" AND "INJUSTICE"

As recognized by Eisenstein and Jacob (1977:26), "nearly everyone in American society values doing justice." What is meant by the terms "justice" and "injustice" however, are often ambiguous and conflicting.[1] When exploring these concepts, it is immediately apparent that there is no consensus among scholars within or across academic disciplines regarding the meaning of justice. Therefore, the answer to the question, "What is justice?" is likely to vary greatly and has been the subject of great debates from the earliest sources of religious writings (e.g., the Bible, Koran, and Torah) and philosophers (e.g., Aristotle [ca. 322 B.C.] 2000; Hobbes [1651] 2000; Homer [ca. 800 B.C.] 2000; Locke [1690] 2000; Plato [ca. 380 B.C.] 2000; Rousseau [1754] 2000, [1762] 2000), to the writings of present-day scholars (e.g., MacIntyre 1984; Nagel 1973; Nozick 1974; Okin 1989; Rawls 1999; Sandel 1982; Tyler 1990). While the details regarding what is justice differ greatly across these works, most sources share the core idea that justice (in whatever form it is conceptualized) is an essential virtue in human society (Soloman and Murphy 2000).

In examining these works collectively, it appears that the concept of justice (and conversely, injustice) has at least three interrelated, yet distinguishable, underlying themes: *punishment*, *legitimacy*, and *fairness*. The most common underlying theme of justice is that of punishment. In fact, the concept of justice is often equated directly with punishment, retribution and/or revenge (e.g., Bentham 1789; Marongiu and Newman 1987; van den Haag 1969). The sources for this conception of justice can be traced back to the earliest religious writings (the Bible, Koran, and Torah). The oft-quoted biblical reference of an "eye for an eye" is how justice is conceptualized and perceived by many citizens. This conceptualization of justice as punishment pervades the American criminal-justice system and its processes. In political

contexts as well, the notion of justice is often used interchangeably with punishment (Scheingold 1991).

A second underlying theme of justice is related to governmental legitimacy. The concept of justice has been related to the theory of the social contract, which establishes a legitimate basis for democratic governments. As originally articulated, the theory of a social contract suggested that individuals within a society must collectively agree to forgo some of their rights, liberties, and freedoms in exchange for governmental regulation and protection (see Hobbes [1651] 2000; Locke [1690] 2000). It has been argued that the theory of a social contract involves the concept of justice as an actual component of the agreement for the legitimacy of government. That is, the social contract views society as "a network of voluntarily accepted obligations" and justice as "the content of the agreement" (Soloman and Murphy 2000; also see Rawls 1999:14-5). Thus, one of the underlying themes of justice is the provision of legitimacy to governments and their agents.

A final underlying theme of the concept of justice (and injustice) involves its relationship with property and ownership. It has been argued that injustice is often the result of the tensions between individual rights and equity (i.e., the right to own property versus inequities in wealth within a society). For example, the writings of Engels (1878), Locke (1690), Marx (1875), and Smith (1759, 1776), all describe the concepts of justice and injustice as they relate to conflicts involved in the unequal distribution of wealth within a society. Unequal distributions of wealth lead to questions of "fairness" and "equity" within societies. Thus, it has been argued that a fundamental idea underlying the concept of justice is fairness (Rawls 1971, 1999).

These three underlying themes of justice (i.e., punishment, legitimacy, and fairness) are combined into Rawls' (1971, 1999) conceptualization of "social justice." Rawls argued that social justice could be defined as "how major social institutions distribute fundamental rights and duties, and determine the division of advantages, economic opportunities, and social conditions" (1999:6). How individual citizens *perceive* justice, however, is likely to vary dramatically based on individual experiences, collective attitudes, media influences, along with individual and neighborhood demographic and economic factors.

CITIZENS' PERCEPTIONS OF JUSTICE AND INJUSTICE

As described above, in American society the differences in citizens' perspectives of justice and injustice may be attributed to the somewhat competing goals of punishment, legitimacy, and equity. As articulated by Eisenstein and Jacob, "for some, justice is done when criminals are caught and severely

punished regardless of procedures . . . for others, adherence to the principles of due process and equal treatment produces justice" (1977:26). Likewise, Gottfredson and Gottfredson asserted that equity is "a necessary (though insufficient) condition of justice" (1988:10). Jacob has also suggested that citizens' perceptions of justice could be measured as "the congruence between expectations about key officials in the justice system and perceptions of their actual behavior" (1971:69). Thus, a gap or inconsistency between citizens' expectations and officials' actual behavior has been interpreted as a form of injustice. This expectation-behavior gap is consistent throughout theories of criminal justice. For example, Packer (1968) described the differences between the "due process" and "crime control" models, Feeley (1973) examined differences between "is" and "ought," and most recently, Bernard and Engel (2001) articulated the differences between the "real" and the "ideal." As described by Bernard and Engel (2001), all research in criminal justice is being measured against an implicit prescriptive ideal of equity that is used to define legitimacy in the criminal-justice system.

These competing conceptualizations of justice are similar to Tyler's (1990, 2001) descriptions of distributive and procedural justice (also see Tyler and Folger 1980; Tyler et al. 1997). Initially Tyler contrasted what he described as an "instrumental" perspective of justice (i.e., concern solely with the favorableness of the outcomes) with a "normative" perspective of justice (i.e., concern with receiving fair outcomes arrived at through a fair procedure). That is, he argued that people make distinctions between "winning" and being treated "fairly." Several of his studies of citizens' perceptions of justice have shown that citizens were more concerned with issues surrounding the normative perspective of justice than simply the favorableness of the outcomes of their cases (Tyler 1990, 2001; Tyler and Folger 1980). That is, Tyler's research suggested that citizens' primary concerns of justice and injustice were based on the notion of fairness (i.e., fair procedures and fair outcomes).

Tyler (1990) further theorized that the normative perspective of justice is represented by two distinct, though related, psychological theories of justice: distributive justice and procedural justice. The concept of distributive justice suggests that citizens care about the fairness of outcomes, while the concept of procedural justice implies that citizens are concerned with fairness of the procedures prior to the outcomes. Both of these concerns are viewed as independent of the influence of the favorableness of the outcome (1990:5). Thus, the normative concepts of procedural and distributive justice equate the term *justice* with fairness of the procedures and outcomes, respectively, whereas the instrumental concept of justice equates the term *justice* with the favorableness of the outcomes. Combined, these conceptions of injustice lead to perceptions of legitimacy of the criminal justice system and its agents.

PRIOR RESEARCH

Prior research examining citizens' attitudes toward criminal justice officials—and police in particular—has generally found that African American and Hispanic citizens have more negative attitudes compared to White citizens (Albrecht and Green 1977; Bayley and Mendelsohn 1969; Bordua and Tifft 1971; Browning et al. 1994; Carter 1983; Decker 1981; Dunham and Alpert 1988; Furstenburg and Wellford 1973; Jacob 1971; Lasley 1994; Scaglion and Condon 1980b; Taylor et al. 2001; Tuch and Weitzer 1997; Webb and Marshall 1995; Weitzer 2000; Weitzer and Tuch, 1999). Likewise, studies have shown that juveniles have more negative attitudes toward police compared to adults (Hurst and Frank 2000; Jesilow et al. 1995; Taylor et al. 2001) and that citizens of lower socioeconomic status have more negative attitudes compared to those of higher social class (Weitzer 1999; Weitzer and Tuch 1999).

These research findings have been bolstered by studies that examine the role that citizens' characteristics play in understanding the cognitive processes associated with perceptions of injustice during encounters with police. For example, Scaglion and Condon (1980b) reported that African American and White citizens had different cognitive structures concerning their evaluations of police and emphasized the importance of examining differences in attitudinal structures. Sullivan, Dunham, and Alpert (1987) expanded upon Scaglion and Condon's (1980b) work by examining attitudinal structures by race, ethnicity, and age, and noted differences in the conceptualization of attitudes toward police among the different subgroups. Follow-up work by Webb and Marshall (1995) also found differences in the cognitive structure of attitudes toward police by African American, White, and Hispanic citizens.

Although the bulk of research examining citizens' attitudes toward police has reported that citizens' race and ethnicity are significant factors, a handful of studies have begun to question this conclusion. In Bayley and Mendelsohn's classic research on citizens' attitudes toward police, they recognized that "it is naïve to think that people have a single attitude toward the police. Attitudes toward the police are dependent upon context" (1969:35). Jacob's (1971) early research suggested that the differences in perceptions of police by race could be the result of neighborhood context. More recent research conducted by Frank and his colleagues (1994) reported that African American residents in Detroit had significantly more *positive* views toward police compared to White residents. These scholars suggested that this counter-intuitive finding may be due to community context. Likewise, Weitzer (2000) reported that residents' attitudes toward police in

Washington, D.C. were not predicted by their individual race and ethnicity, but rather by neighborhood context (also see Jesilow et al. 1995).

The hypothesis that neighborhood context may condition the relationship between individual race/ethnicity and their attitudes toward police has been tested in more quantitatively sophisticated studies utilizing hierarchical linear modeling. Studies by both Sampson and Bartusch (1998) and Reisig and Parks (2000) found that the influence of citizens' race over attitudes toward police diminished greatly when the neighborhood context was examined. Specifically, Sampson and Bartusch (1998) reported that although Black and Latino citizens in Chicago reported less satisfaction with police, when neighborhood variables (including concentrated disadvantage, immigrant concentration, and violent crime rate) were controlled for, citizens' individual-level measures of race and ethnicity were no longer significant predictors of satisfaction with police. Although less definitive, Reisig and Park's analyses of resident surveys in Indianapolis and St. Petersburg showed that "some (although far from all) of the difference in satisfaction with police found for Whites and African Americans can be attributed to differences in residential location" (2000:627).

Research conducted by Tom Tyler has also suggested that citizens' satisfaction with criminal-justice officials is not based solely on race or ethnicity. He concluded that perceptions of fairness are the driving force behind citizens' attitudes and perceptions of injustice. Tyler's research has consistently shown that citizens are more concerned with issues of equity and fairness than the actual outcomes they receive from criminal justice officials. Citizen survey data from Evanston, Illinois, showed that citizens' reported satisfaction with police was independent of whether police "solved" the problems for which they were called, or whether citizens received citations during traffic stops (Tyler and Folger 1980). Likewise, Tyler's survey of Chicago residents showed that "in evaluating the justice of their [citizens'] experiences, they consider factors unrelated to outcomes, such as whether they have had a chance to state their case and been treated with dignity and respect" (1990:178).

Tyler's (2001) examination of responses from a sample of Oakland residents also revealed that of those who had any type of direct contact with police in the past year (e.g., in response to calls for service, pedestrian stops, traffic stops, etc.), 44 percent reported an unsatisfactory outcome, 28 percent believed the police used unfair procedures, and 25 percent thought they were treated unfairly by the police. Citizens' general evaluations of the police were predicted by both the favorableness of the outcome *and* citizens' perceptions of fairness and equality of the treatment they received. Tyler's analyses of citizens' perceptions of police, however, did not differ by citizens' race. That is,

the findings showed that White and non-White respondents both valued equity over favorableness of outcomes. As summarized by Tyler (2001) in his examination of residents in Chicago:

> These findings suggest that all residents—majority and minority—are very concerned about how the police treat people. . . . Residents are strongly influenced by whether or not they believe that the police and courts treat people with respect, dignity, and fairness and do not harass them or subject them to rude or racist treatment. This is true for both white and minority group members. (P. 219)

These findings conflict with the bulk of the literature examining citizens' attitudes toward police, which has generally reported differences by race and/or ethnicity. They also conflict with early research by Smith and Hawkins (1973) that found that citizens surveyed in Seattle who were not satisfied with the police action following a reported victimization had more negative attitudes toward police than those citizens who reported more favorable outcomes.[2]

Analyses from a survey of citizens in Pittsburgh showed that citizens' perceptions of the ways in which officers interacted with them personally in prior encounters was the most significant determinant of their general attitudes toward police (Scaglion and Condon 1980a). In this study, citizens' perceptions of prior incidents with police were stronger predictors of their general attitudes than were all other socioeconomic variables including race. In a wave-panel survey design of residents in a large midwestern city, Brandl and his colleagues (1994) also focused on the differences between global and specific attitudes toward police. They found that citizens' general attitudes toward police affected their assessments of specific contacts with police and vice versa. Specifically, citizens who had unfavorable attitudes toward the police were more likely to evaluate their specific contacts with police as unfavorable, and citizens' attitudes regarding their specific contacts with police influence their overall global attitudes.[3]

Tyler's (1990, 2001) work on perceptions of justice has shown similar findings that citizens' perceptions are based on their personal experiences with criminal-justice officials. As Tyler reports, "in contrast to what is often believed, public confidence in the police and courts is not primarily linked to judgments about cost, delay, and performance . . . people's concerns on this general level are very similar to those that are central to people's reactions to their personal experiences" (2001:216).

Unfortunately, the research reviewed above has been unable to examine the specific circumstances of citizens' experiences and how these factors shape citizens' perceptions of justice and injustice. As acknowledged by

Tyler (2001:223), his analyses were limited because the survey did not ask for details regarding the contact between citizens and police. Therefore, what remains unclear is how the specific details of the police-citizen interactions influence citizens' perceptions of justice and injustice, and whether these perceptions differ based on race, age, sex, social class, and other factors.

RESEARCH QUESTIONS

The contrasting perspectives regarding the influence of citizens' race and ethnicity over perceptions of injustice can be examined through police-citizen encounters during traffic stops. Citizen contact with the police is most likely to occur via traffic stops. Findings from a national survey in 1999 found that of the 21 percent of U.S. residents who had a contact with police in the previous year, more than half (52 percent) of the contacts occurred during traffic stops (Langan et al. 2001). Therefore, interactions with police during traffic stops may provide an opportunity for the formation of citizens' perceptions of justice and injustice of the police specifically and the criminal justice system more generally.

As previously noted, most prior research has found that citizens' perceptions of injustice are based on their characteristics. Other research has suggested the importance of community characteristics. And finally, a third body of research has indicated that citizens' perceptions of injustice are based on the fairness and equity of individual experiences, rather than actual outcomes. Two of these competing hypotheses are tested with data collected for the Police Public Contact Survey (PPCS), taken from a national sample of citizens in 1999 (Langan et al. 2001). The size and richness of the PPCS data offer a unique opportunity to examine citizens' perceptions of distributive and procedural injustice during traffic stops by police. These data allow for the simultaneous examination of multiple influences (e.g., citizens' characteristics, situation-based factors, interaction effects, and outcomes) over citizens' perceptions of distributive and procedural justice. Unfortunately, only crude community-level measures were publicly available for the PPCS data and therefore the hypothesis that community context influences citizens' perceptions of injustice could not be adequately tested.[4]

DATA

The PPCS is a BJS-sponsored national survey of citizens designed to examine citizens' interactions with police. After a pilot test was fielded in 1996, a revised version of the survey was administered to citizens as a

supplemental questionnaire to the National Crime Victimization Survey (NCVS) during the last six months of 1999. This national sample was 15 times larger than the initial pilot test (Langan et al. 2001). As a supplement to the NCVS, the PPCS was a complex survey design that used a cluster sampling method. The sampling frame consisted of "approximately 50,000 sample housing units selected with a stratified multi-stage cluster design" (U.S. Department of Justice 2001:3). Specifically, the NCVS sample included 94,717 respondents age 16 or older. Of these respondents, 85.0 percent (80,543) completed questions included in the PPCS.[5] After adjustments for nonresponse, this sample weights to a national estimate of 209,350,600 persons 16 years or older (U.S. Department of Justice 2001).

The analyses reported below are based on those respondents who indicated that they were the driver during a traffic stop with police during the past year. Of the 80,543 respondents, 17,720 (22.0 percent) reported that they had some type of contact with the police during the past year, and of those respondents who had contact with police, 7,054 (39.8 percent) reported they were the driver during a traffic stop.[6] The descriptive statistics reported below are based on weighted data; this sample of 7,054 drivers stopped by police (8.7 percent of all valid interviews) weights to a national estimate of 19,277,001.[7]

MEASURES

Perceptions of Distributive and Procedural Injustice

Citizens' perceptions of distributive and procedural injustice were initially captured through survey responses to two separate questions: (1) Was the traffic stop legitimate? and (2) Did the officer act properly during the stop? These two questions were reverse coded and captured as separate dichotomies, where 14.7 percent of citizens indicated they thought the stop was not legitimate, and 9.9 percent of citizens indicated they thought the police acted improperly during the stop. Combining both concepts of injustice, 19.1 percent of citizens indicated they had negative perceptions of their encounters with police. As shown in Table 1, a four-category variable was created to examine the differences among citizens' perceptions, where 1 = no negative perceptions (81.0 percent), 2 = perceived the stop was not legitimate only (9.2 percent), 3 = perceived the police acted improperly only (4.4 percent), and 4 = perceived both the stop was not legitimate *and* the police acted improperly (5.5 percent).[8]

The predictor variables are also reported in Table 1 and described in detail below. These variables are grouped as citizens' characteristics and

TABLE 1: Descriptives of Drivers Stopped by Police, Police-Public Contact Survey, 1999

Variables	Minimum	Maximum	Mean	Standard Deviation
Citizen perceptions				
Perceptions of injustice	1	4	1.344	0.801
1 = No perceptions of injustice			0.810	
2 = Distributive injustice only			0.092	
(i.e., stop not legitimate)				
3 = Procedural injustice only			0.044	
(i.e., police acted improper)				
4 = Distributive and procedural injustice			0.055	
(i.e., stop not legitimate and police				
acted improperly)				
Citizen characteristics				
Male	0	1	0.608	0.488
Age	16	88	35.964	14.195
Caucasian	0	1	0.770	0.421
African American	0	1	0.116	0.320
Hispanic	0	1	0.084	0.277
Other race	0	1	0.030	0.171
Employed	0	1	0.795	0.404
Income less than $20,000	0	1	0.279	0.448
Income $20,000 — $49,999	0	1	0.349	0.477
Income greater than $50,000	0	1	0.373	0.484
Situational, legal, control variables				
Caucasian officer	0	1	0.819	0.385
Number of people in the vehicle	1	8	1.375	0.772
Number of traffic stops (past year)	1	10	1.356	0.992
Any evidence (in vehicle or on citizen)	0	1	0.009	0.093
CATI survey	0	1	0.240	0.427
Normative model				
Speeding	0	1	0.492	0.500
DUI roadside check	0	1	0.021	0.143
Other traffic offense	0	1	0.222	0.415
Vehicle defect	0	1	0.107	0.309
License/registration check	0	1	0.087	0.281
Driver suspected of something	0	1	0.022	0.148
Other reason for stop/unknown	0	1	0.050	0.218
Any use of force (excluding handcuffed)	0	1	0.007	0.085
Any search (vehicle or citizen)	0	1	0.066	0.247
Instrumental model				
Citation	0	1	0.521	0.500
Arrest	0	1	0.030	0.171
Interaction terms				
Low-income African Americans	0	1	0.046	0.209
Low-income Hispanics	0	1	0.031	0.173
African American citizen/Caucasian officer	0	1	0.083	0.276
Hispanic citizen/Caucasian officer	0	1	0.068	0.252

NOTE: n = 7,034 drivers stopped by police, unweighted (n = 19,277,002 weighted).

interaction terms, situational/legal/control variables, variables representing the normative model, and variables representing the instrumental model.

Citizens' Characteristics

Prior research has indicated that citizens' characteristics (e.g., sex, race, age, social class, etc.) influence their attitudes toward police and perceptions of injustice. To test this hypothesis, several dichotomous variables are created. Specifically, citizens' sex is captured as male or female, whereas citizens' race is captured through four dichotomous variables: non-Hispanic Caucasian, non-Hispanic African American, Hispanic, and other.[9] For the multivariate models that follow, Caucasian is the excluded comparison category. A dichotomous variable also measures respondents' employment status and three separate dichotomous variables capture respondents' annual income levels: less than $20,000, $20,000 to $49,999, and greater than or equal to $50,000.[10] In the multivariate analyses to follow, income greater than or equal to $50,000 is the excluded comparison category. Finally, citizens' age is measured as a continuous variable ranging from 16 to 88 years old. As shown in Table 1, the majority of citizens stopped by police were male (60.8 percent), White (77.0 percent), employed (79.5 percent), with an annual income above $50,000 (37 percent), and average of 36 years old.

Situational, Legal, and Control Variables

Additional measures are created to examine the influence of specific situations, legal factors, and methodological controls. It is plausible that the race of the officer may influence citizens' perceptions of distributive and procedural injustice. For example, other research has found that citizens' actions during police-citizen encounters are influenced by the officer's race (Mastrofski, Snipes, and Supina 1996). Specifically, Mastrofski and his colleagues (1996) reported that White officers encountering minority citizens were significantly more likely to gain compliance, whereas minority officers encountering White citizens were significantly less likely. In contrast, Engel (2003) reported that minority suspects were significantly more likely to be noncompliant toward White officers. Regardless of the direction of the effect, one might expect that in addition to citizens' behavior, citizens' perceptions may also be influenced by officers' race. Therefore, officers' race (as reported by the citizen) is measured as a dichotomous Caucasian/ non-Caucasian variable.

Some additional characteristics of the situation might be expected to have an influence over citizens' perceptions of injustice during traffic stops with police. For example, the number of passengers in the vehicle might influence

citizens' perceptions of the actions taken by police officers. Tedeschi and Felson's (1994) social interactionist theory of coercive actions suggests that the social dynamics associated with impression management, or "saving face," are of great concern in situations where there has been a challenge to authority, such as in police-citizen encounters. Therefore, one might expect that negative perceptions of police may arise if citizens' social identities have been threatened in a public setting. To examine this hypothesis, the number of people in the vehicle is measured as a continuous variable (range = 1 – 8).

It is also expected that citizens who experience more stops by police are more likely to perceive the current stop as illegitimate or that the police were acting improperly. That is, as the frequency of stops increase, citizens' perceptions of harassment also increases. The number of prior stops in the past year is measured as a continuous variable, ranging from 1 to 10. In addition, whether any evidence of criminal wrongdoing was found during vehicle or person searches is captured as a dichotomous variable. Respondents reported that evidence was found in fewer than 1 percent of all stops. Finally, a dichotomous variable is created to control for whether the citizen was responding to a computer-assisted telephone interview (CATI). This variable is included in the analyses to control for the possibility that the manner in which the survey was administered might have an influence over citizens' responses (Lohr 1999).

Normative Model

Tyler's normative model suggests that citizens are concerned about fairness of both procedures and outcomes rather than the favorability of the outcomes. Therefore, both the initial reason for a traffic stop and the procedures used by police during that stop are hypothesized to be related to citizens' perceptions of injustice. One of the most common complaints among minority citizens is that police stop them for minor or invalid reasons (Browning et al. 1994). To examine this concern, a series of dichotomous variables capture the primary reason citizens were stopped by police. Respondents were asked if the police indicated to them the reason for the stop; 97.6 percent of respondents indicated that police had informed them why they were being detained.[11] The percentages reported in Table 1 indicate the primary reason for the stop: 2.1 percent of respondents were stopped for a DUI check, 49.2 percent for speeding, 22.2 percent for a traffic offense other than speeding, 10.7 percent for a problem or defect with the vehicle, 8.7 percent for a license or registration check, 2.2 percent for a suspicious driver, and 5.0 percent for some other or unknown offense.[12] For the multivariate models that follow, the most frequent offense category (i.e., speeding) is the excluded comparison group.[13]

Other measures of procedural fairness include whether police used force or conducted searches. Use of force is measured as the threat or actual use of physical force (excluding handcuffs) by police against citizens. Using this measure, fewer than 1 percent of drivers stopped by police indicated that they had force threatened or used against them by police.[14] Vehicle and citizen searches are combined into an "any search" dichotomous variable, with 6.6 percent of respondents indicating that officers searched their vehicle, their person, or both.

Instrumental Model

Tyler's (1990, 2001) instrumental model suggests that citizens' perceptions of injustice are based on the official outcomes they receive. That is, if citizens receive unfavorable outcomes, they would be more likely to have negative perceptions of the police. For traffic stops, there are two formal outcome measures: citations and arrests. Traffic citations are captured as a dichotomous variable, with 52.1 percent of respondents stopped by police indicated they had received a citation. Arrest is also measured as a dichotomous variable, with 3.0 percent of citizens reporting an arrest during traffic stops.

Interaction Terms

In addition, it is hypothesized that some combinations of citizens' characteristics may be stronger predictors of citizens' perceptions of injustice compared to the influence of these characteristics independently. Research conducted by Weitzer and Tuch (1999) found that citizens' attitudes toward the criminal-justice system, and the police in particular, were influenced by a combination of race and social class. Specifically, Black citizens of higher social class were more critical of the criminal-justice system and the police compared to lower class Blacks and Whites (regardless of class standing). To examine the contingent relationship between race and social class, two dichotomous variables were created. Specifically, two-way interaction terms capture the percentage of low-income African Americans and low-income Hispanics. As shown in Table 2, African Americans with low income (i.e., income less than $20,000 per year) represent 4.6 percent of the sample, whereas low-income Hispanics represent 3.1 percent.

Prior research has also suggested that contingent relationships may exist for the influence of officer and citizen race over perceptions of injustice. As previously described, Mastrofski et al.'s (1996) research found that citizens' compliance differed for citizen and officer race dyads. It is plausible that minority and White citizens may have different perceptions of injustice

TABLE 2: Multinomial Logistic Regression of Citizens' Perceptions of Injustice, Police-Public Contact Survey, 1999

Variable	Distributive Injustice: Stop Not Legitimate			Procedural Injustice: Police Acted Improper			Distributive and Procedural Injustice: Stop Not Legitimate and Police Act Improper		
	Coefficient	SE	Odds Ratio	Coefficient	SE	Odds Ratio	Coefficient	SE	Odds Ratio
Intercept	-3.57***	0.24		-3.21***	0.39		-5.45***	0.37	
Citizen characteristics									
Male	0.07	0.10	1.07	-0.17	0.16	0.84	0.41**	0.13	1.50
Age	-0.00	0.00	1.00	-0.01	0.01	0.99	0.02***	0.00	1.02
African American	0.54***	0.15	1.71	0.70***	0.21	2.02	0.77***	0.17	2.16
Hispanic	-0.08	0.16	0.92	-0.05	0.22	0.95	0.30	0.21	1.35
Other race	-0.05	0.24	0.96	-0.07	0.42	0.93	-0.06	0.33	0.94
Employed	0.23*	0.12	1.26	-0.14	0.17	0.87	0.19	0.18	1.21
Income less than $20,000	0.13	0.12	1.14	-0.18	0.20	0.83	-0.12	0.15	0.89
Income $20,000 – $49,999	-0.01	0.11	0.99	-0.31	0.18	0.73	-0.05	0.15	0.95
Situation, legal, and control variables									
Caucasian officer	-0.03	0.13	0.97	-0.30	0.16	0.74	0.27	0.16	1.31
Number of people in the vehicle	0.13**	0.05	1.14	0.25***	0.06	1.28	0.08	0.08	1.08
Number traffic stops (past year)	0.12**	0.05	1.13	0.22***	0.05	1.24	0.25***	0.04	1.29
Any evidence	0.21	0.66	1.24	0.11	0.53	1.12	0.38	0.56	1.46
CATI survey	0.29**	0.10	1.34	-0.40*	0.16	0.67	-0.14	0.14	0.87
Normative model									
DUI roadside check	0.34	0.45	1.41	-1.01	0.76	0.36	-0.96	1.03	0.38
Non–speeding traffic offense	1.16***	0.11	3.18	-0.31	0.18	0.73	1.30***	0.13	3.66
Vehicle defect	0.29	0.18	1.34	-0.61*	0.25	0.54	0.73***	0.20	2.07
License/registration check	0.25	0.21	1.28	-1.17***	0.33	0.31	-0.01	0.31	0.99

(continued)

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TABLE 2 (continued)

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Variable	Distributive Injustice: Stop Not Legitimate			Procedural Injustice: Police Acted Improper			Distributive and Procedural Injustice: Stop Not Legitimate and Police Act Improper		
	Coefficient	SE	Odds Ratio	Coefficient	SE	Odds Ratio	Coefficient	SE	Odds Ratio
Driver suspected of something	1.92***	0.27	6.84	−0.51	0.53	0.60	2.01***	0.33	7.45
Any use of force	0.45	1.15	1.57	2.73***	0.64	15.27	2.76***	0.66	15.72
Any search	0.60**	0.20	1.83	2.09***	0.24	8.07	1.38***	0.21	3.96
Instrumental model									
Citation	0.42**	0.96	1.52	0.56**	0.16	1.75	0.57***	0.13	1.77
Arrest	−0.57	0.34	0.57	−0.17	0.36	0.84	−0.41	0.40	0.66
Overall fit (F-value)	12.63***								
Cox-Snell likelihood ratio	0.13								
Pseudo r-square	.11								

NOTE: The omitted reference category is no negative citizen perceptions. Table entries include multinomial logistic regression coefficients, followed by standard errors, and the log odds. Asterisks represent statistically significant differences at the following levels: *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$. $n =$ 7,034 unweighted, 19,277,002 weighted.

based on officers' race. Specifically, one might expect that minority citizens who are stopped by White officers are more likely to perceive they were treated unjustly and/or received an unfair outcome, compared to minority citizens stopped by minority officers and White citizens stopped by White and/or minority officers. To examine this hypothesis, two citizen-officer race interaction terms—African American citizen/Caucasian officer, and Hispanic citizen/Caucasian officer—are created to estimate the contingent relationships regarding the race of officers and citizens. These variables are reported in Table 2.

Data Limitations

As with all quantitative analyses, the analyses that follow are somewhat limited through the utilization of the PPCS data. First, there are theoretically relevant variables that simply were not measured with the data. For example, the use of skip patterns in the survey design produced unacceptable levels of missing data on some variables of interest (e.g., citizens' actions toward officers, citizens' use of drugs or alcohol), and therefore these variables are not included in the analyses.[15] Also, as previously noted, the PPCS data do not include adequate community measures to test the hypothesis that community context influences citizens' perceptions of injustice.

In addition, because the PPCS data were collected as a supplement to the NCVS, they have many of the same potentially problematic methodological issues as the NCVS (for review, see Biderman, Lynch, and Petersen 1991; Lynch 2002). Most important, the reliability and validity of self-reported data are not well understood. This becomes a major limitation if there are systematic biases in responses—that is, if particular types of citizens have differential reporting patterns on some variables. For example, Smith et al. (2000) reported in follow-up surveys with citizens who had received traffic citations that African American respondents were significantly less likely to self-report that they had received a ticket compared to White respondents. It is unknown if this trend of systematic underreporting by race found in the North Carolina data is also a problem with the PPCS. However, if African Americans do systematically underreport being stopped by police or receiving traffic citations, the analyses that follow would then represent a more conservative test of hypotheses regarding differential perceptions of injustice by race. Furthermore, as described by Lundman and Kaufman (2003:214), "there is a pressing need and ample scholarly room for additional research on Driving While Black using triangulated police-reported, citizen-reported, and observer-reported data."

ANALYSES

In complex survey designs such as that employed for the PPCS, the observations have different probabilities of selection. That is, due to nonresponse and under-coverage in the population, certain groups (e.g., young Black males in urban areas) may be underrepresented in the sample. Therefore, analyses based on these data must account for these potential differences. Failure to do so could lead to biased regression parameters and inflated standard errors (Lohr 1999:352-53). With logistic regression, if the model estimated is a good fit to the data, "the only difference between weighted and unweighted analyses would appear in the intercept terms" (Lohr 1999:372). Nevertheless, the PPCS has a cluster sample design that must be accounted for in the logistic-regression models. That is, "the dependence of the data induced by clustering will need to be considered in the logistic regression model for variance estimation" (Lohr 1999:372). Therefore, the analyses described below are generated through the WesVar statistical software package, with the jackknife replication method employed to generate estimate variances. After weighting the sample, the jackknife procedure produces degrees of freedom equal to the number of sampled primary sampling units (PSUs) minus the number of strata. The WesVar software takes into account the inflation factor and clustering when computing standard errors. Therefore, the jackknife replication estimator produces standard errors that are less likely to be inflated (for a full description of the jackknife procedure, see Lohr 1999:359). Thus, the use of weighted data in the analyses that follow is more appropriate than the use of non-weighted data because of the need for post-stratification adjustments. The standard errors generated through these procedures are not inflated, and therefore the tests of significance are reliable.

Multivariate Results

Using the categorical, unordered variable measuring citizens' perceptions of procedural and distributive justice, a multinomial logitistic regression model is estimated. This multinomial logitistic model represents an extension of binary logit models and is used to predict the probabilities of unordered response categories compared to an excluded category (see Liao 1994).[16] Findings from this analysis are reported in Table 2. The first three columns display the regression coefficients, standard errors, and odds ratios for the predictors of citizens' perceptions that the stop was not legitimate (i.e., perceptions of distributive injustice). The next three columns show the coefficients, standard errors, and odds ratios for citizens' perceptions that the

police acted improperly (i.e., perceptions of procedural injustice), and the final three columns display results for citizens' perceptions that both the stop was illegitimate and the police acted improperly (i.e., perceptions of both distributive and procedural injustice). The excluded category in this multinomial logistic regression analysis is no negative perceptions of the police or the stop.

The results show that four predictor variables have significant influences across all types of injustice. Citizens who were African American, stopped more frequently, searched by police, or received a traffic citation were significantly more likely to have perceptions of distributive injustice (i.e., perceived the stop was illegitimate), procedural injustice (i.e., perceived that the police acted improperly during the stop), or both combined. Other variables were significant predictors of one or another type of injustice. For example, citizens' perceptions that the initial stop was not legitimate were strongly influenced by the primary reason for the stop. Citizens who were stopped for traffic offenses other than speeding and those who were stopped for suspicion were significantly more likely than citizens who were stopped for speeding to perceive that the stop was illegitimate.

Significant predictors of citizens' perceptions of procedural injustice (i.e., the police acted improperly) differed somewhat from those predicting distributive injustice (i.e., the stop was not legitimate). The strongest predictors of procedural injustice were police actions during the stop. Citizens who had force threatened or used against them were 17.2 times more likely to perceive the police acted improperly. Likewise, citizens who were searched were 7.9 times more likely to perceive police acted improperly.

Three demographic variables were significant predictors of citizens' perceptions of both forms of injustice. Specifically, males, older respondents, and African Americans were significantly more likely to indicate that the initial stop was not legitimate and that the police acted improperly during the stop. In addition, the reason for the stop and actions taken by police during the stop were strong predictors of citizens' perceptions of injustice. Citizens who were stopped for more discretionary reasons (e.g., traffic offenses other than speeding, vehicle defects, and suspicion) were significantly more likely than citizens who were stopped for speeding to perceive that both forms of injustice had occurred. Finally, citizens who received a citation were also more likely to indicate they had both negative perceptions of the police. It is also noteworthy that Hispanic citizens and those of other races did *not* have significant perceptions of injustice. In addition, contrary to the hypotheses of the instrumental model, the most severe formal sanction (i.e., arrest) does *not* predict citizens' perceptions of distributive or procedural injustice.

Interaction Terms

The influence of interactions of citizens' race and income, along with officers' and citizens' race, were also examined. Citizens' race-income interaction terms are included in the models shown in Table 3. The interaction term capturing low-income African Americans is not significant for any form of injustice. Interestingly, however, the low-income/Hispanic variable is a significant and positive predictor of citizens' perceptions of procedural injustice, whereas the Hispanic main effect is significant and negative. This indicates that Hispanic citizens of different socioeconomic status have different perceptions of injustice as a result of traffic encounters with police. Compared to middle and upper class Whites, middle and upper class Hispanics are significantly less *likely* to perceive that the police acted improperly. Low-income Hispanic citizens, however, were 3.5 times more likely to perceive that the police had acted improperly during the stop.

The statistical model estimating the second set of interaction terms (officers' race and citizens' race) is reported in Table 4. As shown, the coefficients for the African American citizen/White officer and Hispanic citizen/White officer interaction terms were not significant. From these null findings, it appears that minority citizens' perceptions of injustice are not contingent upon the officers' race. That is, minority citizens' perceptions of procedural and distributive injustice during traffic stops are consistent across the race of the officer responsible for the stop.

DISCUSSION

Across all categories of the dependent variable, there were four consistent predictors of distributive and procedural injustice (i.e., African American citizens, citizens stopped more frequently, citizens searched by police, and citizens who received a citation). Consistent with Tyler's (1990, 2001) findings, the analyses reported above show that the favorableness of the outcome citizens receive during traffic stops does not alone fully account for citizens' perceptions of injustice. Rather, citizens' perceptions of injustice are also affected by the perceived *fairness* of the procedures and outcomes they receive. Based on the odds ratios reported for the multinominal logistic regression models, the substantively strongest predictors of citizens' perceptions of distributive and procedural injustice during traffic stops are represented in the normative model, which suggests that citizens are concerned with issues of equity and fairness in procedures and outcomes.

Within the normative model, the initial reason for the traffic stop, police use of force during the encounter, and vehicle/citizen searches are all

TABLE 3: Multinomial Logistic Regression (with income-race interaction terms) of Citizens' Perceptions of Injustice, Police-Public Contact Survey, 1999

Variable	Distributive Injustice: Stop Not Legitimate			Procedural Injustice: Police Acted Improper			Distributive and Procedural Injustice: Stop Not Legitimate and Police Act Improper		
	Coefficient	SE	Odds Ratio	Coefficient	SE	Odds Ratio	Coefficient	SE	Odds Ratio
Intercept	-3.56***	0.24		-3.20***	0.40		-5.45***	0.37	
Citizen characteristics									
Male	0.07	0.10	1.07	-0.18	0.16	0.83	0.40**	0.13	1.49
Age	-0.00	0.00	1.00	-0.01	0.01	0.99	0.02***	0.00	1.02
African American	0.61**	0.20	1.84	0.80**	0.27	2.23	0.98***	0.21	2.65
Hispanic	-0.27	0.22	0.76	-0.69*	0.34	0.50	0.17	0.23	1.19
Other race	-0.04	0.24	0.96	-0.06	0.42	0.94	-0.07	0.33	0.94
Employed	0.23	0.12*	1.26	-0.14	0.17	0.87	0.18	0.18	1.19
Income less than $20,000	0.11	0.13	1.12	-0.26	0.22	0.77	-0.04	0.16	0.96
Income $20,000 to $49,999	-0.01	0.11	0.99	-0.29	0.19	0.75	-0.06	0.15	0.94
Situation, legal, and control variables									
Caucasian officer	-0.03	0.13	0.97	-0.28	0.16	0.75	0.27	0.16	1.31
Number of people in the vehicle	0.13**	0.05	1.14	0.25***	0.06	1.28	0.08	0.08	1.09
Number traffic stops (past year)	0.12**	0.05	1.13	0.22***	0.05	1.25	0.26***	0.04	1.29
Any evidence	0.22	0.66	1.25	0.15	0.53	1.17	0.38	0.56	1.47
CATI survey	0.29**	0.10	1.34	-0.40**	0.16	0.67	-0.15	0.14	0.86
Normative model									
DUI roadside check	0.34	0.45	1.40	-1.03	0.76	0.36	-0.97	1.02	0.38
Nonspeeding traffic offense	1.16***	0.11	3.17	-0.32	0.18	0.72	1.29***	0.13	3.65
Vehicle defect	0.28	0.18	1.33	-0.63**	0.25	0.53	0.72***	0.20	2.06
License/registration check	0.25	0.21	1.28	-1.16**	0.33	0.31	-0.02	0.31	0.98
Driver suspected of something	1.92***	0.27	6.82	-0.51	0.53	0.60	1.99***	0.33	7.30

(continued)

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TABLE 3 (continued)

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Variable	Distributive Injustice: Stop Not Legitimate			Procedural Injustice: Police Acted Improper			Distributive and Procedural Injustice: Stop Not Legitimate and Police Act Improper		
	Coefficient	SE	Odds Ratio	Coefficient	SE	Odds Ratio	Coefficient	SE	Odds Ratio
Any use of force	0.46	1.15	1.58	2.73***	0.65	15.33	2.75***	0.66	15.65
Any search	0.59**	0.20	1.81	2.06***	0.24	7.85	1.37***	0.21	3.92
Instrumental model									
Citation	0.42***	0.10	1.52	0.57***	0.16	1.77	0.57***	0.13	1.77
Arrest	−0.56	0.34	0.57	−0.14	0.37	0.87	−0.41	0.40	0.66
Interaction terms									
Low-income African American	−0.18	0.27	0.84	−0.22	0.40	0.81	−0.62	0.37	0.54
Low-income Hispanic	0.48	0.32	1.61	1.31**	0.46	3.70	0.32	0.35	1.38
Overall fit (F-value)	11.65***								
Cox-Snell likelihood ratio	0.13								
Pseudo r-square	.12								

NOTE: The omitted reference category is no negative citizen perceptions. Table entries include multinomial logistic regression coefficients, followed by standard errors (in parentheses), and the log odds. Asterisks represent statistically significant differences at the following levels: * $p \leq .05$ **, $p \leq .01$, *** $p \leq .001$. $n = 7,034$ unweighted, 19,277,002 weighted.

TABLE 4: Multinomial Logistic Regression (with police-citizen race interaction terms) of Citizens' Perceptions of Injustice, Police-Public Contact Survey, 1999

Variable	Distributive Injustice: Stop Not Legitimate			Procedural Injustice: Police Acted Improper			Distributive and Procedural Injustice: Stop Not Legitimate and Police Act Improper		
	Coefficient	SE	Odds Ratio	Coefficient	SE	Odds Ratio	Coefficient	SE	Odds Ratio
Intercept	-3.50***	0.24		-3.17***	0.42		-5.34***	0.38	
Citizen characteristics									
Male	0.07	0.10	1.07	-0.18	0.16	0.84	0.40**	0.13	1.50
Age	-0.00	0.00	1.00	-0.01	0.05	0.99	0.02***	0.00	1.02
African American	0.35	0.27	1.42	0.52	0.33	1.68	0.44	0.39	1.56
Hispanic	-0.42	0.32	0.66	0.05	0.41	1.05	-0.00	0.50	1.00
Other race	-0.05	0.24	0.95	-0.07	0.42	0.93	-0.07	0.33	0.93
Employed	0.23*	0.12	1.26	-0.14	0.17	0.87	0.18	0.18	1.20
Income less than $20,000	0.13	0.12	1.14	-0.18	0.20	0.83	-0.11	0.15	0.89
Income $20,000 to $49,999	-0.01	0.11	0.99	-0.31	0.18	0.74	-0.04	0.15	0.96
Situation, legal, and control variables									
Caucasian officer	-0.11	0.15	0.90	-0.34	0.20	0.71	0.14	0.19	1.15
Number of people in the vehicle	0.14**	0.05	1.15	0.25***	0.06	1.28	0.08	0.08	1.08
Number traffic stops (past year)	0.12**	0.04	1.13	0.22***	0.05	1.24	0.25***	0.04	1.29
Any evidence	0.22	0.66	1.25	0.13	0.53	1.14	0.39	0.56	1.47
CATI survey	0.29**	0.10	1.34	-0.40**	0.16	0.67	-0.14	0.14	0.87
Normative model									
DUI roadside check	0.34	0.45	1.40	-1.00	0.76	0.37	-0.96	1.03	0.38
Nonspeeding traffic offense	1.16***	0.11	3.18	-0.32	0.18	0.73	1.29***	0.13	3.65
Vehicle defect	0.29	0.18	1.34	-0.61*	0.25	0.54	0.72***	0.20	2.06
License/registration check	0.24	0.21	1.28	-1.18***	0.33	0.31	-0.01	0.31	0.99

(continued)

TABLE 4 (continued)

Variable	Distributive Injustice: Stop Not Legitimate			Procedural Injustice: Police Acted Improper			Distributive and Procedural Injustice: Stop Not Legitimate and Police Act Improper		
	Coefficient	SE	Odds Ratio	Coefficient	SE	Odds Ratio	Coefficient	SE	Odds Ratio
Driver suspected of something	1.92***	0.27	6.80	−0.50	0.53	0.61	2.00***	0.33	7.38
Any use of force	0.45	1.15	1.58	2.72***	0.64	15.19	2.76***	0.66	15.82
Any search	0.60**	0.20	1.82	2.08***	0.24	8.01	1.37***	0.21	3.95
Instrumental model									
Citation	0.42***	0.10	1.52	0.56***	0.16	1.75	0.57***	0.13	1.76
Arrest	−0.57	0.34	0.57	−0.16	0.37	0.85	−0.41	0.40	0.66
Interaction terms									
African American driver/White officer	0.24	0.33	1.27	0.26	0.40	1.29	0.41	0.43	1.50
Hispanic driver/White officer	0.41	0.35	1.50	−0.16	0.49	0.85	0.36	0.53	1.43
Overall fit (*F*-value)	11.41***								
Cox-Snell likelihood ratio	0.13								
Pseudo r-square	.12								

NOTE: *n* = 7,034 unweighted, 19,277,002 weighted.

significant and substantively strong predictors of citizens' perceptions of distributive and procedural injustice. Compared to citizens who were stopped for speeding, citizens who were stopped for other traffic offenses, suspicion, or vehicle defects were significantly more likely to perceive the stop was not legitimate, the police acted improperly, or both. Citizens who had force used against them were 17.2 times more likely to report perceptions of procedural injustice, compared to those citizens who did not have force used against them. Likewise, citizens who were searched and/or had their vehicles searched were 1.8, 7.9, and 3.2 times more likely to report that the stop was not legitimate, the police acted improperly, or both, respectively. Previous research based on these data found that the search success rate was low (13 percent of searches resulted in the discovery of contraband) and differed significantly by race (i.e., African Americans and Hispanic citizens had lower search success rates compared to White citizens; Engel and Calnon 2004; also see Lundman 2004). Thus the overwhelming majority of citizens who were searched were not found to be carrying contraband and were significantly more likely to perceive that the initial stop was illegitimate, that the police acted improperly, or both. Several studies have found that the majority of searches conducted by police are based solely on the drivers' consent and that consent searches have lower success rates compared to searches based on other factors (e.g., plain view, probable cause, canine alerts, etc.; for review see Engel and Calnon 2004; Engel et al. 2004). Combined, these findings suggest that to reduce citizens' perceptions of injustice and increase the perceived legitimacy and fairness of the police, law enforcement officials may need to reconsider their policies guiding the use of consent and other types of discretionary searches (Engel et al. 2004).

Although the findings suggest that the fairness of both the procedure and the outcome are significant predictors of citizens' perceptions of injustice during traffic stops with police, the favorableness of the outcome appears to have a mixed influence. It is interesting to note that, although citizens who received citations had an increased probability of perceived injustice, citizens who were arrested did not. Given that arrest is a far more serious (and less favorable) outcome compared to a traffic citation, one might expect that the influence of arrest would be at least as strong as that shown for citizens issued citations. There are several possible explanations for this counterintuitive finding. First, it is possible that arrests, which require probable cause and are more thoroughly monitored by the police hierarchy and the courts than routine traffic citations, are perceived by citizens as more likely to be legally justified. That is, arrests, which are presumably based on more evidence and/or more serious offenses, are less likely to be viewed by citizens as illegitimate compared to traffic citations. It is also possible that many arrests during traffic stops are based on outstanding warrants that are discovered

after officers process motorists' identifications. In these cases, citizens may be more likely to perceive that an officer is just "doing his/her job" and therefore are less likely to perceive the outcome as unjust. Finally, it may be as Tyler suggests that the favorableness of the outcome is just not as important for citizens' perceptions of injustice as the fairness of the procedure. Citizens may find more fairness in the legal procedures surrounding arrest compared to the more subjective (and significantly different procedures across jurisdictions) received for traffic citations.

Another major finding of this research is that differences in perceptions of procedural and distributive injustice are based at least partially on citizens' race. African American citizens were significantly more likely to have perceptions of distributive injustice (i.e., perceive the stop was illegitimate), procedural injustice (i.e., perceive that the police acted improperly during the stop), or both combined. For example, compared to White citizens, African Americans were 1.7, 2.0, and 2.6 times more likely to perceive that the stop was illegitimate, the police acted improperly, or both, respectively. African American's perceptions of injustice at the hands of police exist even after controlling for other legal and extra-legal factors. In addition, citizens who were stopped more frequently in the past year were also significantly more likely to have perceptions of procedural and distributive injustice. Additional research based on these data has shown that the number of previous stops varies dramatically by race, with African Americans significantly more likely to report that they were stopped more frequently in the past year compared to Whites (Engel 2001).

It is important to note that the results based on the citizen race and income interaction terms also suggest that it is not specifically low-income African Americans that have perceptions of injustice. Rather, African Americans of all social classes have greater perceptions of distributive and procedural injustice compared to Whites. In contrast, high- and middle- income Hispanic citizens are not significantly more likely than White citizens to have perceptions of injustice. Low-income Hispanics, however, are 3.5 times more likely to report perceptions of procedural injustice during traffic stops with police.

These findings regarding differences in citizens' perceptions of injustice by race and ethnicity are somewhat inconsistent with Tyler's (2001) findings, and likewise conflict with research findings reported by Weitzer and Tuch (1999) regarding the influence of social class over citizens' attitudes toward police. Nevertheless, the finding that African Americans, regardless of income, are more likely to have perceptions of injustice compared to White citizens is consistent with arguments made by other scholars. For example, Kennedy (1997) has argued that even African Americans of higher social economic status who conform to the expectations of White society are sin-

gled out for disparate treatment based on race. Kennedy (1997) described the hostile sentiments "of many who feel deeply insulted because they are targeted for scrutiny at least partly on the basis of their race" (p. 158). These "hostile sentiments" are not restricted to particular subgroups within the African American race. For example, Walton (1989) vividly described the plight of educated African Americans of higher social economic status, as they deal with perceptions of injustice in American society:

> I am recognizing my veil of double consciousness, my American self and my black self. I must battle, like all humans, to see myself. I must also battle, because I am black, to see myself as others see me; increasingly my life, literally, depends on it. I might meet Bernhard Goetz on the subway; my car might break down in Howard Beach; the armed security guards might mistake me for a burglar in the lobby of my own building. And they won't see a mild-mannered English major trying to get home. They will see Willie Horton. (Walton 1989:653)

As Walton so clearly demonstrated, African Americans of all social classes must battle against discrimination and injustice. It appears this is particularly true for police-citizen encounters during traffic stops.

This trend, however, is somewhat different for Hispanic citizens. Middle- and high-income Hispanic citizens do not perceive their encounters with police to be unjust; however Hispanic citizens of lower income do report perceptions of procedural injustice during traffic stops. It is not clear why this pattern of race effects contingent upon income emerges for Hispanic citizens but not African Americans. One might speculate that middle- and upper-class Hispanic citizens have better assimilated into the dominant White culture and therefore do not perceive the same types of negative stereotyping as described by Walton. It is also possible that middle- and upper-class Hispanic citizens are treated with more respect and courteously by police, compared to African Americans of similar class backgrounds. Unfortunately, the data do not allow for a more thorough examination into these issues, and therefore, one can only speculate about the differences in perceptions of injustice by African American and Hispanic citizens.

Overall, these findings raise concerns regarding the need for future research. Unfortunately, the hypothesis that community characteristics influence citizens' perceptions of injustice could not be tested with these data. Given the recent studies that have described the emerging importance of the influence of community characteristics over individual citizens' attitudes and satisfaction toward the police (e.g., Reisig and Parks 2000; Sampson and Bartusch 1998; Weitzer 2000), this is a major limitation of the current research. Future research should attempt to better test this proposition.

It should also be acknowledged that the statistical models estimated do not explain a large proportion of the total variance in citizens' perceptions of injustice (pseudo r-square = 0.11, 0.12). The lack of explanatory power suggests that important predictors of citizens' perceptions of injustice are not currently included in the statistical models. It is clear that more detailed information regarding the interaction between officers and citizens is needed to better understand citizens' perceptions of distributive and procedural injustice during encounters with police. For example, it would be important to know if officers and/or citizens acted in a noncompliant, resistant, hostile, or disrespectful manner toward one another during the encounter (Engel 2003). In their theory of coercive actions, Tedeschi and Felson (1994) have stressed the importance of the processes of interactions. Likewise, Sykes and Clark (1975) cautioned against interpretations of police and citizen behavior that only consider the personal traits of the individuals rather than focusing on the interaction between citizens and police. Clearly, future research needs to better examine the specific interactions between police and citizens to better assess the factors that lead to citizens' perceptions of injustice.

CONCLUSIONS

Despite the limitations noted above, these findings have direct and important implications for policy. Compared to citizens stopped for speeding, citizens stopped for more discretionary reasons—traffic offenses other than speeding and suspicion—are 3.1 and 6.8 times more likely to believe that they were treated unjustly by police. Additional analyses from these data have shown that African American and Hispanic citizens were significantly more likely to be stopped initially for offenses that involve a greater degree of officer discretion (Engel and Calnon 2004). That is, citizens' perceptions of procedural and distributive injustice during traffic stops may reflect the varying distribution of police resources by neighborhood and individual race/ethnicity. For example, minority segments of the population may be more dissatisfied with police because they receive a disproportional amount of punitive attention. A similar situation may exist with the concentration of police resources in high crime neighborhoods.

One of the most important public policy issues currently facing police administrators involves the actual and perceived differential patterns of police-citizen contacts and outcomes based on citizens' race and ethnicity (Engel, Calnon, and Bernard 2002). The perception of "racial profiling" has received national attention, undermining police departments' attempts to restore and rebuild trust with their constituents (Harris 1999; Lundman and Kaufman 2003; Walker 2001). The crisis of legitimacy associated with racial

profiling strategies has prompted an overwhelming move toward the collection of official data on traffic and pedestrian stops in state and local police departments across the country (Fridell 2004; Police Foundation 2001; Ramirez et al. 2000; Strom et al. 2001). The majority of the publicly available reports and studies reveal disparities in the percentages of minority citizens stopped, cited, searched, or arrested as compared to selected benchmarks (for review see Engel and Calnon 2004; Fridell 2004). In addition, other analyses examining the PPCS data show that the police are significantly more likely to cite, arrest, search, and use force against African Americans during traffic stops, even after controlling for other legal and extra-legal factors (Engel and Calnon 2004).

The current findings, along with findings from other research, suggest that citizens' perceptions of injustice are not based solely on the favorableness traffic stops outcomes, but rather are based on citizens' perceptions of inequalities and unfair procedures disproportionately used by police during traffic stops. These perceptions of injustice are more likely for African American compared to White citizens. When examining citizens' perceptions of injustice however, whether police actually engage in racially biased policing is not necessarily a determinant factor. Even if police do not actively engage in "racial profiling" behaviors, minority citizens may perceive that these forms of discrimination exist. Furthermore, police administrators must recognize that traffic stops in and of themselves, regardless of the official outcomes that citizens receive, can trigger citizens' perceptions of distributive and procedural injustice. Even stops that are made for legally justified reasons can result in citizens' perceptions of injustice. Officers should be trained to explain to citizens why they were stopped and why the officer took the course of action he/she chose. These explanations are particularly important during traffic stops for offenses other than speeding, where the specific violations may be less clear to citizens. Some officers are especially skilled at "selling" the stop or the ticket to the motorist.[17] That is, some officers are better able to reduce citizens' negative perceptions of the encounter by convincing them that the officer is being lenient or by simply making their decision making apparent to the citizen. Thus, to increase their legitimacy, officers must make an extra effort during traffic stops to ensure that motorists understand why they were initially stopped, and why officers took the actions they did.

Despite the constitutionality of pretextual stops and the aggressive use of traffic stops for further investigatory purposes (*Whren v. U.S.* 1996), many police administrators across the country have recognized the need to formally sanction such behavior. Indeed, for police officers to gain legitimacy with minority citizens, departmental administrative rules must be implemented that regulate and control police use of pretext traffic stops. This

research confirms that citizens' perceptions of injustice are not based solely on the favorableness of the official sanctions they receive but also are based on their perceptions of the way they are treated by police during the process. For example, simply being stopped for more discretionary reasons without being ticketed would likely be more troublesome to citizens than actually receiving a ticket for a legitimate offense. Vehicle and person searches (the majority of which are unfruitful in the collection of contraband) also raise citizens' perceptions of distributive and procedural injustice, even if these citizens do not receive an official sanction (e.g., citation or arrest).

Over 35 years after the Kerner Commission report, perceptions of injustice and police illegitimacy are still much stronger for African Americans compared to White citizens. The underlying concepts of justice (i.e., punishment, legitimacy, and fairness) often are at issue during police-citizen interactions. The current findings suggest that citizens' perceptions of injustice are not based solely on the favorableness of the outcomes of traffic stops, but rather, are also based on citizens' perceptions of inequalities and unfair procedures disproportionately used by police during traffic stops. These negative attitudes and the resulting tensions between officers and citizens are extremely important because, as described by Tyler (1990), "legitimacy in the eyes of the public is a key precondition to the effectiveness of authorities" (p. 5). The police in American society must address these lingering issues regarding their legitimacy and fairness in relationship to citizens' perceptions of injustice. To increase citizens' perceptions of confidence and legitimacy in the police, police officers and administrators must alter their operating procedures during interactions with the citizens, and not simply the outcomes that citizens receive.

NOTES

1. Injustice is conceptualized throughout this article and operationalized in the statistical models as the opposite of justice. That is, injustice is conceptualized as involving the underlying themes of punishment, legitimacy, and fairness, as is the concept of justice. Furthermore, injustice is operationalized as the reverse coding of variables described as reflecting citizens' perceptions of distributive and procedural justice.

2. Note, however, that Smith and Hawkins' (1973) research was based on bivariate comparisons of citizens surveyed and temporal ordering of these measures was not established.

3. Note, however, that Brandl et al. (1994) reported that the former relationship (i.e., global attitudes • specific attitudes) was much stronger than the latter relationship (i.e., specific attitudes • global attitudes).

4. Specifically, in the publicly available Police Public Contact Survey (PPCS) data, community context was crudely captured as the residency of respondents in a central city metropolitan statistical area (MSA) (i.e., urban), noncentral city MSA (i.e., suburban), or non-MSA, (i.e., rural). Furthermore, no information was available regarding the community characteristics of

where the actual traffic stops occurred. When these community measures were included in the initial analyses (central city was the excluded comparison category), they offered no additional exploratory power and therefore have been excluded from the final analyses.

5. Of the 15 percent of respondents not interviewed, 73 percent were National Crime Victimization Survey (NCVS) noninterviews (someone else in the household was interviewed), 4.5 percent refused to answer questions for the PPCS, 0.9 percent were not available for the PPCS portion of the interview, 19.5 percent were ineligible because the respondent was giving a proxy interview for the NCVS, and for 1.6 percent, the reason is unknown. The overall response rate for the PPCS was 85 percent, compared to an overall response rate of 89 percent for the NCVS. For more information, see U.S. Department of Justice (2001).

6. Approximately 15 percent ($n = 1,232$) of the respondents who reported contact with police indicated they were passengers in a vehicle during a traffic stop. These respondents were eliminated from the analyses because only drivers were asked specific questions regarding the stop and police behavior.

7. Academics have debated about the use of weighted data in regression analyses. As described by Lohr (1999), two approaches have been adopted: design-based and model-based (also see Brewer and Mellor 1973; DuMouchel and Duncan 1983). In the design-based approach, "inferences are based on repeated sampling from the finite population, and the probability structure used for inference is that defined by the random variables, indicating inclusion in the sample" (Lohr 1999:363). This approach uses weighted data. In contrast, the model-based approach describes the relation between the variables that holds for every observation in the population. This approach relies on a theoretical model and assumes the observations in the population follow that model (1999:363). For present purposes, the design-based approach is more appropriate; therefore, the analyses reported in the text are based on the weighted data. As noted in the analyses section of the text, however, the differences between weighted and unweighted analyses are minimal for logistic regression models. In addition, the WesVar jackknife replication estimation procedure takes into account the inflation factor and clustering when computing standard errors.

8. The categories in the dependent variable are mutually exclusive. A combined injustice category (i.e., perception that the stop was not legitimate and the police acted improperly) is considered separate from citizens' perceptions of illegitimate stops or improper police action. The dependent variable is measured in this manner to examine and those individuals who expressed concern over both the initial stop and police actions during the stop to individuals who only expressed one of the two concerns, or no perceptions of injustice.

9. The "other" race category includes American Indian/Eskimo, Asian/Pacific Islander, and other, nonspecified.

10. Income is measured as three dichotomous variables because a continuous measure was not included in the publicly available data set.

11. Note however, that the legal basis for the stop (e.g., the use of RADAR, officer observation of violation, etc.) is not captured in these data.

12. For the multivariate analyses, the primary reason for the stop is measured. If the citizen indicated that the officer had notified him/her about the reason for the stop, the respondent was asked a series of questions to indicate the specific reason for the stop. Initially, these categories were not mutually exclusive; 10.7 percent of citizens indicated they were stopped for multiple reasons. For the multivariate model, a series of dichotomous variables were created to measure the categories as mutually exclusive. These variables were created by initially ranking the reasons for the stop. These reasons were ranked from those involving the *least* individual officer discretion to those involving the *most* officer discretion: (1) driving under the influence (DUI) check point, (2) speeding, (3) traffic offense other than speeding, (4) problem or defect with the vehicle, (5) license or registration check, (6) suspicious driver, (7) other. The dichotomous variables

representing the primary reason for the stop were then created using the *least* discretionary reason. For example, if a citizen indicated that he/she was stopped for speeding and for a license and registration check, it is assumed that speeding was the primary reason for the stop. Thus, the speeding variable would be coded as one and the license and registration check variable would be coded as zero.

13. The distribution of being stopped for an "other or unknown reason" is not consistent across the categories of the dependent variable. The inclusion of this variable in the multinomial models, although not affecting the estimates of other variables, does produce an artificially inflated standard error and unstable coefficient. Given the infrequent nature of this reason for the stop and the unstable coefficient produced, it has been excluded from the multivariate statistical models that follow.

14. The measure of police use of force includes officers' threats or actual use of the following tactics: (1) push or grab that did not cause pain, (2) push or grab that did cause pain, (3) kick or hit with officer's hand or something held in officer's hand, (4) bite from an unleashed police dog, (5) spray with chemical or pepper spray, (6) point a gun but did not shoot, (7) fire a gun at citizen, or (8) any other form of physical force. The use of handcuffs is not included in this measure of the use of force because of its high level of collinearity with arrest. When the measure of the use of force includes handcuffs, the Pearson's correlation coefficient for arrest and use of force is 0.79, compared to 0.24 for the measure of force excluding the use of handcuffs.

15. Respondents were asked the following questions *only* if they indicated police had used force against them: At any time during this incident did you (1) argue with or disobey the police officer(s); (2) curse at, insult, or call the police officer(s) a name; (3) say something threatening to the police officer(s); (4) resist being handcuffed or arrested; (5) resist being searched or having the vehicle searched; or (6) try to escape by hiding, running away, or being in a high speed chase? Likewise, only respondents who had force used against them were asked if they thought any of their actions may have provoked officers, if they were using drugs at the time of the incident, or if they were using alcohol.

16. Multinomial logistic regression is a legitimate and appropriate technique for these data (see Liao 1994). A single, multinomial logistic-regression estimation ultimately leads to the same (substantive) observations as do multiple binary logistic-regression estimates. Therefore, in the interest of data reduction, two multinomial regression models are estimated, rather than estimating six binary regression models. Individual Pearson's R correlation coefficients for the independent variables do not exceed 0.50, and the standard errors for the estimated models are not artificially inflated, suggesting that there is no problem with multicollinearity in the models.

17. This "selling" skill is similar to the "selling" style of management described by Hersey and Blanchard (1988).

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