

ACCOUNTING FOR MEMBERSHIP:
AN EXAMINATION OF THE EFFECTS RACE, SEX, AND AGE HAS ON POLICE CONDUCT
AND FORCE DURING TRAFFIC STOPS.

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THESIS ABSTRACT

Accounting for membership:

An examination of the effects race, sex, and age has on police conduct

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Traffic stops are one of the most common police interactions in the daily lives of Americans. Thought to be routine by most, traffic stops are actually some of the most eventful and complicated police interactions. In light of current controversies surrounding discretionary behavior and police conduct during traffic stops, I examine the relationship between race of the driver, race of the officer, sex of the driver, age of the driver, and police conduct/use of force during traffic stops. Using data from the 2011 Police and Public Contact Survey, collected by the Bureau of Justice Statistics, I examine which factors are associated with both initial contact with officers and incident outcomes, which allow for a better understanding of whether certain groups are more likely to receive a ticket, be exposed to force, or perceive their experience to be unfair. Logistic regression models reveal that being black is significantly associated with a higher likelihood of being stopped in a car compared to white drivers, however Latinos are less likely to be stopped in a car than black drivers. Both Latinos and blacks are also more likely to perceive the outcome of their stop as unfair, even when the officer is non-white. Importantly, being black was only associated with an increased likelihood of getting a ticket in cases where the officer was white. The implications are discussed.

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Introduction

Countries like the United States, Canada, and England have vastly different social policies and approaches to criminal justice. Yet relative to their numbers in the overall population, young black men in all of these countries are disproportionately represented in the criminal justice system (May, Gyateng & Hough, 2010; Piquero, 2008; Trevethan & Rastin, 2004; Warde, 2013). With the ubiquity of minority disproportionality, there has been growing interest in understanding the causes and consequences of racial and ethnic disparities at every stage of the criminal justice system. Recent studies, for instance, have explored the effect of race on policing (Bowling & Phillips, 2003, 2007) and arrests (Borooah, 2011). Due to a number of high-profile incidents indicative of police misconduct against racial minorities in the United States, the issue of race and policing is once again front and center of political discourse.

Racial disparity during traffic stops has also become a major media story and community issue (Novak & Chamlin, 2012). In fact, minority community members and race scholars coined the term driving while black (DWB), to help explain the disparity found in traffic stops (Novak & Chamlin, 2012). American history has countless victims of police misconduct targeting disadvantaged and predominantly minority communities. In fact, historically police misconduct was not even considered a crime in America; victims experienced no legal recourse (Novak & Chamlin, 2012). It's only been since the 1960s that police misconduct has been outlawed in American society (source needed). In modern America, officers are routinely captured on video engaging in practices perceived as misconduct; symbolized by recent deaths of Sandra Bland or Eric Garner who were

both killed by officer misconduct and/or neglect, both at the hands of white officers. Racial profiling during traffic stops has subsequently become a salient issue that has been studied by numerous researchers with varying degrees of success (Novak & Chamlin, 2012; Brunson, 2007; Brunson & Weitzer, 2009; Tyller, Klahm, & Engel, 2012).

Despite ample anecdotal evidence and public outrage, current research has had a difficult time pinpointing the exact nature of racial profiling, but societal belief shows fear of its existence and how widespread the issue is (Novak & Chamlin, 2012; Brunson, 2007; Brunson & Weitzer, 2009; Tyller, Klahm, & Engel, 2012). Researchers and governmental officials seeing the issue emerge in past data sparked an increased wave of funding and research to aid legislative initiatives to curb racial profiling during traffic stops (Novak & Chamlin, 2012). The difficult task for researchers and legislators is to discern the reasons for the apparent racial disparity in traffic stop data, which clearly supports societal fears of racial inequality (Novak & Chamlin, 2012; Brunson, 2007; Brunson & Weitzer, 2009; Tyller, Klahm, & Engel, 2012). While researchers are split on the existence of racial profiling, those who do believe in its existence are equally split on its actual cause and influence (Novak & Chamlin, 2012; Brunson, 2007; Brunson & Weitzer, 2009; Tyller, Klahm, & Engel, 2012).

The purpose of this study is to examine police-public interactions through traffic stops in the United States and to tease out the role of race in initiating police-public interactions, in the outcomes of interactions, and the ways in which officer race may moderate the relationship between race and police-public interaction. While much of the existing discussion on police discretion and incident outcomes have focused on the relationship between white officers and black suspects, I also examine the risk of police-

public contact and outcomes among Latinos, the fastest growing minority group in the United States today.

Literature Review

Although crime control may be considered the primary mechanism through which the criminal justice system can protect citizens, persistent empirical evidence suggests that the likelihood of arrest, use of force, and disposition is often a function of the racial and ethnic make-up of the community at large (Carmichael & Kent 2014a, 2014b; Kent & Jacobs, 2005; Smith & Holmes, 2014). Marxist-based theories and minority threat perspectives have both predicted the unequal distribution of legal resources and police arrest strategies, arguing that areas with growing minority groups also tend to have higher public support for intensive social control, tough punishment, and a higher fear of crime (Johnson et al., 2011; Ousey & Unnever, 2012; Parker et al., 2005; Pickett & Chiricos, 2012). These theories are particularly relevant to contemporary developments in society as it provides a framework to account for recent surges in immigration posing a potential threat to a community, resulting in harsher social control of Latinos in addition to African Americans (Feldmeyer et al., 2014; Johnson et al., 2014).

Chambliss and Seidman (1982) were among the first to offer a theoretical perspective for group differences in justice, drawing largely on Marxism. Arguing the purported functional operation of the law was a myth, they stressed that society is made up of various groups that are in conflict. The law, they argued, was a tool for those in power (i.e., the ruling class) to coerce other groups in society. They maintained that the relationship between power and the use of the law extends to various institutions such as the legislatures, law enforcement, and especially the appellate courts. Relatedly, Black's (1976) mapping of the behavior of law is similarly relevant to theorizing why minority groups may face greater quantities and more punitive applications of the law. Black's

theory implies that the less integrated and marginalized groups in society exist on the periphery of social life, with greater horizontal distance from the core of the state's power structure compared to privileged groups. This distance exposes marginalized groups to more punitive responses. Both perspectives, albeit drawing on different conceptual traditions, propose that (racial) group differences are key to understanding the use of law and social control. And the police are seen as representatives of the more affluent segments of society who exist not to protect, but to control the lower classes which are primarily made up of minority groups. This creates a conflict between those in low income communities and the police who are entrusted with the job of protecting and serving them.

Group threat perspectives have emerged from Marxists perspectives. Building on the classic work of Rusch and Kirscheimer (1939) and Blalock (1967), recent applications of group threat perspective have argued that majority groups may perceive growth in minority groups as potential political and economic threats, subsequently supporting tougher sanctions and applications of social control including arrests. The police, government, and judicial system are subsequently seen by the minority as the primary controlling agents of the American majority. This view creates mutual fear and animosity between the minority and the control groups which in turn adds to risk factors of police brutality. Indeed the mutual fear, distrust and animosity which has resulted from decades of race/class based clashed between the police and members of the African American community have led some to speculate that the frustration and alienation felt as a result of the past is a leading cause of African American offending (Unnever & Gabbidon, 2011). Unnever and Gabbidon (2011) argue that the lived experience of blacks

within a conflicted racially stratified society has created a shared worldview that is unlike those that inform whites or other minorities. While we cannot claim evidence of explicit bias in the operation of the law, the disproportionate impact by race of punitive criminal justice policies and policing practices has been well documented, reinforcing the troubled relationships between race, police, and the legal system (Bobo & Thompson, 2006).

Policing, Traffic Stops and Police-Public Interactions

These theories, then, have guided scholars in the examination of racial disparities in policing and in studying how race affects officer decision making (Tyller & Engel, 2013). Past research has repeatedly produced results showing that extralegal factors play an influencing role in officer decision making (Schaffer, Carter, Katz-Bannister, & Wells, 2006). The bulk of research regarding this area is accomplished using data collected and distributed by state and federal law enforcement agencies (Tyller & Engel, 2013). A continuing issue with past research has been the differences in findings particularly when comparing results between states regarding racial connections to officer coercion (Tyller & Engel, 2013). When past researchers have compared officer actions based on gender the results have consistently shown that male drivers are more likely to receive disciplinary action, like a ticket, than female drivers (Tyller & Engel, 2013). Age has had a continuing impact on officer conduct and has consistently shown that younger cohorts are at greater risk for arrest and disciplinary action during traffic stops (Tyller & Engel, 2013).

A 2006 study by Schaffer, Carter, Katz-Bannister, and Wells discussed three noteworthy decisions all police officers must make in the course of a traffic stop; “first, the officer must decide to initiate a stop. Second, the officer may decide to or be compelled to search the driver or the vehicle. Third, the officer must decide if he/she should sanction or can sanction the driver (Schaffer, Carter, Katz-Bannister, & Wells, 2006).” In their (2006) study Schaffer, Carter, Katz-Bannister, & Wells, noted that profiling of a driver has an effect on officer decision making and conduct whether known to the officer or subconsciously. Persistently, traffic stop research has discovered racial,

age, and gender disparities, which are protective of older white males, who unsurprisingly dominate police force personnel (Tyller & Engel, 2013; Schaffer, Carter, Katz-Bannister, & Wells, 2006). As past research explains, searches arising from a traffic stop are not common occurrences, in fact less than 1% of traffic stops lead to a person or vehicle search (Tyller & Engel, 2013; Schaffer, Carter, Katz-Bannister, & Wells, 2006; Farrell, 2011). Link this to your main point.

Traffic stops commonly take place in areas with similar demographics and issues that require a police presence (Tyller & Engel, 2013; Schaffer, Carter, Katz-Bannister, & Wells, 2006; Farrell, 2011). While historically women have received preferential or lenient treatment from police officers, a number of studies have indicated irregularity in disparate treatment based on gender (Farrell, 2011). The sample sizes associated with female interactions during traffic stops are minuscule in comparison to studies on male driver traffic stops; the reason for this difference is fervently debated among scholars (Farrell, 2011). In fact, while traffic stops are the most common interaction between the police and the public they have garnered only scant scholarly attention (Tyller & Engel, 2013; Schaffer, Carter, Katz-Bannister, & Wells, 2006; Farrell, 2011). Additionally, because these interactions are not more deeply studied and/or understood, incidents involving these interactions are not widely publicized creating mistrust in law enforcement personnel and agencies (Tyller & Engel, 2013; Schaffer, Carter, Katz-Bannister, & Wells, 2006; Farrell, 2011). Furthermore, recent research involving self-report data supports the hypothesis that women commonly report fewer interactions with and coercive actions involving police initiated traffic stops (Farrell, 2011).

Past and present research (what there is of it) has indicated that citizen demographics are only one set of factors associated with officer conduct and decision making involving traffic stop encounters (Tyller & Engel, 2013; Schaffer, Carter, Katz-Bannister, & Wells, 2006; Farrell, 2011). The affects of citizen demographics has been continuously shown to be different among law enforcement agencies and geographic locations (Farrell, 2011). A (2004) study conducted by D. A. Klinger explains that to understand variations in law enforcement and citizen interactions one must examine the relationship between community context, culture, and organizational structure. Additionally, it is unfortunate that most past and present studies of police and citizen interactions and traffic stops have neglected the disparity between appropriate and actual officer conduct among law enforcement agencies (Tyller & Engel, 2013; Farrell, 2011). A number of studies have posited that paternalism/chivalry is the primary reason for officer leniency during traffic stops involving females (Tyller & Engel, 2013; Schaffer, Carter, Katz-Bannister, & Wells, 2006; Farrell, 2011). This leniency associated with female interactions during traffic stops stems from the historical belief that males are duty bound to protect women even from themselves (Farrell, 2011). This paternalistic atmosphere can be affected by the expansion of female law enforcement populations as well as an increase in minority officer populations (Farrell, 2011). Currently, female officers nationwide account for 13 to 20 percent of the law enforcement population (Farrell, 2011). This is believed to be relevant to police - citizen interactions (or traffic stops) because there is an inverse relationship between female presence on the police force and paternalistic views of females. Therefore, as the number of female officers increases, chivalry treatment of female drivers by police is expected to decline (because

as the number of female officers increases, so does their hierarchal influence making citizen treatment based on sex/gender more equal (Farrell, 2011).

The existing traffic stop research indicates that minority drivers are the most at-risk of coercive officer action and use of force (Tyller, Klahm, & Engel, 2012). More recent research into coercive officer action and use of force indicates that an officer's race is paramount during traffic stop interactions with citizens (Tyller, Klahm, & Engel, 2012). For example, white officers are more likely to use force with racial minority drivers during traffic stops as compared to white drivers (Tyller, Klahm, & Engel, 2012). White officers are also much more likely to use force during traffic stops with males when compared to females (Tyller, Klahm, & Engel, 2012). Race is influential in traffic stops in other ways as well. To illustrate, black males are more likely to perceive traffic stops as illegitimate compared to white males; furthermore, black males are also more likely than Latino males and females of all races to have been or to be stopped by officers as a pedestrian and/or a driver (Brunson, 2007; Brunson & Weitzer, 2009). I perceive this disparity among race indicates that officer perceptions of certain cohorts are biased and based on life experience, perception, and/or bigotry than on actual criminal action (Brunson, 2007; Brunson & Weitzer, 2009; Tyller, Klahm, & Engel, 2012). Based on current research regarding searches during pedestrian and/or traffic stops, driver demographics (such as ?) and extra legal factors (for instance ?) indicate whether a citizen receives coercive officer action and/or use of force (Brunson, 2007; Brunson & Weitzer, 2009; Tyller, Klahm, & Engel, 2012).

Racial profiling research has consistently shown a disparity among traffic stop conduct of officers, coercive action, arrests, searches, and use of force, but the depth of

the disparity has differed (Novak & Chamlin, 2012). In 1999 the Bureau of Justice statistics noted that while black licensed drivers accounted for only 9.8% of vehicle drivers they accounted for 11.6% of drivers stopped once by police and 13.7% of drivers stopped more than once (Novak & Chamlin, 2012). Racial disparity among traffic stops in urban areas have shown major differences in officer conduct and action, which many theorize is at least in part connected to societal perceptions of minority threat theory (Novak & Chamlin, 2012; Brunson, 2007; Brunson & Weitzer, 2009; Tyller, Klahm, & Engel, 2012). Differences between urban and rural locations are abundant, but racial disparities are still present during officer initiated contacts, in fact a 2001 study conducted in Ohio found that blacks are around 2.5 times more likely than whites to be ticketed by police (Novak & Chamlin, 2012). That same 2001 study by M. R. Smith and Petrocelli found that minorities were 1.16 times more likely than whites to be stopped by the police (Novak & Chamlin, 2012). While inner city law enforcement agencies have been shown to be greatly affected by racial disparity suburban and rural agencies are also a part of the problem (Novak & Chamlin, 2012; Brunson, 2007; Brunson & Weitzer, 2009; Tyller, Klahm, & Engel, 2012). Officer discretion is important for officers to do the job, but it is that same discretion that allows outside/personal influence which are believed to be a major contributing factor of racial profiling and disparity in traffic stop data (Novak & Chamlin, 2012; Brunson, 2007; Brunson & Weitzer, 2009; Tyller, Klahm, & Engel, 2012).

Racial profiling and racial disparity during traffic stops has become such an important societal issue that the Bureau of Justice statistics (BJS) began to analyze data in the 21st century (Eith & Durose, 2011). The results of these studies were congruent with

past research; a 2008 study indicated that 44.1% of police and public contacts from that year were traffic stops, making it the most common interaction (Eith & Durose, 2011). The 2008 study also found that while racial population groups are drastically different in size that they all were stopped by police at similar rates (whites 8.4%, blacks 8.8%, and Hispanic 9.1%) (Eith & Durose, 2011). Male drivers were stopped at 9.9% and women were stopped at 7.0% a 2.9% difference which is significant. (Eith & Durose, 2011). Finally, a 2008 BJS study found that black drivers (who accounted for around 12% of the national population) were at a greater risk of receiving officer coercive action (three times as) than white drivers and (two times as likely as) Hispanic drivers (Eith & Durose, 2011). Males were more likely to have more than one police initiated contact than females in 2008 and blacks were at a slightly greater risk than whites and Hispanics (Eith & Durose, 2011). In this 2008 BJS study like many studies before it that analyzed public perceptions of police conduct and found that the majority of those contacted by police believed that officers had legitimate reason(s) for the stop and that they acted properly during the interaction (Eith & Durose, 2011; Novak & Chamlin, 2012; Brunson, 2007; Brunson & Weitzer, 2009; Tyller, Klahm, & Engel, 2012). During police initiated stops a common police action is a search and again the data indicates that blacks, males, and young adults are not only more likely to be stopped, but they are also more likely to be searched, especially during the night time (Eith & Durose, 2011; Novak & Chamlin, 2012; Brunson, 2007; Brunson & Weitzer, 2009; Tyller, Klahm, & Engel, 2012). Interestingly, the 2008 BJS study data indicates that 74.3% of persons contacted in instances where the officer used force, perceived the force as excessive; furthermore, the population who had force used on them were racially equal (Eith & Durose, 2011).

Current Study

While police conduct during traffic stops has received considerable public attention in recent years, it is unfortunate that it has occurred primarily by the media rather than by scholars. To this end, there is a specific need to tease out the ways in which perpetrator race, officer race and other perpetrator characteristics are associated with the likelihood of officer-public interactions, punishments, and coercive action. Furthermore, the vast majority of what research does exist has focused primarily on African Americans' increased risk of police-public interactions, ignoring individuals from other (racial -- or are you using the term more broadly ?) minority groups. Data from the Bureau of Justice Statistics' police-public contact survey allow me to tease out the relations between police interaction with Latino as well as African American individuals, using a large sample of police-public interactions. Specifically, I am able to test the following hypotheses:

1. The risk of police-public interactions will be higher for Latino and black Americans relative to whites.
2. Black and Latino Americans face a higher likelihood of punitive outcomes (such as receiving a ticket, or coercive police action) compared to white Americans.
3. Racial (?) minorities face a higher likelihood of punitive outcomes if the officer is white.
4. Racial (?) minorities are more likely to perceive their police interaction as illegitimate, especially if the arresting officer is white.

Data and Methods

Data were obtained from the Police-Public Contact Survey (PPCS), which provides detailed information on the characteristics of persons who had some type of contact with police during the year and includes those who contacted the police to report a crime or were pulled over in a traffic stop. The PPCS interviews a nationally representative sample of residents age 16 or older as a supplement to the National Crime Victimization Survey (NCVS). The survey enables the Bureau of Justice Statistics (BJS) to examine the perceptions of police behavior and response during these encounters. The most recent PPCS was conducted for the BJS during the last 6 months of 2011 by the U.S. Census Bureau as a supplement to the NCVS. In 2011, PPCS interviews were obtained from 49,246 of the 62,280 individuals age 16 or older in the NCVS sample. To produce national estimates on police-public contacts, sample weights were applied to the survey data so that the respondents represented the entire population, including the non-respondent.

Dependent Variables: This first stage of our analysis examines the impact of race on whether or not someone was stopped in a car, and/or stopped as a pedestrian (not in a vehicle). I then further examined whether or not an individual stopped by police received a ticket, perceived the stop as legitimate, or experienced some form of coercive action from the officer during the stop. *Stopped in a car* was assessed using the question “Have you ever been stopped by police in a vehicle?” where a value of 0 indicates no and 1 indicates yes, and. Being stopped as a pedestrian was assessed by the question “have you ever been stopped as a pedestrian by a police officer (not in a vehicle)?” (0 = No, 1= Yes). Two of the three possible incident outcomes I examined were also measured with dichotomous variables: Whether a participant had received a ticket during an officer initiated stop (0 = No, 1= Yes); and whether the individual believed the officer was legitimate in initiating the stop (0 = No, 1= Yes). Coercive action was assessed using a seven-item scale including the questions: 1) Did the officer shout?, 2) Did the officer curse?, 3) Did the officer threaten arrest?, 4) Did the officer threaten force?, 5) Did the officer push or grab you?, 6) Did the officer handcuff you?, 7) Did the officer point a gun at you?; all were recoded into a single binary variable and is measured using (0 = No, 1= Yes).

Race of the member of the public and race of the officer are the two key explanatory variables utilized in the analyses. Race was recorded in the original survey with participants checking all and any applicable options that included 1) *black/African American*, 2) *Hispanic/Latino*, 3) *white*, 4) *Asian or Other Pacific Islander*, 5) *Native American/American Indian*, and 6) *Other*. It was then recoded into two binary variables in the following models with participants identifying as Hispanic/Latino measured as (0 =

No, 1 = Yes) or Black (0 = No, 1 = Yes). Officer's race / ethnicity were obtained from the individual's report of officer race. Clearly this measure is problematic, as race and ethnicity are not always accurately observed. In the absence of officer self-reported race, however, this was deemed a suitable measure. Indeed how an individual perceives the race / ethnicity of an officer may be a more important predictor of how they view the fairness of their traffic stop rather than the objective race of the officer.

In addition to race, I included control variables for a variety of indicators associated with the risk of police-public interaction. Firstly, I included age of the driver, measured as a continuous variable in all models. I include the driver's gender, which was recoded so that female = 1, and male =0. I included measures of the length of the stop (measured in minutes), whether or not passengers were present during the stop (in the case of a traffic stop, yes=1, no=0), whether the individual knows any police officers (yes = 1, no = 0), the location of the stop (1=urban center with a population over 100,000, 0=suburban or rural area), and household income (0= household income under \$50,000 and 1= household income is greater than \$50,000).

Data Analysis

Numerous analytical steps were taken to determine the relationship between citizen race, police-public interactions, and interaction outcomes, controlling for a number of demographic and incident-specific covariates, including: sex, age, class, incident location, and length of stop. To start, descriptive statistics were calculated to exhibit the mean and standard deviations from the 2011 (CBPP) database. Additionally, a number of diagnostic checks were conducted to ensure model estimates were not biased by multicollinearity or partialling. Specifically, bivariate correlations between all independent variables were examined. Secondly, items were entered into each model in an iterative fashion one at a time, to ensure that coefficients did not change significantly in magnitude or direction upon entry of an additional variable. Finally, variance inflation factor scores (VIF) were estimated, using a suggested cutoff of 2.50 to indicate problematic levels of collinearity (Allison, 1999). Upon diagnostic inspection, no problems of multicollinearity were detected.

To assess the relationship between race, police-public interactions, and event outcomes, a series of logistic regressions were conducted. Firstly, I conducted a logistic regression estimating the likelihood of being stopped as a pedestrian or being stopped in a car, using the total sample of the 2011 public-police contact survey. After establishing the overall likelihood of interaction, I then selected out the 4,281 cases in which an individual had been stopped for a traffic violation. This sample was used to estimate the likelihood of receiving a ticket, the occurrence of coercive action, and whether or not the stop was perceived as legitimate. All statistical analyses were conducted in SPSS 22.0 (IMB Corp 2013). For ease of interpretation, coefficients (log odds ratios) are expressed

as odds ratios. Once the relationship between race and incident outcomes (the issuing of a ticket, the use of coercive action, whether the stop was perceived as legitimate) were established, I then examined whether officer race moderated these relations by re-estimating models separately for incidents involving a white officer and incidents involving a non-white officer.

Results

Descriptive characteristics of the original and analytical samples are provided in Table 1. Of the original sample of 62, 280 individuals, a little over 1% (449) were involved in a pedestrian stop while over 10% (4,281) were stopped in a car. Just over half (52.4%) of the original sample was female. The percentage of females was reduced, however, among the sample of individuals who had been pulled over for a traffic violation. Of the 4, 281 participants in a traffic violation, 44% were female, while 56% were male. While 14% of the original sample identified as Latino and 10% identified as Black, less than 12% of the sub-sample who had been stopped by the police identified as Latino, while 11% identified as Black. The age of participants ranged from as young as 16 to as old as 90, with a mean age of 46. Turning to the sub sample of individuals who were stopped in a car, 26% of individuals stopped in a traffic incident had a passenger with them at the time of the stop. Stops lasted an average of 11 minutes. In almost 85% of traffic stops reported in this study, the officer was white, which is consistent with the general racial breakdown of police officers.

Table 1: Descriptive Statistics of All Dependent and Independent Variables Utilized

	Mean	Std. Error
<i>Dependent Variables</i>		
Stopped in a car ^a (No = 0, Yes = 1)	0.103	.304
Stopped in Public ^a (No = 0, Yes = 1)	0.011	.103
Ticket ^b (No = 0, Yes = 1)	0.440	.008
Legit ^b (No = 0, Yes = 1)	0.690	.007
Coercive Action ^b (No = 0, Yes = 1)	.0322	.00270
Age ^a	46.556	18.297
Sex ^a (Male = 0, Female = 1)	0.524	.499
Black ^a (No = 0, Yes = 1)	0.105	.307
Latino ^a (No = 0, Yes = 1)	0.141	.348
Location ^b (Rural = 0, Urban = 1)	0.242	.006
Income ^a (< 50,000 = 0, > 50,000 = 1)	0.348	.007
Passengers ^b (No = 0, Yes = 1)	0.260	.007
Length of Stop in Minutes ^b	10.867	.1466
Know Officers ^a	0.223	.416
Officer Race ^b (White = 1, Minority = 0)	0.846	.361

a. Item based on full sample

b. Item based on sub sample

The first stage of the analysis is to estimate the likelihood of being stopped as a pedestrian (on foot) and being stopped in a traffic incident. Table 2 displays the odds ratios of being stopped by a police officer as a pedestrian (on foot) or while operating a motor vehicle, controlling for demographic and incident-specific factors. The results indicate that being stopped while operating a motor vehicle is much more likely than being stopped as a pedestrian (on foot). Females had 33% lower odds of being stopped in a car compared to males, and almost 49% lower odds of being stopped as a pedestrian (on foot) compared to their male counterparts. A one unit increase in age was associated with significantly reduced odds of being stopped in any capacity. Interestingly, while a higher income was associated with reduced odds of being stopped as a pedestrian, individuals with a household income above \$50,000 were 23% more likely to be pulled over in a car. More money = faster cars or more money = nicer cars = police presumption of racial minority driving it as drug dealer?

Turning to key explanatory variables of race and ethnicity, neither Latinos nor African Americans were significantly more likely to be stopped as a pedestrian (on foot) compared to their white counterparts. This may be surprising to those who envision racially biased policing tactics, given that race may be more visible in a public setting than in a car. Race and ethnicity were more compelling predictors of being stopped in a traffic incident, although interestingly the effects were not as expected. African Americans were 16.5% more likely to be pulled over than whites; however Latinos were 11% *less* likely to be pulled over compared to whites.

Table 2: Logistic Regression Results Examining the Likelihood of Being Stopped by the Police. Odds Ratios Displayed.

	Stopped In Public		Stopped in a Car	
	OR	Std. Err.	OR	Std. Err.
Sex (M=0, F=1)	0.515***	0.051	0.674***	0.022
Age	0.957***	0.003	0.976***	0.001
Latino	1.134	0.150	0.888*	0.046
Black	1.223	0.179	1.165**	0.063
Income (>\$50,000 = 1)	0.872*	0.049	1.231***	0.024
Large City (Over 100,000)	1.353**	0.144	0.909*	0.036
Know Officers	2.271***	0.234	1.566***	0.058
_cons	0.157	0.035	0.361	0.030
Log Likelihood	-2307.47		-13208.41	
Observations	41,395		41,382	

*** = P<.001, ** = P<.005, * = P<.05

Given that race and ethnicity were unrelated to being stopped as a pedestrian, I focus attention on traffic incidents. Thus, the second stage of this analysis is to examine the effect of demographic variables on traffic stop outcomes. Table 3 displays the odds ratios of specific demographic variables on three distinct outcomes of a traffic stop. The first outcome is coercive action; the results indicate that a one-unit increase in the length of the stop was associated with a 4% increase in the odds of an officer using coercive action. People that live in large city populations were 29% more likely to experience coercive action during traffic stops than their smaller city counterparts.

The second traffic stop outcome is receiving a ticket, which appears affected by the individual's age, race, location of the stop area, length of stop, and the individual knowing an officer. Age is associated with a decrease in the likelihood of receiving a ticket. Race of the driver is also associated with receiving a ticket. Specifically, black individuals are 43% more at risk of being issued a ticket compared with white drivers. In contrast, Latinos were no more likely to receive a traffic ticket compared to non-racial minority drivers. Individuals from larger cities are at a 13% greater risk of receiving a traffic ticket. The length of the traffic stop seems to increase the risk of receiving a ticket by 12%. Furthermore, the odds of receiving a traffic ticket are greatly diminished (31% reduced odds) for drivers stopped by a police officer known to them compared with individuals who do not know the police officer prior to the stop.

Lastly, perceived legitimacy is the final outcome examined in this study. The results indicate that self-reported race and ethnicity, in addition to income, stop location, and knowing an officer were all associated with perceptions of legitimacy regarding the traffic stop. Although only black drivers were more likely to get a traffic ticket compared

to non-racial minority drivers, both Latino and black drivers were significantly *less* likely to perceive their stop as legitimate. Stated slightly differently, racial minorities were more likely to perceive their traffic stop as illegitimate compared with their white counterparts.

Table 3: Logistic Regression Results Examining Predictors of Traffic Stop Outcomes. Odds Ratios Displayed

	Coercive Action		Ticket		Perceived Legitimate	
	OR	Std. Err.	OR	Std. Err.	OR	Std. Err.
Sex (M=0, F=1)	0.721	0.176	0.981	0.078	1.089	0.115
Age	0.998	0.008	0.992**	0.003	0.999	0.003
Latino	1.317	0.434	1.204	0.157	0.686*	0.106
Black	1.196	0.445	1.426**	0.194	0.560***	0.086
Income (>\$50,000 = 1)	0.812	0.111	1.046	0.049	1.259***	0.077
Large City (Over 100,000)	1.293*	0.165	1.131*	0.062	0.858*	0.054
Passengers	0.998	0.255	0.922	0.08	1.031	0.118
Length of Stop (Minutes)	1.042***	0.009	1.123***	0.009	0.971***	0.006
Knowing Officers	0.997	0.271	0.687***	0.062	1.327*	0.166
Observations	3001		3006		2920	
	-340.98577		-1833.08		-1215.903	
Log Likelihood						

***=P<.001, **=P<.005, *=P<.05

Recall that the goal of the last stage of the analysis is to explicitly examine whether the race of the officer moderates the effect of driver race on incident outcomes. As displayed in Table 4, the results again confirm the protective effects of age and knowing an officer, as well as the risk factors of length of stop and large city location. Focusing on the key explanatory variables, in incidents involving a white officer, the odds of a black driver receiving a traffic ticket at the end of a traffic stop were 50% greater than a white driver with a white officer, controlling for all other factors in the model. In incidents with a non-white officer, however, black drivers were no more or less likely to receive a ticket than white drivers. In other words, Mike, frame this in every day language as I did in the above paragraph as its important and we don't want it to get lost on the reader. In traffic stops involving either white officers or non-white officers, black drivers were significantly less likely to perceive their stop as fair. Interestingly, however, black drivers were 43% less likely to perceive the stop as legitimate with a white officer, but 51% less likely with a non-white officer. It's a big deal that Black drivers still believe police stops to be illegitimate even if the officer was black or Latino. In this study there were no observed differences in the risk of Latinos receiving a traffic ticket compared to non-racial minority drivers. Furthermore, Latinos were significantly less likely to perceive a stop as legitimate, but only when the officer was non-white.

Table 4: Logistic Regression Examining Traffic Stop Outcomes by Race of the Officer

	White Officer				Non White Officer			
	Ticket		Legitimate		Ticket		Legitimate	
	OR	Std. Err.	OR	Std. Err.	OR	Std. Err.	OR	Std. Err.
Sex	0.970	0.084	1.080	0.125	1.067	0.224	1.144	0.302
Age	0.991**	0.003	1.000	0.12	0.997	0.42	0.991	0.009
Latino	1.199	0.169	0.723	0.10	1.225	0.33	*	0.179
Black	1.496*	0.235	**	1	1.201	0.11	*	0.154
Income	1.075	0.055	**	2	0.897	0.12	**	0.226
Large City	1.155*	0.072	**	8	1.057	0.21	0.942	0.136
Passengers	0.922	0.086	1.127	0.00	0.896	0.02	0.615	0.179
Length of Stop	1.123**		0.974	0.00	1.122	0.02	0.950	
Knowing Officers	*	0.009	***	6	***	3	**	0.016
	0.707**			0.16	0.584	0.14	2.249	
	*	0.068	1.214	3	*	3	*	0.817
Observations	2554		2,487		452		433	
Log Likelihood	-		-		-		-	
	1557.52		1017.01		273.3753		192.162	

***=P<.001, **=P<.005, *=P<.05

Discussion

In light of recent attention paid to the potential racial bias in police functions, this study sought to offer further evidence of the role of race in police-public interactions. Specifically, I sought to examine whether race influences the likelihood of initial interaction, in addition to incident outcomes such as receiving a ticket, being on the end of coercive action, or perceiving the stop as legitimate. Like many previous studies, I utilized data from a large sample of police-public interactions necessary to ensure a sufficient number of interactions involving members of multiple minority groups.

Findings from the first stage of analysis in this study illustrated that police officers are far more likely to stop a driver in a car than a pedestrian walking. Importantly, race and ethnicity were only significant predictors of being stopped in a car and were not significant predictors of being stopped as a pedestrian. Given that race may be more visible during a foot patrol compared to patrolling in a car, this finding may be surprising. That race was only significant in traffic stops may speak to a complex issue of anonymity alongside the issue of racial profiling. I believe that an officer may be more vulnerable to public scrutiny while stopping/detaining a pedestrian compared to stopping a driver on the side of road. Explaining why race was not a significant predictor of pedestrian stops is beyond the scope of this study, but the perceived anonymity of officers is a factor deserving greater attention from scholars in future research into racial bias and policing.

As predicted, the likelihood of being stopped in a car, as well as the likelihood of receiving a ticket, was significantly greater for black compared to non-racial minority

drivers. Black drivers were also less likely to perceive the outcome of their stop as legitimate. These findings are consistent with prior research that examined demographically based relationships with interactional outcomes of police traffic stops and how they negatively affect minority groups (Armentrout, Goodrich, Nguyen, Ortega, Smith, & Khadjavi, 2007; Barnum, Miller, & Miller, 2015; Blalock, DeVaro, Leventhal, & Simon, 2011; Callahan, & Anderson, 2001; Engel, 2005; Engel, & Calnon, 2004). While these findings do not prove racial bias among police officers, it does reinforce the thorny relationship between policing and race, in addition to strongly held beliefs among African Americans that the negative effect of policing is felt more heavily by blacks (Bobo & Thompson, 2006).

Scholars have detected the association between race and being stopped in a vehicle for many decades, a phenomena commonly referred to in the media and as a pedestrian as Driving While black (Engel, 2005; Engel, & Calnon, 2004). A primary source for this glaring finding is the historical legacy of race in an America, based on decades of institutional racism, racially-coded law, and disproportionate legal outcomes by race (Engel, 2005). In turn, this legacy has increased alienation and frustration among racial minorities, further dividing the police and African Americans. Race is, of course, also a marker for other social characteristics including income. My results suggest that a lower household income was associated with a higher likelihood of being stopped as a pedestrian (on foot), possibly indicative of the increased police presence in low income and predominantly minority communities. The confounding of race, class and crime go to the very heart of the debate about bias in policing practices (Miller, 2009; Moran, 2000; Unnever & Gabbidon, 2011).

While the majority of prior analyses on this topic have focused on black drivers, I extended the analyses in numerous ways. Firstly, I also incorporated a focus on Latino drivers with some interesting and surprising findings. Like black respondents in the survey, ethnicity was unrelated to the likelihood of being stopped as a pedestrian (on foot), once location, income, gender and age were controlled for. But while black drivers were more likely to be stopped by the police than non-racial minority drivers, the odds of being stopped by the police were actually lower for Latino drivers. This finding is contrary to prior studies examining whether ethnicity impacts the incidence of traffic stops (Engel, 2005; Williams, & Stahl, 2008). Nevertheless, while Latino drivers were also no more likely to receive a traffic ticket as the outcome of a stop, Latino drivers were still far less likely to perceive a stop as legitimate. This finding is consistent with past and present research which analyzes public perceptions of traffic stops and police conduct across the country (Engel, 2005; Lichtenberg, & Smith, 2001; Gibson, Walker, Jennings, & Miller, 2009). This may speak to the deeply ingrained fear and mistrust of the police in minority communities. It also suggests that greater efforts must be made to reach out to the Latino community. Prior studies have documented the immense difficulty for police of engaging and communicating with the Latino community (Skogan, 2006). The disconnect may explain why perceptions of police-public contact may be viewed skeptically, despite the lack of evidence suggesting Latinos are any more likely to be stopped or given a ticket compared to non-racial minority drivers.

Secondly, I also extended prior literature by explicitly examining whether officer race moderated the impact of driver race on incident outcomes. Two important findings stand out. Black drivers were more likely to receive a ticket than their non-racial minority

counterparts only when the arresting officer was white. Given that 85% of officers in the study were white, it is difficult to draw firm conclusions about the role of racial bias in ticketing. Nevertheless, it is an area, which clearly warrants more attention and research. Additionally, both Latino and black drivers were significantly less likely to perceive their stop as legitimate compared to non-minority drivers even when the officer was also non-white. In other words, having an officer of color did not legitimate the traffic stop in the eyes of the drivers that were pulled over. This finding is important in light of calls to increase minority representation in the police. I interpret the findings that minority drivers were less likely to perceive their stop as legitimate with a non-white officer as evidence that minority officers in a white-dominated field are perceived as “one of them” or a “traitor.” As long as minority representation remains in the single digits, the illegitimacy of arrests by a minority officer may remain. This cultural perception may only turn once a specific threshold of minority representation in the police is achieved (upwards of 20-30% in line with larger population estimates).

Many of my other findings regarding the role of demographic and incident specific characteristics were consistent with prior literature examining police stops and traffic stop outcomes. As an example, in this study like many done previously, gender significantly impacted the likelihood of initial police contact. Specifically, females were significantly less likely to be stopped as a pedestrian (on foot) or in a vehicle compared to males, consistent with many previous studies that have indicated that males are involved in more police contacts than females (Engel, 2005; Moran, 2000; Rojek, Rosenfeld, & Decker, 2012). As is often assumed, gender differences in police-public contact may be

reflective of gender differences in suspicious behavior as a pedestrian and gender differences in dangerous driving, which require a police initiated stop.

The effect of age also mirrored the well-established findings in the criminological literature that crime decreases with age generally, and dangerous driving incidents decrease with age specifically. It is thus not surprising that an increase in age was associated with significantly reduced odds of being stopped as a pedestrian or in a vehicle, as well as receiving a ticket in a traffic stop. As with a majority of the past research, knowing police officers was also shown to be associated with a greater perception of legitimacy of police conduct and actions (Carric, 2000; Decker, Kopacz, & Toto, 2004) in addition to a reduced likelihood of getting a ticket. Interestingly, however, respondents who knew police officers were significantly more likely to be stopped as a pedestrian or in a car than respondents who did not know an officer personally. This may be explained by a heightened sense of immunity from the law, alternatively it could just be reflective of people being stopped by someone they know for non-legal reasons. Unfortunately the data do not allow me to tease out these possibilities.

One surprising finding in this study was lack of findings regarding coercive action, an oft-cited symbol for the racial problem in police behavior. In this study, coercive action included any act of an officer shouting, cursing, threatening arrest, threatening force, pushing or grabbing, handcuffing, and/or pointing a gun. Given that each of these items were rare events across the study, finding empirical evidence of an effect of race would have been difficult statistically. It is also possible that race does not influence the likelihood of coercive action. In fact only two of the predictors were associated with an increased likelihood of coercive action during a traffic stop. Coercive

action was significantly more likely in large urban cities, and in longer lasting traffic stops. The length of time of a traffic stop is indicative of a more serious incident, greater background checks needing to be run, or an escalation of the police-citizen interaction. As such, the opportunity for coercive action increases. While many previous studies have indicated length of stop as increasing likelihoods of negative outcomes (Engel, & Calnon, 2004; Gibson, Walker, Jennings, & Miller, 2009), my study contributes to the wealth of knowledge on the topic with its detailed explanation of what outcomes drivers are at risk of (Engel, 2005; Engel, & Calnon, 2004; Dixon, Schell, Giles, & Drogos, 2008). The concentration of coercive action in large cities also came as no surprise as previously discussed large cities have concentrations of people with low socioeconomic status and educational attainment; factors associated with crime and social injustice which may also affect traffic stop outcomes (Engel, 2005; Engel, & Calnon, 2004; Dixon, Schell, Giles, & Drogos, 2008; Gibson, Walker, Jennings, & Miller, 2009).

When analyzing variables that could affect receiving a ticket from a police officer, age was shown to have a lower but still significant association affecting an officer's decision to give a ticket. Past research has varied on how significant a variable age is, but many agree that a person 16 to 35 is most at risk of receiving a ticket (Dixon, Schell, Giles, & Drogos, 2008; Gibson, Walker, Jennings, & Miller, 2009). People of black ancestry (1.426**) have significantly higher odds of receiving a ticket when compared to other racial populations. This finding is considered to be very consistent across the existing research regarding traffic stops in the United States (Engel, 2005; Engel, & Calnon, 2004; Dixon, Schell, Giles, & Drogos, 2008; Gibson, Walker, Jennings, & Miller, 2009). As with coercive action, length of stop was associated with having a

significantly increased effect on receiving a traffic ticket. Past research regarding time of stop has consistently discussed the parallel of increasing time of stop and increased risk of receiving a traffic ticket (Carric, 2000; Lundman, & Kaufman, 2003; Callahan, & Anderson, 2001).

Being stopped after dark was also associated with a significantly increased risk of receiving a ticket for this sample. Much of the past research has been connected to notions of darkness/night time increasing officers' likelihood to issue more traffic tickets as well as having a heightened sense of criminal activity which historically has been associated with darkness/night time (Barnum, Miller, & Miller, 2015; Decker, Kopacz, & Toto, 2004). The final variable with any significant effect on receiving a traffic ticket was personally knowing an officer. This was a finding revealed to be a protective factor in this sample as well as past studies lowering the risk of receiving a traffic ticket (Engel, 2005; Engel, & Calnon, 2004; Aementrout, Goodrich, Nguyen, Ortega, Smith, & Khadjavi, 2007). Future research may consider the ways in which knowing an officer can help someone in a traffic stop, whether through naming a direct contact, or through discursive knowledge which improves the handling of the traffic stop.

Although findings of this study are notable, limitations must also be considered. Chief among them, the measure of officer conduct during traffic stops is a small concept under a much larger umbrella of police conduct and practices. In future studies, additional measures should be examined to gauge a more comprehensive understanding of police conduct which includes attention to local police goals, agency organization, and political climate. Police behavior does not operate in a vacuum, and failure to take into

account these larger political and organizational contexts severely hampers our understanding of the ways in which race moderates police-public interactions.

Additionally, the third and final stage of the analysis may have had limited statistical power due to the small number of non-white officers in the sample. The recruitment of minority officers is, of course, an ongoing issue for police agencies across the United States but an important goal in ensuring a local police force is reflective of, and engaged with, its local community (Skogan, 2006). The small sample size in my analysis may help explain why age was not associated with the likelihood of a traffic stop outcome among non-white officers, but does also raise the possibility that non-white officer ticket decisions may not be affected by demographic/extra-legal factors as often as white officers (Engel, 2005; Engel, & Calnon, 2004). The findings from this analysis are important however and should guide further research on the importance of officer race (Miller, 2009). As an example, the finding that black drivers have lower odds of perceive a stop as legitimate compared to non-minority drivers when the officer is also non-white warrants further investigation. This finding would seem to contradict the theoretical rationale for increasing minority representation in the police force (i.e. it would increase perceived fairness)

Findings of this study, nonetheless, are notable in a few ways. First, it provides information useful for researchers, law enforcement agencies, citizens, and other stakeholders to utilize when strategizing ways to prevent police officer misconduct and profiling. Specifically, the measures of coercive action and perceived legitimacy are important to examine as a protective factor against hazardous police behavior. Next, findings consistent with prior studies are important to observe. This study was unique in

its examination with an understudied population of police conduct and citizen perceptions from those living in inner city neighborhoods. Last, significant results concerning participant race, income, and location yield further insight into potential differences in the ways police treat citizens based on demographics.

By considering these findings, this research should encourage awareness of police practices targeting the profiling of citizens and use of coercive action. Prior research traditionally has studied police profiling and coercive action as a defensive factor when examining traffic stops. In contrast, this study yields similar results when examining the relationship between police conduct, coercive action, ticketing, and perceptions of legitimacy. Additionally, the utilization of direct and internal controls provides important tools for police practices. Agencies, legislators, and policies focusing on policing techniques should consider these methods to improve police conduct and encourage positive citizen interactions.

Based on the current research the issue of police conduct can be improved with the implementation of three key policies or strategies 1) increased officer education/training, 2) community policing programs, and 3) increased psychological testing/services. Firstly, increased officer education/training would aid in the officers' knowledge of their impending community of patrol and the appropriate ways to deal with intense situations. The current model of officer education (6 - 9 month certification) does not allow for the timing necessary to truly understand the impact of actions made and situations that could be faced especially in communities with police mistrust (Bronitt, 2012). Officers (new and old) need to be put through a more intense physical training program that includes an increased emphasis of situational tactics. Additionally, officers

need to be faced with real life scenarios in a way that can convey the seriousness of their decisions. Increased focus on outcomes of decision making (similar to military training) will increase the individual's chance of making appropriate decisions under increased duress/stress (Bronitt, 2012). Additional and extensive mental preparation is the first key to terminate the often life changing decisions poorly trained officers are forced to make during situations they are not prepared for. This policy would also require new officers to be paired with more seasoned officers for 12 to 24 months on shifts that allow for a better integration with their assigned communities. The positive of this policy would be that it allows new officers and trainees much needed time to familiarize themselves with community needs, concerns, and problems. A negative of this policy would be that the new officers could learn negative traits from unfit older officers and perpetuate those, creating issues within their assigned communities.

The second key policy that could decrease police-public interactions cached in racially-slanted outcomes is a community policing program; that is, to create a program that places officers, trainees, and community leaders in constant communication with one another. This allows officers the ability to connect with community members with a buffer allowing for familiarity with one another increasing communication and cooperation. Urban, minority, and impoverished communities need to know that officers are there to protect and serve them, a fact which has been overshadowed by increasingly tragic situations that can be avoided with increased community involvement. This model is closely related to the more traditional style of community foot patrol officers of the early twentieth century. During the early part of the twentieth century police officers were a daily part of the community and knew the members and what was going on. This

increased involvement led to more openness between community members and police officers. The officers on the streets had more control of their decisions and actions which allowed them the ability to aide communities/members more efficiently. This policy could decrease crime and arrest numbers while also increasing community awareness, rehabilitation, and confidence in police conduct. This policy can also be linked to a more relaxed and lenient brand of consequences for criminals within the community, which can be negative.

Lastly, based on the research, police conduct can be decreased by stricter psychological testing of academy members and a more stringent psychological/therapy policy for working officers. To begin applicants who are prone to violent outburst because of the negative impacts of increased stress and physical outbursts could be weeded out in greater numbers with increased testing. This policy would also require current police officers to participate in either monthly or bi-monthly therapeutic/psychological analysis to account for the high stresses of an emotionally demanding profession. Like soldiers in combat zones police officers routinely see the worst aspects of life such as violence, death, rape, and child victims; witnessing or taking part in these events increasingly affects their psychological wellbeing. Additionally, this policy would give officers the ability to understand and deal with high stress situations more effectively because they will be given the needed psychological tools to interpret what they encounter. Based on the research, police officers are routinely given only seconds to make high risk decisions about force which can instantly escalate to levels of excess. An understandable negative of this policy would be its financial impact on cities, which would be responsible for providing the funds for this policy initiative. The

overwhelming positive of this policy would be its ability to increase officer reliability and decrease the number of police brutality that occur because of the impact of a stressful profession. The research data has shown that in general police brutality is not committed intentionally, but rather because of situational pressures, which could be decreased with this policy.

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