11-19-2010

Minority Group Threat and Racial Profiling: An Analysis of Pretextual Traffic Stops and Outcomes in Missouri Municipalities

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A Dissertation Submitted to The Graduate School at the University of Missouri-St. Louis in partial fulfillment of the requirements for the degree Doctor of Philosophy in Criminology and Criminal Justice

November 2010

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Abstract

Racial profiling remains a controversial societal issue due in part to difficulties in determining its prevalence. Some analysts have proposed that criminological theories should be used to explain racial profiling. Using the minority group threat hypothesis, this dissertation analyzes the effects of Black population increases on race-based pretextual stops in 113 Missouri municipalities with sizable Black populations. The research also analyzes the effects of the growth and size of the Black population on traffic stop outcomes, including searches, contraband found, arrests, and citations. Other variables that might explain pretextual stops and traffic stop outcomes, including violent crime rates and socioeconomic differences between the Black and White populations, are assessed. The study finds support for the minority group threat hypothesis in explaining racial profiling based on the relative growth and size of the Black population. The hypothesis is refined by results showing the thresholds in the relative size of the Black population at which racially disparate stop rates and outcomes emerge and recede. Community accountability theory also helps to explain the effects of municipal government structure on race differences in traffic stops and outcomes. Although policies that affect population growth would be questionable, policy makers and police organizations should make genuine efforts to reduce profiling by scrutinizing pretextual stops more closely, revising racial profiling forms to reflect more explicit police activity, taking away the ability for officers to make easy outstanding warrant and traffic violation arrests, and requiring documentation of departmental responses to disproportionate stop rates to accompany yearly racial profiling reports to the Attorney General.

Key Words: racial profiling, pretextual stop, minority threat, population ratio, disproportionate searches, disproportionate arrests for outstanding warrants, contraband, traffic violations, and citations issued

Pernell Witherspoon is currently a criminal justice professor at Lindenwood University and a doctoral student at the University of Missouri-St. Louis. His research interests are racial issues in the criminal justice system and police ethics.

Acknowledgements

It is difficult to express truly my most sincere appreciation to all that were meaningful during this process. But first, I must thank my parents, Helen and Charlie Witherspoon, who gave me the ability to endure and never quit. Additionally, I want to thank my wife, Anissa, who stuck by me throughout this endeavor and encouraged me to continue during challenging times. Furthermore, I want to thank my committee who had confidence in my ability and persisted that I produce a quality dissertation. I owe much of that to Dr. Jody Miller. Dr. Jeff Rojek was vital by assuring that I used the appropriate data to execute the tasks required for my analyses. Dr. Glenn Curry was instrumental by providing me with the courage and confidence to get it done. And mostly, Dr. Richard Rosenfeld took the time out of his busy and hectic schedule to guide my thoughts, which enabled me to truly understand how to approach this subject and introduce important findings to the discipline. I want to give a special thanks to Dr. Gene Overall and Dr. Sue Tretter, who both contributed to this accomplishment at magnitudes that I am sure they are not aware of. I want to thank all of you and pray that each of you will be blessed for years to come.

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CHAPTER 1
INTRODUCTION: HISTORICAL REVIEW

When people are asked about whether racism still exists in America, they almost unanimously confirm its presence and view it repulsively (Quillian, 2006). Some believe that while it is not as conspicuous as in the past, it could be more dangerous today as some hide their hatred to avoid violating political correctness. This is not to assume that racism only reflects an individual's conscious prejudices toward others. It can also be subconsciously triggered by the presence or mention of a minority group (Quillian, 2006). This subconscious activation may come from "stereotypical beliefs associated with a racial category" and could subsequently influence an individual's or group's actions (Quillian, 2006: 314-15). Although racism is prevalent in the eyes of many, few seem to confess their true feelings. Many even justify its existence by making the claim that everyone is "prejudiced" to some extent. Yet the majority maintains that they have never mistreated another or used the "n" word because the use of that word was not allowed in their homes (Walker et al., 2004).

It is difficult to deny that individuals learn behaviors mostly from what their parents have taught (Siegel, 2005). Going back to days of slavery in the United States, children were taught that Blacks were inferior to Whites, which kept slaves in subservient positions. African captives were treated as animals by many civilians and government officials. In fact, Africans were only considered three-fifths of a person during early United States history. This principle was simply the sign of the times. As things changed, American born Africans gained more freedoms, but not without resistance. Historically, Blacks maintained a subordinate position in American society,

economically, educationally, politically, and even within the criminal justice system. Blacks received the death penalty under conditions that would not have elicited capital punishment if the perpetrators were White (Walker et al., 2004). Historical accounts from the early 1900s until the early 1960s show how White children accompanied their parents to witness and celebrate hangings of Blacks.

It causes one to wonder whether today's corporate CEO's might have been in these audiences and now teach or have taught their sons and daughters the traditions they learned growing up. Additionally, today's religious leaders may have stood in these crowds and currently may hold views similar to their parents. Furthermore, politicians who learned from past experiences may now teach their children these perspectives. There could also be law enforcement officials who maintain racial prejudices taught by their mothers and fathers. This racist past is not very distant, and the vestiges may still be present.

After Civil Rights laws were put in place in the mid 1960s, attitudes did not necessarily change, but tactics did (Quillian, 2006). Those who remained opposed to allowing racial equality continued to hood themselves to hide their identities as they terrorized Black communities. These individuals most likely passed down their ideas and attitudes to subsequent generations who now continue this trend, but in different ways (Quillian, 2006).

In reality, individuals will maintain their own beliefs and attitudes toward other groups. Authorities will only need to deal with these convictions as they become pertinent to the welfare of other individuals. For that matter, it becomes more alarming when agents of trust act on these sentiments passed down from previous generations.

While there are those who belong to groups that proudly tout their superiority over others, few admit having racist postures (Quillian, 2006). In some instances racist attitudes are only revealed because of an unfortunate slip of the tongue that exposes a person's true character. These clandestine positions make it difficult for scientific research to prove to what magnitude racism exists in the minds of agents of trust. Yet history has shown that Blacks have been put to death at higher rates than Whites, sentenced more harshly, arrested at higher rates, and are several times more likely than Whites to come under the control of the criminal justice system (Walker et al., 2004). While many acknowledge that racism is still prevalent in America, no matter whether one is a politician, minister, or an agent of the criminal justice system, some believe that Black overrepresentation in the criminal justice system has more to do with crime patterns than racism (Walker et al., 2004). Some are even more reluctant to believe that police, whom we trust to protect our daily quality of living, act in racist ways that would affect an entire population. Since the police are in a powerful position to make life changing decisions, the importance of analyzing police behaviors is paramount in administering criminal justice equally.

Criminological research consistently reports that police treat Blacks and Hispanics more harshly than Whites in most contacts. Police arrest and use lethal and non-lethal force more often against Blacks and Hispanics than Whites.[1] The FBI's Uniform Crime Report arrest statistics indicate that minorities are disproportionately more involved in criminal activity than Whites, which may partially explain the differential treatment by

[1] (Binder and Scharf, 1982; Fyfe, 1982; Sparger and Giacopossi, 1992; Sorensen et al., 1993; Jacobs and O'Brien, 1998; Crawford, 2000; Smith and Petrocelli, 2001; Terrill and Reisig, 2003)

police.[2] However, arrest statistics do not tell the entire story when other data collection methods, such as victimization and self report surveys, are taken into account (Walker et al., 2004).

Victimization and self report studies indicate that the frequency by which Blacks and Hispanics engage in criminal activity is not as high as arrest statistics suggest. Aside from serious felonies, Blacks and Hispanics violate the law approximately at the same rate as Whites (Hindelang et al., 1979; Powell, 1990; Tonry, 1995; Donohue and Levitt, 2001; Eitle et al., 2005). In fact, when it comes to traffic stops, some research suggests that Whites violate traffic laws at higher rates than Blacks and Hispanics (Lamberth, 1996). Nevertheless, most studies reveal that Blacks and Hispanics are still more likely than Whites to be stopped and searched by the police.

While debates on differential treatment of Blacks and Hispanics versus Whites continue, traffic stop data and the circumstances surrounding police stops have gained more attention. As a supplement to the National Crime Victimization Survey (NCVS), a 2002 national study on citizen contacts with police indicates that Blacks and Hispanics were no more likely than Whites to be subjected to traffic stops. However, Blacks were significantly less likely to feel the stops were legitimate (Durose et al., 2005). The study acknowledges methodological concerns with the study results. For instance, respondents to the NCVS might use selective memory, misinterpret, or simply forget circumstances (Siegel, 2005). There is also growing debate that involves the denominator used to measure minority overrepresentation in traffic stops (Durose et al., 2005). Nevertheless, the national study displayed results that cannot be ignored.

[2] (Hindelang et al., 1979; Moyer, 1982; Smith et al., 1984; Powell, 1990; Sealock and Sampson, 1998; Avakame et al., 1999; Crawford, 2000; Avakame and Fyfe, 2001; Walker, 2001; Stolzenberg et al., 2004)

Given these results, this dissertation provides a descriptive analysis of municipalities in the State of Missouri with populations of 90 or more Black residents. This study further used explicit theoretical assessments of police differential treatment of minorities in Missouri traffic stops and particularly the outcomes of those stops. One might speculate that as the minority population increases, police use aggressive law enforcement tactics, such as traffic stops, more often against minorities than Whites. The circumstances surrounding these traffic encounters may provide a more in-depth look at whether there is differential treatment of minorities, whether these differences are a function of some legal factor that puts minorities at a higher risk of police scrutiny than Whites, or whether the complexities of this issue simply hinder any concrete evidence of racial profiling. To that end, traffic stop outcomes are examined. Additionally, extralegal factors such as poverty, unemployment, household income, and property values are assessed to test the extent that minority population increases contribute to differential treatment.

LITERATURE REVIEW ON DIFFERENTIAL TREATMENT

Differential police treatment between minorities and White citizens is examined in studies that address various police activities.[3] While extralegal factors may play a role in some police behavior, it is not clear whether race is the exclusive explanation of why Blacks and Hispanics are treated more harshly than Whites. This section will examine

[3] (Correll et al., 2002; Hindelang et al., 1979; Binder and Scharf, 1982; Fyfe, 1982; Moyer, 1982; Erez, 1984; Smith et al., 1984; Bursik, 1986; Schuerman and Kobrin, 1986; Powell, 1990; Sparger and Giacopossi, 1992; Sorensen et al., 1993; Doerner and Ho Tai ping, 1994; Tonry, 1995; Klinger, 1996, 1997; Jacobs and O'Brien, 1998; Levin and Alexander, 1997; Sealock and Sampson, 1998; Avakame et al., 1999; Mastrofski et al., 2000; Rogers and Johnson, 2000; Avakame and Fyfe, 2001; Brandl et al., 2001; Donohue and Levitt, 2001; Garner et al., 2002; Smith and Holmes, 2003; Terrill and Reisig, 2003; Schuck, 2004; Stolzenberg et al., 2004; Eitle et al., 2005)

the effects of race on lethal and non-lethal use of force, arrests for serious and minor offenses, and traffic stops. When it comes to the use of force, some studies have found no evidence that suggests that race plays a role in police actions (Brandl et al., 2001; Eitle et al., 2005). However, if we get more specific by examining deadly force, there might be indications that race, indeed, influences police decisions to shoot.

Lethal Force

Some studies reveal that police kill Blacks overwhelmingly more often than they do Whites.[4] Fyfe (1982) conducted a study of the Memphis, Tennessee, Police Department and found that even in less threatening situations, Blacks are shot more often than Whites. While studies acknowledge that the police subject Blacks to lethal force more often than Whites, it is still not clear to what extent race of the offender plays a major role in police decisions to use lethal force (Doerner and Ho Tai ping, 1994; Correll et al., 2002).

Police shootings were more likely to occur in situations when officers felt that suspects posed a high risk of danger. Since Blacks and Hispanics make up a disproportionately large number of individuals who participate in high risk activity (Smith et al., 1984; Walker et al., 2004), it follows that they will become victims of police shootings more often. Does this complicate the issue and possibly explain police shootings as a function of situational factors rather than racial discrimination? In response to this rhetorical question, Michael Donohue (1983) showed that Black officers are disproportionately more likely than White officers to shoot Black suspects. Donohue

[4](Binder and Scharf 1982; Fyfe, 1982; Sparger and Giacopossi, 1992; Sorensen et al., 1993; Jacobs and O'Brien, 1998; Smith and Petrocelli, 2001; Terrill and Reisig, 2003)

noted that Black officers are often assigned to predominantly disadvantaged minority areas. This might suggest that Black police have a tendency to be tougher than White police on Black suspects. Furthermore, studies that use Firearm Training Systems simulating field situations to safely analyze an officer's decision to shoot armed versus unarmed subjects show that White officers are no more likely to use deadly force than Black officers (Doerner and Ho Tai ping, 1994; Ho Tai ping, 1994; Correll et al., 2002). If nothing else, maybe neighborhood characteristics, such as the high general rate of violence in inner cities, mediate police use of deadly force against minorities. It might not be that minorities are shot at different rates solely because of race (Binder and Scharf, 1982; Terrill and Reisig, 2003). Studies that analyze the use of police non-deadly force might provide a clearer depiction of police action as it pertains to race and neighborhood characteristics.

Non-lethal Force

Police use of deadly force is a rare event (Garner et al., 2002) and generally occurs as a result of an officer perceiving a threat. However, the justifications for using non-deadly force are not as transparent when analyzing physical confrontations between police and citizens. Police use of non-lethal force ranges from physical altercations to the use of pepper sprays, stun guns, and other control techniques. While some studies claim there is no evidence that race plays a role in police use of physical force (Rogers and Johnson, 2000; Brandl et al., 2001), other studies suggests that race is very relevant (Erez, 1984; Levin and Thomas, 1997; Smith and Petrocelli, 2001; Schuck, 2004). As physical force comes from a wide range of activities that may or may not officially be documented in

police reports, research data may be limited when seeking to determine whether police use more physical force on Blacks and Hispanics than Whites. However, when arrests are made, there is considerable research that covers various circumstances surrounding the disparate arrest rates between minority and White individuals.

Arrests for Serious Felonies

While the literature is scant on arrest statistics for Hispanics, studies have shown that Blacks and Hispanics are generally arrested more often than Whites, and these differences vary between arrests for serious crimes as opposed to minor offenses.[5] Moreover, the ratio of Black-to-White Americans arrested for serious crimes is much greater than the ratio between the same groups for arrests for less serious crimes (Hindelang et al., 1979; Smith et al., 1984; Smith and Petrocelli, 2001; Stolzenberg et al., 2004). However, "controlling for the amount of race-specific crime reported to the police, Black citizens actually have a lower probability of arrest than Whites in cities with relatively large Black populations" (Stolzenberg et al., 2004: 673). Furthermore, Blacks were found to be less likely to be arrested in cities where segregation is more pronounced, except for crimes involving a White victim and Black offender (Avakame and Fyfe, 2001; Stolzenberg et al., 2004). Thus, it appears that the racial makeup of the population and perhaps the local police department may have some influence on arrest rates.

The results are varied in studies that report the influences of the racial makeup of police departments as it relates to arrest rates. While Whites are more likely to be

[5] (Hindelang et al., 1979; Moyer, 1982; Smith et al., 1984; Powell, 1990; Sealock and Sampson, 1998; Avakame et al., 1999; Avakame and Fyfe, 2001; Walker, 2001; Stolzenberg et al., 2004)

arrested for assaults than Blacks and Hispanics regardless of the racial composition of the police department, the probability that Whites are arrested is even greater in cities with relatively more minority officers. In fact, increases in the number of minority police are positively associated with White arrests while increases of White officers result in more minority arrests, particularly for minor offenses (Donohue and Levitt, 2001; Eitle et al., 2005). Having evidence that Blacks are arrested for serious crimes more often than Whites, self report and victimization surveys confirm data from official statistics that indicate that Blacks commit more serious offenses than Whites (Hindelang et al., 1979; Tonry, 1995; Walker et al., 2004). Therefore, it appears that there is justification for the higher Black arrest rates for serious crimes. Based on such data, one must question whether the justifications for higher Black and Hispanic arrests are as salient when analyzing arrests for minor offenses.

Arrests for Minor Offenses

As stated earlier, while Blacks are arrested more often than Whites for serious crime, they are also arrested more for non-serious crime (Hindelang et al., 1979; Smith et al., 1984; Powell, 1990; Crawford, 2000; Stolzenberg et al., 2004). Conversely, unlike the patterns of criminal behavior reported for serious offenses, the ratio of offending between Blacks and Whites is not as pronounced when studying minor offenses. In fact, many self report and victimization surveys show that crime rates between Blacks and Whites are similar for minor offenses; thus, discrimination may appear to play a larger role in these arrest statistics (Hindelang et al., 1979; Powell, 1990; Tonry, 1995; Donohue and Levitt, 2001; Eitle et al., 2005). Alfred Blumstein (1982) conducted a study of racial

differences in arrest vulnerability. He found that as the seriousness of the offense decreased, Blacks became disproportionately represented in arrests. He acknowledges that police patrol neighborhoods that are more crime prone which accounts for some of the disparities, but the differences in arrest rates are more pronounced for minor violations of the law, which allows for more police discretion and the potential for bias activity.

However, there are studies that claim that race either has no significant correlation to or little impact on police decisions to arrest (Moyer, 1982; Klinger, 1996, 1997; Chamlin and Brandl, 1998; Mastrofski et al., 2000). Chamlin and Brandl (1998) report results from a Milwaukee study by analyzing populations from 1930 to 1972. They found that as the percentage of the Black population rose, the arrest rates for vagrancy decreased, which contradicts the notion that Blacks are substantially more often arrested for minor offenses. Klinger (1997) even espoused that in areas where crime rates are high, which is usually in Black neighborhoods, arrests for minor offenses are less frequent than in areas with lower crime rates. He concluded that the conduct did not violate the threshold that would warrant an arrest in these types of neighborhoods. On the other hand, other studies report that in neighborhoods where there is less informal control, there is a need for more official social control or police intervention (Bursik, 1986; Schuerman and Kobrin, 1986). More interestingly, Smith et al. (1984) show that in lower status neighborhoods, police are more punitive in their arrest practices when there are no complainants and less punitive if there is a Black victim. These actions perpetuate what Smith et al. (1984) call a "systematic denial of legal protection for blacks" (p. 249).

Traffic Stops

Police treatment of minorities during traffic stops has become a controversial issue in recent years. While criminological research on traffic stops is limited, much of it focuses on how minorities are racially profiled (Smith and Petrocelli, 2001; Cox, 2002). The definition of racial profiling has varied around the notion of police stopping an individual based solely on the driver's skin color.[6] Given the problem with determining whether an officer's motivation to stop an individual was truly based on skin color, the definition is difficult to use as an accurate measurement for analyzing race-based traffic stops. Nevertheless, research consistently reports that minorities are stopped by police at disproportionately higher rates than Whites, which at least provokes the need to examine whether some form of racial profiling exists. The problem might be, as Batton and Kadleck (2004: 31) assert, that "the defining characteristics of racial profiling incidents have yet to be identified." That is, the circumstances surrounding a traffic stop must be examined more closely to determine whether racial profiling is taking place.

The concept of racial profiling became controversial in the 1980s as Operation Pipeline, a tool used by the United States Drug Enforcement Administration to profile drug couriers, was initiated. Blacks and Hispanics were explicitly identified as drivers that fit the profile of drug traffickers.[7] The facts surrounding these implications have been questioned as Engel et al. (2002) point out that Black drivers stopped for traffic violations do not produce more arrests or drug seizures than White drivers. Racial profiling gained national attention in a 1993 incident when a Black attorney (Robert

[6] (Walker, 2001; Barlow and Barlow, 2002; Buerger and Farrell, 2002; Engel et al., 2002; Farrell et al., 2002; Meeham and Ponder, 2002; Batton and Kadleck, 2004; Novak, 2004)
[7] (Harris, 1997; Crawford, 2000; Hemmens and Levin, 2000; Buerger, 2002; Buerger and Farrell, 2002; Engel et al., 2002; Farrell et al., 2002; Batton and Kadleck, 2004; Tomaskovic-Devey et al., 2004; Walker et al., 2004)

Wilkins) accused Maryland State Police of stopping him simply because of his color (Lamberth, 1996; Novak, 2004). Since then, the attention on racial profiling has caused many to question its magnitude. Racial profiling studies are mixed when analyzing differential treatment of Whites as compared to minorities. Most criminological studies reveal that minorities are either significantly or moderately more likely than Whites to be stopped by the police.[8] Other studies, while fewer, reveal that Blacks and Hispanics are no more likely than Whites to be stopped by the police (Meeham and Ponder, 2002; Scmitt et al., 2002; Durose et al., 2005). It is no surprise that minorities are more likely than Whites to believe that racial profiling exists in traffic stops (Novak, 2004; Walker et al., 2004). Minorities have consistently reported, more often than Whites, having a negative perception toward police.[9] However, a larger problem is determining whether these minority beliefs accurately depict unfair treatment by police or legitimate police actions are justified by the circumstances surrounding the stop and the perpetrators just happen to be minorities.

POST TRAFFIC STOPS

Post Stop Review

Several methods have been used to analyze traffic stop data; however, assessing racial profiling remains enormously challenging (Ridgeway, 2006). Which method is best

[8] (Lamberth, 1996; Harris, 1997; Fagan and Davies, 2000; Hemmens and Levin, 2000; Langan et al., 2001; Smith and Petrocelli, 2001; Walker, 2001; Buerger, 2002; Batton and Kadleck, 2004; Meeham and Ponder, 2002; Novak, 2004; Rojek et al., 2004; Walker et al., 2004)

[9] (Jacob, 1971; Peek et al., 1981; Hagan and Albonetti, 1982; Polivka, 1984; Welch, 1989; Murty et al., 1990; Oramas, 1994; Frank et al., 1996; Priest and Carter, 1999; Henderson et al., 1997; Sampson and Bartusch, 1998; Chandek, 1999; Weitzer, 1999, 2000; Son et al., 2000; Hurst et al., 2000)

remains a controversial issue in criminological studies (Walker, 2001; Novak, 2004; Rojek et al., 2004; Durose et al., 2005). Studies have used a specified racial/ethnic group's number of stops within a given location divided by that racial/ethnic group's total residential population in the location to determine the likelihood of being stopped (Petrocelli et al., 2003; Withrow, 2004). Other studies have used the number of stops divided by the total residential driving age population within a municipality to measure the likelihood of being stopped.[10] Police chiefs argue that minority stops are not simply a function of their populations within a location but have more to do with the number of minority drivers that travel through a given area (Rojek et al., 2004). The implication is that non-resident minorities travel from surrounding municipalities, which increases their likelihood of being stopped. This may distort results in studies that use residential populations as the denominator to calculate stop rates. Thus, studies have used direct observations to determine the racial make-up of driving populations along with spatial weighting to assure that drivers in surrounding areas are accounted for in the denominator (Rojek et al., 2004). While the Rojek et al. (2004) study appears to be a better measure in providing a benchmark for comparing racial differences in stop rates, it still does not confirm that racial disparities in stop rates are the result of officer bias.

It could be that police disproportionately stop minority motorists because they violate the more serious traffic laws, such as speeding, at higher rates than Whites. If police are justified in their actions and since speeding motivates most stops (Langan et al., 2001; Durose et al., 2005), it is expected that minority stop rates for serious traffic violations should be significantly higher than White rates. Similarly, minority motorists might be

[10] (Harris, 1999; Smith and Petrocelli, 2001; Langan et al., 2001; Zingraff et al., 2000; Nixon, 2003; Durose et al., 2005)

more likely to violate minor traffic ordinances as well, which may prompt police stops. These minor traffic stops, which are generally at the heart of racial profiling complaints, are the result of the "pretextual" stop (Crawford, 2000; Novak, 2004). The pretextual stop is a strategy originally used by officers as part of the war on drugs to stop a vehicle for minor infractions even though the officer's intentions might be to discover other illegal activity (Harris, 1997; Crawford, 2000; Novak, 2004). Additionally, pretextual stops have been used widely in the police profession and have been recently ruled constitutional by the United States Supreme Court (Crawford, 2000; Novak, 2004). Pretextual stops could further cloud the ability to determine racial motives. While this issue remains complex, an attempt to isolate patterns that show disparities might be a useful strategy to continue to understand the existence of conditions that might permit racist motives to remain inconspicuous.

This study examines the relationship between pretextual stops and the likelihood of disproportionate stops of Black drivers over White drivers. While the argument can be made that minorities; operate more vehicles with equipment violations or improper registration, these stops are still considered minor traffic violations. With this being the case, minority drivers may become suspicious of police intent, which might set off the racial profiling accusations.

Would it be wrong for officers to stop vehicles for minor violations? What drives minorities toward allegations of racial profiling? Since there are no statistical methods available to efficiently measure individual officer discrimination, analyzing what occurs after the stop might be a better way to examine racial profiling than simply looking at disparities in stop rates alone (Engel and Johnson, 2006).

Researchers have recently started taking a closer look at what occurs after the stop to assess the existence of racial profiling (Rosenfeld et al., forthcoming). Some utilize outcome tests (Ridgeway, 2006; Engel et al., 2006; Engel, 2008, Perisco and Todd, 2008), which employ statistical comparisons of search success rates, for instance, the number of searches that result in the discovery of contraband divided by the number of total searches. These rates are then compared across racial/ethnic groups. These comparisons, according to some economists who first generated the outcome tests, can be used to discern between officer bias and statistical discrimination (Engel, 2008). Statistical discrimination is described as a large dissimilarity in results between groups which leads to a disparate impact on one group, albeit these outcomes were not intentional (Engel, 2008). An example would be the likelihood that minorities are stopped at much higher rates than Whites which might be due to race based deployment in crime prone neighborhoods, generally minority, to be saturated with police. Such extention in law enforcement results in more police/citizen encounters (Engel, 2008). Minority motorists are more likely than White motorists to violate minor traffic laws (Langan et al., 2001; Crawford, 2000; Novak, 2004; Durose et al., 2005). Thus, officers are given greater opportunity to make stops and further investigate minority motorists through vehicle searches. If officers are finding that the search rate is generally successful, then officers may be more inclined to use the pretextual stop on minority drivers. However, there could be other variables that drive an officer's desire to stop a vehicle for further investigation.

The number of arrests is central to the measurement of police efficiency, which might be a key motivating factor behind law enforcement practices (Walsh, 1986).

Interestingly, there is research that studied officer use of mobile data terminals that reveals that minorities are queried by police at higher rates than Whites (Meehan and Ponder, 2002). These data imply that while police are in the privacy of patrol vehicles equipped with car computers, without any provocation they randomly run record checks on the license plates of vehicles driven by Blacks and Hispanics. The queries could reveal results that include expired license plates, improper registrations, and wanted persons. The results of the inquiries seemingly give police probable cause to make a pretextual traffic stop.

Since most research clearly indicates that Blacks are stopped at higher rates than Whites, it follows that Blacks will receive traffic citations at higher rates as well. As a result, Blacks are more likely to have outstanding warrants because they are less likely to afford paying fines (Walker et al., 2004). While officers are aware that the number of arrests is a key measurement of individual and department efficiency (Fisk, 1974; Walsh, 1986; Gaines and Miller, 2006) and assuming that police are mindful that Blacks are more likely than Whites to be wanted (Langan et al., 2001; Durose et al., 2005), the chance of making an arrest after stopping Black drivers becomes greater. For these reasons, outstanding traffic warrants might partly explain why police use the pretextual stop to detain Black motorists disproportionately to White motorists. While some argue that these stops exhibit good police work (Walsh, 1986), others may argue that this practice is still racially driven.

Studies have shown that Blacks spend time in local jails at higher rates than Whites, which may be attributed to more warrant arrests (Walker et al., 2004). Additionally, spending more time in jail can affect job opportunities, which results in higher

unemployment rates (Siegel, 2005; Walker et al., 2004). Furthermore, these effects are associated with higher crime rates (Walker et al., 2004; Siegel, 2005). Increased incarcerations produce a cycle that puts minorities at a considerable disadvantage within the criminal justice system. These circumstances may be the result of statistical discrimination because Blacks are simply at a higher risk for police contact. On the other hand, if there are no other explanations why Blacks are at risk for police contacts more than Whites, but are still searched, arrested, and given citations at much higher rates, such disparities could be the result of officer bias, particularly if search success rates are lower for Blacks (Ridgeway, 2006; Engel et al., 2006; Engel, 2008, Perisco and Todd, 2008). These factors seriously complicate any research looking to explain racial profiling. This study will examine factors after the stop, including searches, arrests for contraband, arrests for outstanding warrants, arrests for traffic violations, and citations issued to provide a better understanding of the pretextual stop and the likelihood that racial profiling is in operation.

Stop and Search

While studies reveal that Blacks and Hispanics are stopped by the police at higher rates than Whites, Blacks and Hispanics are even more likely than Whites to be searched during a traffic stop.[11] On the other hand, again to a lesser extent, some studies demonstrate that Whites are searched more often than minorities, particularly when it comes to consent searches (Smith and Petrocelli, 2001; Novak, 2004).

[11] (Lamberth, 1996; Knowles et al., 2001; Langan et al., 2001; Buerger, 2002; Buerger and Farrell, 2002; Scmitt et al., 2002; Rojek et al., 2004; Tomaskovic-Devey et al., 2004; Durose et al., 2005; Steward and Totman, 2005)

Knowles et al. (2001) claim that searches of Black drivers are justified because Blacks are arrested more often for various charges, and the searches are part of the search incident to the arrest, which this study will discuss later. Steward and Totman (2005), to the contrary, state that Blacks and Latinos consent to searches at higher rates, which might suggest that searches are not necessarily due to arrest factors. Rosenfeld et al., (forthcoming) examined searches that were purely discretionary and excluded searches incident to the arrest and outstanding warrants. While Rosenfeld et al. (forthcoming) found that searches varied with age of driver, residence, and time of day, young Black males were subjected to discretionary and non-discretionary searches at higher rates than young White males. On the other hand, when observing discretionary searches, which mostly included consent searches, older White males were more likely searched than older Black males. The results held for searches conducted by both Black and White officers.

Traffic Arrests

Mixed results emerge on the likelihood of being arrested after a traffic stop. Although they exist, few studies show that Whites are more likely than minorities to be arrested after a traffic stop (Smith and Petrocelli, 2001) while other studies show that minorities are more likely than Whites to be arrested after being stopped (Crawford, 2000; Engel, 2003; Rojek et al., 2004; Smith et al., 2006). Smith et al. (2006) furthermore claim that there is a link between suspicion and arrests. That is, individuals who are perceived by the police as being suspicious have a higher probability of being stopped and perhaps arrested. Since police perceive Blacks more often than Whites to be questionable, the

probability of Blacks arrested after a traffic stop becomes higher than the likelihood for Whites (Smith et al. 2006). In other words, although the stop may or may not appear legitimate, the occurrences during the stop result in an arrest for Blacks at higher rates than for Whites. It has even been reported that excessive noise complaints, such as driving with loud music, has been used as a pretextual stop, which results in Black arrests at higher rates than White arrests (Crawford, 2000).

After using race of the officer as an indicator, Smith and Petrocelli (2001) found that White officers were no more likely than Black officers to arrest minority drivers. In fact, both White and Black police officers have been reported as treating people of color differently than White citizens during traffic stops (Buerger and Farrell, 2002). This certainly makes the issue more complex but does not eliminate the possibility that the motivation for traffic stops is based on race. While it remains difficult to determine why officers make the decision to arrest, most researchers report Blacks arrested at higher rates than Whites after traffic stops. Why minorities are arrested at higher rates becomes the question. It would be appropriate to examine the research on traffic stops that result in arrests after discovery of contraband, for outstanding warrants, and even for the traffic violation itself.

Contraband Justifies the Arrest and Search. The research on contraband reveals that illicit drugs are found in cars driven by Blacks at rates lower than for Whites.[12] Even some self reports reveal that White drivers report possessing illegal substances in their vehicles at higher rates than minorities (Geiger and Phillips, 2003). However, larger

[12] (Zingraff et al., 2000; Buerger, 2002; Engel et al., 2002; Gross and Barnes, 2002; Institute on Race and Poverty, 2003; Engel and Calnon, 2004; Steward and Totman, 2005; Smith et al., 2006)

quantities of drugs may be found on Blacks and Hispanics more often than on Whites (Gross and Barnes, 2002). Again, few studies find that Whites are less likely than Blacks to possess contraband although Knowles et al. (2001) report that Blacks do possess illicit drugs at higher rates than Whites. If minorities are indeed less likely to be found with contraband during a traffic stop, then the justification for searches incident to an arrest of minorities should likely result from factors other than contraband findings.

Outstanding Warrants Justify the Arrest and Search. Indications that minorities are arrested more often than Whites might explain why minorities are searched more often since officers are usually required to search after an arrest (Hernandez and Knowles, 2004). While the criminological research on warrants is scant, Stewart and Totman (2005) state that high minority search rates are particularly evident in the area of consent searches that cannot be explained by outside factors such as probable cause or outstanding warrants. On the other hand, if minorities are arrested on outstanding warrants more often than Whites, searching minorities at higher rates due to searches incident to arrest would be justified, assuming the arrest is legitimate.

Traffic Citations

When examining traffic citations issued by police, the studies have mixed results. Some reveal that Black drivers are no more likely than non-Black drivers to be issued traffic citations (Ridgeway, 2006); Engel et al., 2006). Others conclude that when other extra-legal and legal factors are controlled, Blacks are more likely to be issued traffic citations (Engel and Calnon, 2004; Mosher et al., 2008). These circumstances that occur

after a stop are plagued with confounding issues that prevent researchers from determining the extent to which race is involved in an officer's decision to initially conduct a pretextual stop which leads to a search, citations, or arrests. Nevertheless, patterns of police conduct must continue to be studied to get to the root of racial profiling allegations. More importantly, a clear and explicit criminological theory should accompany these explanations of differential treatment.

CHAPTER 2
MINORITY GROUP THREAT

To analyze police behavior, Engel et al. (2002) state that "theoretical models must guide future data collection efforts" (p. 249) and must be more explicitly stated as explanatory variables in determining racial profiling. With evidence that minorities commit more serious crime at higher rates than Whites (Smith and Petrocelli, 2001; Walker, 2001; Walker et al., 2004), it follows that law enforcement efforts, which include traffic stops, might increase, particularly for Blacks and Hispanics because of a perceived threat. In other words, the greater the minority population, the higher the likelihood of formal law enforcement intervention (Bursik, 1986). This is especially true when officers who patrol predominantly White neighborhoods view minorities as being suspicious (Walker, 2001).

From a criminological perspective, the minority group threat hypothesis proposes that as the minority population or population ratio to Whites increases, citizen fear of crime increases. As a result, White citizens pressure political authorities, which motivate more police crime control tactics against minorities (Blalock, 1967; Jackson, 1989; Jacobs and Carmichael, 2001; Baumer et al., 2003; Kane, 2003; Smith and Holmes, 2003; Ruddell and Urbina, 2004; Stolzenberg et al., 2004, Kent and Jacobs, 2005). Thus, minorities are stopped and searched by police at higher rates than Whites. Do these stops constitute racial profiling and discrimination or is there a more complex question? To explain differential treatment of minorities as it relates to their relative populations requires an examination of the sociological roots of the minority group threat hypothesis.

In his attempt to develop a systematic theory that explains minority-group relations, Hubert Blalock grounded the minority group threat hypothesis in socio-psychological perspectives (Blalock, 1967). He criticizes theories that focus on single factors that explain race relations, but points out that an attempt to combine variables, such as sociological, ideological, and status factors, does not require one to be forced to give equal explanatory power to each. Furthermore, Blalock adds that it would be more appropriate to specify the conditions when one or the other causal factor or factors are more important. He explains that there are various interrelated studies that emphasize 1) status factors; 2) competition; and 3) power relationships that attempt to explain minority relationships with Whites. Few of these studies present explicitly stated theoretical propositions. Nevertheless, these are important factors that Blalock (1967) uses to build the minority group threat theory.

STATUS FACTORS

Some theorists believe that prejudice stems from a deliberate attempt by economic elites to preserve dominance over the less fortunate (Blalock, 1967; Quillian, 2006). While some theories minimize the role that economic factors play in discrimination and favor personality traits derived from early childhood, Blalock (1967) insists that status factors cannot be ignored. When the dominant group aspires to certain goals to maintain a preeminent status and minorities are in direct competition for these same goals, various forms of exploitation and discrimination may occur to block minority advancement. For instance, Whites will avoid minorities because socialization with such an underprivileged group might jeopardize an elite status; therefore, minorities are excluded from various

activities. Also political power may be obtained through manipulation of prejudice, as direct aggression against minorities may satisfy certain psychic needs produced by frustration of a social system that calls for equality (Blalock, 1967). These premises imply that discrimination will increase as the minority population increases. However, other variables will need to be introduced to determine to what extent minority presence produces economic competition and frustration that garner a particular level of racial prejudice (Blalock, 1967).

COMPETITION

Measuring the degree of inter-group competition that might account for discrimination is a difficult task (Blalock, 1967). Factors to consider are the intensity of goals and the value of rewards for which competition exists. It would then make sense to measure the number of competitors relative to the number of rewards. Additionally, it is appropriate to measure the manner by which rewards are distributed and the degree to which resources are to be allocated among competitors (Blalock, 1967).

For instance, in the 1940's, The Ford Motor Company in Detroit hired over half of all the Black males living in Detroit and approximately 14% of its White males. Black males could not find employment elsewhere while White males had numerous employment opportunities. There was no serious competition for the Ford jobs; therefore, discrimination appeared nonexistent in hiring practices at Ford. However, Black employee wages were considerably lower than White Ford employee wages (Maloney and Whatley, 1995). Since many Whites had no desire to work at Ford (Maloney and Whatley, 1995), why were Black wages lower? Why were Blacks not

hired by other companies in Detroit? Were they not qualified? To what degree do these conditions represent inter-group conflict or competition? One would assume that White employers formed subtle coalitions that maintained the status quo to block Black opportunities, which will be difficult to conceptualize (Blalock, 1967). Nevertheless, Blalock says that inter-group competition must still be assessed at least as a general descriptive term.

Alternatives to measuring the degree of inter-group competition would be to analyze the legitimate means, such as how individuals develop their own resources and hard work that allow them to reach their goals without blocking others (Blalock, 1967). On the other hand, one could analyze how alliances are formed with some competitors to place obstacles in front of other rivals. Researchers can additionally examine how potential competitors, including minorities, might join together to assure an equitable division of rewards or increase total rewards by means of regulating contenders (Blalock, 1967). To further illustrate the complexities of this theory, Blalock introduces class and educational factors that could further cloud the extent to which competition incites discrimination. For instance, he posits that competition between Whites and Blacks might be stronger in the lower classes, where resources are closer to equal. Frustration and resentment may mount as lower class Whites do not possess the resources that will allow them to automatically benefit from their racial status (1967). However, researchers note that it must still be determined at what point this resentment influences a person to act out frustrations with racist behavior (Blalock, 1967; Quillian, 2006).

POWER AND DISCRIMINATION

To act out racist behavior, one must have the ability to do so. Blalock (1967) describes power as the total resources one has and the degree to which these resources are mobilized. By resources he refers to features such as money, property, prestige, authority, and natural and supernatural resources of an individual or group that provide the potential to exercise power. The exertion of these resources depends on the motivations and goals of those whom power is exercised over. In other words, if minorities aspire to achieve goals that challenge or threaten White status, power is put into action to control minority behavior, thus allowing Whites to maintain their position (Blalock, 1967).

Blalock (1967) conceptualizes mobilization as the potential or ability to apply power and the total resources that are actually used or expended to achieve a certain goal or objective. The sources of power take on various forms, categorized as legitimate, referent, expert, reward, and punishment power. Legitimate power is "a generalization of the notion of authority" in which definite role relationships need not be involved, such as a personal promise made from one person to another. Referent power is "a generalization of the notion of charisma" by which one individual identifies with another and wishes to do as the other person requests even though that person has no special personality or charismatic traits that encourages the other to do as he/she says. Expert power comes from a person's special skills or knowledge that makes him/her valuable to the subordinate; therefore, the subordinate yields power to that person (Blalock, 1967: 117). However, reward and punishment power comes from instances when resources, such as economic status, police, and the like are consciously mobilized to affect change in

another person (Blalock, 1967). In modern times, legitimate, referent, and expert powers are not as significant as they were in the past, as minorities now question the dominance and expertise that Whites previously possessed (Blalock, 1967). Therefore, it is more appropriate to explain race relations from perspectives that relate to reward and punishment power (Blalock, 1967). This is where criminologists have expanded on the minority group threat hypothesis, particularly punishment power.

An example of reward power is evident when minority resources produce economic opportunities that allow them to afford relocating to better neighborhoods, which are usually predominantly White (Blalock, 1967). Unfortunately, they are not always welcomed as Whites mobilize their resources to change minority behavior to push them out of, or prevent further migration to, mostly White neighborhoods. The latter is an example of punishment power, which includes coercive functions by police (Blalock, 1967; Quillian; 2006). According to Blalock (1967), three factors of discrimination occur under punishment power: 1) political discrimination; 2) symbolic discrimination; and 3) a threat oriented ideological system. While political and symbolic discrimination are important factors to consider, the threat oriented ideological system will be the central concept in this writing.

The threat oriented ideological system is a belief system that contributes to group functioning that calls for immediate mobilization of resources to attack the perceived threat of a numerically large minority population (Blalock, 1967). According to Blalock, Whites fear that an influx of Blacks will threaten White existence as Blacks are stereotyped as oversexed, overaggressive, and criminally inclined (Blalock, 1967). Since Blalock's writing, there have been changes to the Southern White stereotypes that

perceive Black males as oversexed rapists who need to be controlled. This is evident in the United States Supreme Court's decision in *Furman v Georgia* that made government sponsored executions for rape charges unconstitutional (Walker et al., 2004). Nevertheless, these exaggerated fears of the violent Negro male are said to justify violent or extreme forms of social control over this potentially harmful group (Blalock, 1967). This fear is the cornerstone to criminological and sociological explanations of Blalock's minority group threat hypothesis as it relates to social control (Jackson, 1989; Jacobs and Carmichael, 2001; Baumer et al., 2003; Parker et al., 2004).

MINORITY POPULATION AND SOCIAL CONTROL

Finding a connection between percentage of Blacks in cities and fear of crime, Kent et al. (2005) point out how these potentially hostile views that Whites have about large minority populations promote White anxiety and resentment. Whites will then pressure political authorities to make greater efforts to control street crime. Others have studied how minority population increases affect the various instances of social control, such as arrest rates, incarceration rates, and capital punishment (Jackson, 1989; Jacobs and Carmichael, 2001; Baumer et al., 2003). Some researchers have found an opposite effect on minority population and arrest rates than Blalock proposed. For instance, Jackson (1989) and Parker et al. (2004) claim that law enforcement becomes less sensitive to the needs of the minority community and do not investigate cases with the same vigor that would be evident in White communities. Therefore, as the benign neglect hypothesis would argue some aspects of social control, particularly arrests rates, decrease as the minority population increases (Stolzenberg, 2004).

While studies suggest that more social control is due to an increased minority population as a result of discrimination, other studies posit that the social context of certain neighborhood characteristics, such as crime rates, generate fear, which legitimizes more formal control (Jackson, 1989l; Weitzer, 1999; Weitzer and Tuch, 1999; Weitzer, 2000). For instance, the turbulence felt after the 1960s urban disorders resulted in a steep rise in crime rates in areas heavily populated by Blacks (Siegel, 2005). In turn, police strength increased, which resulted in more coercive use of force against minorities to calm the disorders (Jackson, 1989). However, further research showed no real connection to or deterrent effect of police strength on crime rate decreases (Jackson, 1989). This finding led to further investigations of social control and its relationship to social class, race, and ethnicity (Jackson, 1989).

Other factors that play a role in the extent to which Whites feel threatened by an increasing or existing large minority population may depend on region, time period, or even the size of cities (Jackson, 1989). Historically, Whites in the South were generally more sensitive to race issues and reacted in a more punitive manner against minorities than Whites in other regions (Blalock, 1967; Taylor, 1998; Walker et al., 2004). There are also findings that show a connection between education and the motivation to discriminate (Blalock, 1967). As this may be the case, the collective results of social control as it relates to minority populations will need to be studied across regions and perhaps communities. There should be caution in relying upon cross sectional studies that do not weigh the attitudes and biases reflected in members of the social system, such as the police, who are responsible for crime control. In the absence of assertive crime control tactics or collective methods to control minorities, a distinction between

individual and macro levels of discrimination will need to be examined, which makes studies of race relations even more complex (Jackson, 1989).

Macro vs. Individual Level Explanations

Attempting to interpret back and forth between macro and micro level explanations has plagued research efforts for years (Blalock, 1967). From a macro level perspective, one might make assumptions about individual motivations to develop meaningful theories that pertain to groups (Blalock, 1967). For instance, to say that Whites become threatened and demand more police action against minorities, as the minority population increases one might assume that the motivation behind this demand is individual discrimination turned collectively. One would also have to determine whether the collective results from police practices stem from each individual officer's reaction to the demands of citizens or his or her own biases. One would be required to understand the underlying values, motivations, and other issues that are more appropriately studied in psychology (Blalock, 1967). Therefore, it is imperative that sociologists and criminologists continue to attempt to integrate psychological and sociological factors into race related studies.

Lincoln Quillian (2006) explains how overt expressions of discrimination have sharply declined and now prejudice and discrimination have taken on new and more subtle forms. He elaborates on how subtle, hidden, and sometimes unintentional biases could create methodological problems in understanding prejudice. He uses the term "new racism" and distinguishes four types: 1) symbolic racism; 2) modern racism; 3) ideological refinement; and 4) laissez-faire racism. Symbolic racism refers to the deep

seated hostility that Whites feel toward minorities learned from childhood with the idea that Black Americans are violating the values of American society. Modern racism is the belief that racism is in the past, yet Blacks are pushing too hard for equality. Ideological refinement refers to the discrepancy between White's support for the idea of having equality but low support for active governmental intervention to reduce racial inequality. Laissez-fare racism deals with beliefs in anti-black stereotypes that blame minorities for inequality and resist active policies to reduce inequality (Quillian, 2006). To further the laissez-fare perspective, one could posit that social control is used more often against Blacks and Hispanics because they are more prone to criminal behavior.

Existing research has shown that Blacks are arrested more often because of their demeanor and negative attitude toward authority, which could legitimate formal law enforcement reactions (Klinger, 1996; Bridges and Steen, 1998, Mastrofski et al., 2002). Professional assessments also show some criminal justice agents perceive Black youth as violent and deserving of harsher treatment because of their negative internal attributes (Bridges and Steen, 1998). Since police officers cannot read minds to determine who will commit crimes, their decisions to stop must be based on crude information that results in statistical discrimination (Kent and Jacobs, 2005). If these claims are real, it does not alleviate the possibility that discrimination occurs due to individual officer stereotypes and racism. Whichever type of racism exists, as Quillian (2006) proposes, Blalock (1967) suggests that personality variables which produce motives to discriminate against minorities might bring similarly motivated individuals of the dominant group together to bring about concerted efforts to discriminate against minorities as their populations increase. Given the difficulties in making assumptions about individual

motivations, other problems, such as analytical strategies, unit of analysis, time period, statistical controls, and relative size of the Black population as the only measurement of racial threat confound the minority group threat hypothesis as well (Blalock, 1969; Jackson, 1989; Parker et al., 2004). Because these methodological concerns are real, support for this theory is mixed (Parker et al., 2004). However, criminologists and sociologists must continue to attempt to find theoretical connections between minority populations and social control. While the data in this study do not allow for addressing all the methodological problems such as time period and regional effects, the research will attempt to focus on a strategy that will show patterns that connect minority population size to social conditions that engender more social control by the police.

WHEN THE RELATIVE SIZE OF THE MINORITY POPULATION BECOMES A THREAT

While some studies overwhelmingly claim that there is a strong association between percentage of minorities and fear of crime, which compels more social control (Myers, 1990; Eitle et al., 2002; Earl et al., 2005; King, 2007), other studies contend that this reaction only occurs in desegregated locations (Kent and Jacobs, 2005). As mentioned previously, some even maintain that as the minority population increases, elements of social control actually decrease (Jackson, 1989; Parker et al., 2004). It begs the question of at what point does the percentage of the minority population pose a threat to Whites? According to Marlee Taylor, White opinions on racial policy become more negative as the Black population increases but only up to the point when Blacks represent about 40 percent of the population (1998). Sampson and Morenoff (2006) show that population

change increase once the Black population reaches 40 percent in a given neighborhood. Liska et al. (1985) and Taylor (1998) show that threat become evident when the Black population reaches 20 to 30 percent, which results in more social control. The implications are that fear of crime becomes a concern which induces residents to move out of areas or request more social control as the minority threat becomes prevalent. Furthermore, once Blacks make up 75 percent of the population, neighborhoods become concentrated in poverty, which multiplies the crime rates and furthers minority threat (Sampson and Morenoff, 2006).

On the other hand, some contend that once the population reaches a particular threshold, social control actually decreases due to the benign neglect hypothesis, which explains, as indicated earlier, that when the minority population is considerably high, police are not as proactive or do not sufficiently react when it comes to minority victims. At that point there is less pressure on police to control crime (Jackson, 1989; Parker et al., 2004). While the preceding research attempts to pinpoint when fear or threat begins to exist, it remains unclear at what minority population threshold actually produces fear that subsequently fosters what some consider unfair treatment of minorities. This disparity in treatment is not minor in nature and could be fatal in some circumstances as explained earlier in chapter 1. With that being said, it is appropriate to now explain how this dissertation will contribute to the literature on traffic stops and allegations of minority mistreatment by the police.

CHAPTER 3
PREDICTING PRETEXTUAL STOPS AND TRAFFIC STOP OUTCOMES

MINORITY POPULATIONS EXPLAIN DISPROPORTIONATE STOPS

The preceding chapter reflects disparities in how police treat minorities as compared to Whites. The reasons for these disparities are complex. Most studies that attempt to explain racial differences in outcomes find difficulty identifying race as the motivation for these distinctions. While some studies lean toward race as an explanation, others challenge this notion and explain that racial differences are a result of offending patterns and contextual conditions that call for more police intervention (Weitzer, 1999; Weitzer and Tuch, 1999; Weitzer, 2000; Walker et al., 2004). As much of the research shows that minorities (particularly Blacks and Hispanics) participate in violent crime at higher rates than Whites, it is plausible that minorities will be scrutinized by law enforcement officials at higher rates than Whites. This situation might even explain why minorities fair worse than Whites on the back end of the criminal justice system. Violent crime justifies longer and harsher prison sentences although economic status, lack of competent representation, and other legal and extralegal factors may contribute (Walker et al., 2004). However, on the front end, which includes initial contacts with the police, there has yet to be research that gives a clear justification for the reason or reasons police stop minorities at higher rates than Whites for traffic violations. While studies show that traffic stops make up the largest portion of a citizen's first contact with the police (Langan et al., 2001; Durose et al., 2005), much of the research simply displays disparities in stop rates, and few studies give solid explanations for these differences. Racial discrimination merely appears to be inferred.

There are opposing academic views of racial/ethnic differences in police stops. Robin Engel (2008) reports that researchers guide their studies from four viewpoints: the legalistic, criminological, normative, or economic perspectives. The legalistic perspective is concerned with analyzing how police processes and procedures vary among racial and ethnic groups. This perspective argues that law enforcement should be equally distributed across racial and ethnic groups and assumes that there are no significant differences in criminal behavior across racial/ethnic groups. Therefore, there should be very few differences in stop and search rates. Otherwise, police discrimination is present. The criminological perspective is more concerned with understanding why police behave differently toward some racial/ethnic groups. It claims that law enforcement should be proportional across groups based on the criminal activity groups are involved in. While the criminological perspective embraces the benchmark technique for analyzing police stops, it also uses multivariate statistical modeling to assess the effects of race on officers' decisions during stops. The normative perspective is concerned with substantive along with procedural equality across groups. It argues that although one ethnic or racial group may be more prone to criminal activity, it does not justify unequal treatment of members of that group who are law-abiding. In other words, if innocent minorities are being stopped or scrutinized merely because other minorities are more likely to violate the law, statistical discrimination is in and of itself not a legitimate excuse for racial disparities in stop or search rates. Lastly, the economic perspective embraces equality of outcomes. It also argues that law enforcement should be proportional across racial/ethnic groups depending on their crime involvement. While it welcomes the belief that racial/ethnic groups do behave differently, police behavior,

due to racial differences in offending patterns, may be legitimate and cannot be ignored. Therefore, the economic perspective supports the unfortunate circumstances of statistical discrimination as outcome tests are a major technique used in this perspective (Engel, 2008). While there are problems with each of the preceding perspectives, which will be addressed later, this dissertation incorporated the criminological and economic perspectives. The findings could subsequently lead toward determining or understanding organizational or individual motives that drive discriminatory practices by the police.

Prior research has indicated that minority population is an important variable to consider when social policies are implemented, social controls are mobilized, and neighborhood compositional changes are made (Liska et al., 1998; Sampson and Morenoff, 2006). If the first police contact is considered a gateway to more serious encounters with the criminal justice system and with evidence that the more contact citizens have with police (traffic or non-traffic) the higher the likelihood that criminal careers will develop (Shannon, 1978), then it must be determined why or what social conditions of minority populations become a relevant factor in the higher likelihood of being stopped.

Using the minority group threat hypothesis as the explicitly stated theory, this research more specifically analyzes the relationship between minority population and the likelihood that minorities (particularly Blacks) experience pretextual stops at higher rates than Whites. Additionally, this research examines how Black population size affects five traffic stop outcome ratios. The outcomes are the Black-to-White ratio for 1) search rates; 2) outstanding warrant arrests; 3) drug arrests; 4) traffic violation arrests; and 5) traffic citations issued. The question is to what extent Black drivers experience these

outcomes at higher rates than White drivers when the Black population increases relative to the White population from 1990 to 2000 across selected Missouri municipalities.

Although Hispanics have become a larger portion of the minority population in the United States, most of the racial profiling research compares White and Black drivers. Hispanics represented too small a proportion of the data being used in this study to permit any meaningful conclusions. Likewise, those that fit in the category of other race were also too small to extricate valid results. Therefore, this study also uses Black and White drivers as its central focus. If minority population is correlated with the likelihood of experiencing a pretextual stop and the five outcomes, it does not necessarily reveal discrimination as a result of a perceived threat. Paradoxically, the lack of a correlation does not prove the non-existence of discrimination. In fact, given the many circumstances that may be operating, other factors are examined. While this writing is not sufficient to address every issue, it does attempt to unfold some of the key problems that complicate racial profiling studies.

MISSOURI BACKGROUND

In the State of Missouri racial profiling continues to be a concern. The various studies that have reported on this phenomenon conclude that Black motorists are considerably more likely than White motorists to be stopped by police (Hernandez and Knowles, 2004; Rojek et al., 2004). Additionally, Blacks have an even greater chance than Whites of being subjected to searches after the stop. More importantly, there have been consistent findings that show Blacks are less likely than Whites to possess contraband during the stop (Hernandez and Knowles, 2004; Rojek et al., 2004).

Some criminal justice administrators have challenged the various techniques used to analyze racial profiling data in Missouri. Nevertheless, there were some municipalities in the State that had significantly large traffic stop disparities between races (Hernandez and Knowles, 2004; Rojek et al., 2004). Since police have been required to record each stop in Missouri, data indicate that Black motorists have been consistently at risk of being stopped and searched at higher rates than Whites (Koster, 2008). Little is known about Black population increases and how they affect the outcomes of traffic stops. Using the minority group threat hypothesis in the State of Missouri, the following hypotheses are explored.

THE IMPORTANTCE OF EXAMINING PRETEXUAL STOPS

Recall the disputes concerning the denominator problem that continues to plague racial profiling studies. Opponents argue that using the number of Black residents as the denominator is not appropriate when calculating stop rates. Studies should focus on the actual driving population (Rojek et al., 2004; Durose et al., 2005; Engel et al., 2006). Also recall that some have learned that a better examination of racial profiling is through inspection of stop dispositions (Engel and Johnson, 2006; Ridgeway, 2006; Persico and Todd, 2008; Rosenfeld et al., forthcoming). In other words, a closer look at the circumstances behind officers issuing warnings and citations, arresting motorists, conducting vehicle searches, and perhaps using force might allow for a better explanation regarding the existence of racial profiling. Because extralegal and legal factors that contribute to an officer's decisions after the stop can be statistically controlled, researchers can be more confident in interpreting the results as an explanation of racial

profiling (Engel and Johnson, 2006). To that extent, much of what occurs after a stop might depend on why the initial stop was made. Therefore, the pretextual stop could play an important role in the citizen/officer post-stop encounter. However, this study must avoid the denominator issue that becomes problematic in many racial profiling studies. While studies argue whether the proper benchmark to analyze over-representation of minority drivers should be the total residential population, driving age population within a location, or driving population based on spatial weighting procedures (Rojek et al., 2004), this study attempts to eliminate that problem by using the actual number of stops recorded for a given racial group as the denominator. This population represents a concrete number that can only be adjusted by reporting agencies wishing to amend previously reported data. The numerator in this study will be pretextual stops, which include an aggregation of minor traffic violations, including faulty equipment, license violations, following too closely, failing to signal, and lane violations. At this point, the proportion of pretextual stops accounted for by a given group divided by that group's proportion of total stops in a given municipality will represent that group's over-representation in pretextual stops. A more comprehensive explanation of this method is presented in chapter 5.

In their comprehensive study of vehicle stops in San Diego, California, Cordiner et al. (2002) found that approximately 25% of all traffic stops in 2001 were pretextual stops made to investigate non-traffic violations such as drugs, gangs or crime suspicion. Officers report that they would observe a car suspected of non-traffic related activity and wait until the driver commits a traffic violation to develop probable cause to stop. This technique is legal as long as officers are truthful that the stop did not take place until an

official traffic violation occurred (Harris, 1997; Crawford, 2000; Cordner et al., 2002). Some have argued that police routinely use the pretextual stop to detain minority drivers. In fact, the Supreme Court's decision in *Whren v. United States* sanctioned the practice of racial profiling according to Birzer and Birzer (2006). This practice has created problems with researchers attempting to uncover racial bias in traffic stops because an officer's racial motives may be easily hidden behind the Whren decision.

There are formalized drug interdiction training seminars that teach officers the clues to look for when investigating drug carriers. For starters, the type of vehicle driven is a key sign that draws an officer's attention. For example, large SUV's, which can carry large quantities, and rental vehicles, which may hide identities, are hints that prompt officers to further investigate at minimum. Luxury vehicles driven in poor neighborhoods may also tip police (Engel and Johnson, 2006). While on the surface these clues appear race neutral, some suggest that one should be cautious not to underestimate the role race may play in these so-called leads. Social psychologists have studied consumer behavior and have found that Blacks are more likely to purchase large SUV's and luxury cars no matter where they may reside. Blacks are also more likely, because of economic reasons, to rent vehicles while traveling (Engel and Johnson, 2008). Thus, race does have serious implications when officers are using these clues to decide which vehicles appear suspicious to stop. With that in mind, it is more probable that a police officer will act on the aforementioned clues in locations where there is a perceived need to make such stops. The minority group threat hypothesis would suggest that White residents will feel it is necessary for police to scrutinize Black citizens more often when Black populations increase relative to White populations. Larger Black populations are perceived

threatening to the quality of life for the community and create fear (Blalock, 1967). As a result, this study examined the impact of this perceived threat, indexed by the relative size of the local Black population, on police actions toward Black motorists.

Research Question 1: Pretexual Stop

Research question 1 examines the minority group threat hypothesis by inspecting the relationship between Black population increases relative to White population increases over time and the likelihood that Black motorists will experience pretextual stops at disproportionately higher rates than White motorists. In other words, as the gap between the population percentages of Black-to-White residents narrows, Whites will feel fearful and threatened by the relative Black population increases to the extent that White residents will pressure police to control this perceived threat. Thus, the likelihood that Black motorists will experience pretextual stops at rates higher than White motorists will significantly increase in municipalities where Black-to-White populations increased from year 1990 to 2000.

Recall in chapter 2 that punishment power is the source of power this dissertation focuses on. For punishment power to work as Blalock (1967) explained, White residents must have the ability and resources to mobilize the police to address the perceived threat. Therefore, it was important to consider the relative size of the Black population before and after the populations increased over time. For instance, in cities where Blacks already made up a large portion of the population in 1990, the perceived threat of a rising Black population may not have elevated to a level of concern for White residents to pressure the police to monitor Blacks. Studies show that as Black populations reach

certain levels, White flight becomes more prevalent (Walker et al., 2004). When White residents begin to leave neighborhoods, as the community accountability hypothesis would suggest, larger Black populations create the ability for more elected Black representation in city government, including law enforcement (Smith and Holmes, 2003). In fact, it is only in the absence of influential minorities in the community and police organizations that White residents have the ability to dictate police action toward minorities. Moreover, White officers will not be sensitive to minority issues and are, therefore, not held accountable for their actions against minority citizens in the absence of minority representation (Smith and Holmes, 2003; see Appendix A for a more detailed discussion of the community accountability hypothesis). That said, relative increases in the Black population from 1990 to 2000 (referred in the hypotheses as growth) in selected Missouri municipalities should increase Black-to-White pretextual stops (pretextual stop ratio), and the effect of relative Black population growth on pretextual stops of Black motorists should weaken once the relative Black population, as recorded for year 2000 (current population), reaches a critical threshold. Additionally, total municipal population sizes for year 2000 (referred to as total population) were controlled because police activity and the extent that Whites feel threatened by an increasing or large minority population vary with size of the location (Jackson, 1989; Rojek et al., 2004). All subsequent hypotheses were conducted across selected Missouri municipalities. Hypothesis 1 explores the following:

H1: When the total population is controlled across the targeted Missouri municipalities, the following was expected. As the Black-to-White population percentage change from 1990 to 2000 (growth) increases, the Black-to-White pretextual stop ratio significantly increases in 2002, but this effect diminishes as the Black-to-White population ratio for year 2000 (current population) increases.

As earlier stated, finding such an association is important to understanding what occurs after a traffic stop, particularly during pretextual stops. The following section examined the role searches played in arguably controversial traffic stops.

THE IMPORTANCE OF EXAMINING SEARCH RATES

Generally, most of the criminological research shows that Blacks are subjected to vehicle searches at much higher rates than Whites. [13] The reasons behind these searches may vary from mandatory, when departmental policy dictates the search, to discretionary, when the officer's judgment prompts further investigation (Hernandez, 2004; Ridgeway, 2006; Engel et al., 2008; Perisco and Todd, 2008). As previously stated, what occurs after a stop is important to racial profiling studies. In fact, search rate disparities are so high that it would be negligent to disregard further investigation of such dissimilarities.

Research Question 2: Overall Searches

Similar to pretextual stops, the minority group threat hypothesis would suggest that growing Black populations might play an important role in search rate differences. It may not be enough to simply stop more Black motorists when Black populations increase to a perceived threatening level. Additionally, it is expected that pretextual stops might condition search rates. Therefore the following hypothesis is explored. Relative increases in the Black population should increase 2002 Black-to-White overall search ratios (overall searches), and the effect of Black population growth on overall searches should weaken once the Black population reaches a critical threshold. However, if

[13] (Lamberth, 1996; Knowles et al., 2001; Langan et al., 2001; Buerger, 2002; Buerger and Farrell, 2002; Scmitt et al., 2002; Rojek et al., 2004; Tomaskovic-Devey et al., 2004; Durose et al., 2005; Steward and Totman, 2005)

relative Black population growth interacts with Black-to-White pretextual stops, the effect of growth on overall search rates may become stronger.

H2: When total population size is controlled, the following is expected. As growth increases, the overall search ratio significantly increases. The effects of the growth on the overall search ratio diminishes with increases in the relative size of the Black population in 2000, but the effects become stronger at higher levels of the Black-to-White pretextual stop ratio for 2002.

While types of searches vary, it is the discretionary search that comes into question. Engel (2008) argues that not all discretionary searches have equal levels of an officer's discretion. For instance, activities such as discovery of evidence in plain-view, canine alerts, the smell of drug odors, and other physical evidence that trigger low-discretion searches require less discretion than consent searches (Engel, 2008). In fact, Rosenfeld et al. (forthcoming) acknowledge that racial bias is minimal under mandatory or low-discretion searches, which makes it necessary to separate types of searches.

Research Question 3: Discretionary Searches

If indeed there is little bias in low-discretion searches, as Rosenfeld et al. (forthcoming) suggest, then Black population increases should have little effect on the likelihood that Black motorists will undergo low-discretion searches at higher rates than White motorists. In fact, given that many studies indicate that White motorists are found with contraband at higher rates than Blacks (Zingraff et al., 2000; Knowles et al., 2001; Buerger, 2002; Engel et al., 2002; Rojek et al., 2004; Walker et al., 2004), White motorist should be subjected to low-discretion searches at higher rates than Blacks. However,

because discretion is involved, which potentially opens opportunities for discrimination (Johnson, 2003), Black population increases might even affect low-discretion searches and the effect may become greater at higher levels of pretextual stops of Blacks compared to Whites. In other words, keeping with the minority group threat hypothesis, the following is expected:

H3: When total municipal size is controlled, the following is expected. As relative Black population growth increases, the Black-to-White low-discretionary search ratio for year 2002 (LD search) significantly increases. The effects of growth on LD search ratio diminishes at higher levels of the 2000 Black-to-White population ratio, but the effects become stronger at higher levels of the 2002 Black-to-White pretextual stop ratio.

Researchers explain that the discretionary search is a more accurate assessment of racial profiling (Engel and Johnson, 2006; Persico and Todd, 2008). Some discretionary searches require less discretion than consent searches (Rosenfeld et al., forthcoming), which may explain Steward and Totman's (2005) contention that consent searches are based on non-legal factors and appear to contribute considerably to the search disparities.

Research Question 4: Consent Searches

The data in this study does not readily make available the outcomes of consent searches. Absent any reasonable suspicion or probable cause after an officer makes a pretextual stop, a driver must give permission for police to legally conduct a vehicle search. While some studies show that Blacks are only slightly less likely than Whites to give consent to search (Smith and Petrocelli, 2001; Novak, 2004; Durose et al., 2005),

under some circumstances White motorists are significantly more likely to consent to searches (Smith and Petrocelli, 2001; Engel, 2006). Obviously, something motivates an officer to request authorization to search. If officers claim that generally minorities are stopped for minor traffic violations more often because they engage in infractions at higher rates than Whites, then the motives behind an officer's request to search should be similar to search requests of motorists stopped for major traffic violations such as speeding. In the event that pretextual stops are highly correlated to Black population increases, an argument can be made that extra-legal factors, particularly race, indirectly drive officer discretion toward consent search requests. In fact, Steward and Totman (2005) argue that when search rates for minorities are high, the consent search, which cannot be explained by outside factors such as probable cause or outstanding warrants, is evident.

Although the data in this study cannot determine if consent was solicited by the officer or volunteered by the driver, it does show if a permitted search was executed. While it may be accurate in some studies that Black motorists refuse to consent to a search at higher rates than Whites (Smith and Petrocelli, 2001; Engel, 2006), this study supposes that most drivers, regardless of race, will grant the search upon request. Drivers believe that cooperation with police could be a major factor that determines the traffic stop outcome, or they simply are not aware that they have the right to refuse a search request (Steward and Totman, 2005). To that extent, if there are disparities in officers requesting a search, the actual consent search index should expose such differences.

As stated earlier, officers are trained to observe clues that indicate when a person warrants further scrutiny. Inconsistencies between the driver's clothing and the type of

vehicle driven, socioeconomic status and jewelry worn, and any occupant's past drug record could be clues that the vehicle stop might yield a successful drug hit and subsequent arrest (Engel and Johnson, 2006). Other non-verbal clues might be the driver's nervousness, excessive smiling, vibrant hand gestures, eye contact avoidance, profuse sweating, and speech disruptions (Engel and Johnson, 2006). It is argued that these interpersonal cues are sometimes inaccurately interpreted by officers as deception. There is further argument that these cues are not necessarily race-neutral, which Engel (2008) describes as the subgroup validity problem. Engel explains that the utilization of the outcome test, when studying search rates across racial/ethnic groups, assumes that all drivers behave similarly, which would flaw many studies because some activities are more prevalent in some groups than in others. For instance, social psychology and cross-cultural communication research suggests that Black motorists are more likely to exhibit the previously described normal non-verbal behaviors more often than White motorists during a traffic stop. Furthermore, racial/ethnic differences in the style of dress, patterns of residency, vehicle ownership, and types of vehicles purchased are social realities that researchers need to be aware of (Engel and Johnson, 2006). While Engel (2008) argues that the subgroup validity problem makes research on group differences in searches useless without controlling for these behaviors, some of this conduct, such as hand gestures and profuse sweating, might be difficult to control for. Perisico and Todd (2008) counter Engel by saying that drivers adjust their behaviors, having knowledge that these are the types of clues officers look for. Either way, something triggers an officer's intuition to request a search. If indeed officers are misinterpreting this behavior as deception, then this study suspects that threat becomes heightened with growth in the

Black population, which will increase an officer's desire to request a consensual search. Again, there could be stronger effects if growth interacts with pretextual stops. The following hypothesis is explored.

H4: When total population is controlled, the following is expected. As Black population growth increases, the Black-to-White consent search ratio for year 2002 (consent search) significantly increases. The effects of growth on consent search ratio diminishes at higher levels of the 2000 Black-to-White population ratio, but the effects become stronger at higher levels of the Black-to-White pretextual stop ratio for 2002.

Even though the discretionary search might be a more useful tool to detect racial profiling (Engel and Johnson, 2006; Persico and Todd, 2008), to discard a comprehensive analysis on mandatory searches potentially eliminates the possibility that mandatory searches could be based on race. It is plausible that when police perceive a threat, arrest chances increase which incite mandatory searches.

Research Question 5: Mandatory Searches

Without additional information regarding the stop, this study assumes that a mandatory search accompanies an arrest although some searches might have triggered the arrest. Thus, it is difficult to determine when officers truly use discretion to search (Ridgeway, 2006). However, mandatory searches, which include inventory searches and searches incident to an arrest should eliminate much of the discretion that officers use in other searches. This study expects to find that Black population increases still have an effect on mandatory searches although not as large as what would be found with consent

and low-discretion searches. The effects on mandatory searches may increase with interactions between relative Black population growth and Black-to-White pretextual stops. Hypothesis 5 explores the following:

H5: When total population is controlled, the following is expected. As growth increases, the Black-to-White mandatory search ratio for year 2002 (mandatory search) significantly increases. The effects of growth on mandatory search diminishes at higher levels of the 2000 Black-to-White population ratio, but the effects become stronger at higher levels of the 2002 Black-to-White pretextual stop ratio.

With evidence that Black motorists are arrested at higher rates than White motorists after traffic stops (Crawford, 2000; Engel, 2003; Rojek et al., 2004; Engel, 2006; Smith et al., 2006) it will not be surprising that Black population increases will significantly affect mandatory search ratios. The question now becomes whether or not there are justifiable reasons to arrest Black motorist at such higher rates.

IMPORTANCE OF EXAMINING OUTSTANDING WARRANT ARRESTS

As mentioned previously, most criminological studies show that Blacks are more likely than Whites to be arrested as a result of a traffic stop (Crawford, 2000; Engel, 2003; Rojek et al., 2004; Engel, 2006; Smith et al., 2006). Recall that officers are aware that police efficiency is measured by number of arrests (Fisk, 1974; Walsh, 1986; Gaines and Miller, 2006). Officers are also aware that Black motorists are more likely than White motorists to be wanted on warrants (Langan et al., 2001; Durose et al., 2005). When recording traffic stop data, officers are provided the opportunity to indicate whether or not a given driver had outstanding warrants. Given the scrutiny an officer

might encounter with superiors, it is doubtful that when officers submit racial profiling forms they will check the outstanding warrant box without making an arrest.

Research Question 6: Outstanding Warrant Arrests

In the event that Black-to-White population increases create fear, as the minority group threat hypothesis suggests, officers might be more likely to arrest Black motorists at higher rates than White motorists when outstanding warrants are discovered. Although officers are likely to make an arrest when outstanding warrants are determined (Hernandez and Knowles, 2004; Rojek et al., 2004; Durose et al., 2005), it was difficult for this study to measure when officers decided not to arrest for outstanding warrants because the data did not separate each stop. Thus, this dissertation assumes, perhaps wrongly, that an arrest accompanies any reported outstanding warrant.

While a strong and positive correlation between the Black-to-White population increase and the Black-to-White outstanding warrant arrest ratio would support minority group threat, this study acknowledges that the relationship might have more to do with legal factors. Because Blacks are more likely than Whites to be wanted (Langan et al., 2001; Durose et al., 2005), it makes sense that Blacks will be more likely than Whites arrested on warrants. While Black motorists are responsible for making sure they are not wanted, which weakens debates on officer discrimination, an argument can be made that officers consciously target Black motorists for the purpose to make an easy arrest. This study suspects that the pretextual stop also plays an important role with regard to Black population increases and warrant arrests.

There are ways in which officers might target individuals who appear less financially stable to pay traffic fines. The condition of the vehicle and other license registration violations might be the major indicators that trigger an officer's suspicion that a potentially wanted person is occupying a given vehicle. While the current United States economic structure would suggest that Blacks will be more likely than Whites to be unable to pay traffic fines, Black motorists will be also more often wanted on warrants when officers make random stops. A case can be made that White motorists in lower class areas may be just as likely to drive vehicles with defects and are, therefore, just as unable to pay traffic fines that result in outstanding warrants. The potential for police to target lower class citizens in lower class neighborhoods might be similar for Whites and Blacks. On the other hand, economic inequality is so pronounced (Walker et al., 2004) even low income White motorists may still have the ability to pay traffic fines at higher rates than Black motorists. In fact, White motorists might be more willing to pay fines. Because the tendency is higher for Blacks to distrust the criminal justice system (Walker et al., 2004), Blacks are less likely to show deference to authority (Klinger, 1996; Walker et al., 2004) which may include rebellion to the extent that Blacks refuse to pay traffic fines.

While some argue that the pretextual stop exhibits good police work, as wanted individuals are being taken off the street (Walsh, 1986), others may argue that this practice is still racially driven. Interestingly, there is research on officer use of mobile data terminals that reveals that minorities are queried by police at higher rates than Whites (Meehan and Ponder, 2002). These data imply that while police are in the privacy of patrol vehicles equipped with computers, without any provocation, they

randomly run record checks on license plates of vehicles driven by Blacks and Hispanics. As a result, the computers display expired license plates, improper registrations, and wanted persons, which seemingly give police probable cause to make a pretextual traffic stop.

This study contends that the pretexual stop interacts with Black population increases to the extent that Black drivers will have a higher likelihood than White drivers of being arrested on outstanding warrants. Consistent with minority group threat, when Black populations present a perceived threat, officers might consciously make questionable stops confident that the potential results will justify and mitigate allegations of racial discrimination. Therefore, the following hypothesis represents how Black population increases relative to White population increases might intersect with pretextual stops to the extent that Black motorists are more likely than White motorists arrested on outstanding warrants.

H6: When total population is controlled, the following is expected. As Black population growth increases, the Black-to-White outstanding warrant arrest ratio for year 2002 (warrant ratio) significantly increases. The effects of growth on warrant ratio diminishes at higher levels of the 2000 population ratio, but become stronger at higher levels of the Black-to-White pretextual stop ratio.

While officers will likely arrest an individual for outstanding warrants, officers will also likely arrest individuals found in possession of contraband (Hernandez and Knowles, 2004; Rojek et al., 2004; Durose et al., 2005). If officers perceive Black motorists as the common drug carrier, officers may feel justified making questionable stops to further

investigate for drug violations when Black populations perceptually reach threatening levels.

IMPORTANCE OF EXAMINING DRUG ARRESTS

According to Perisico and Todd (2008) officers are aware of who might more likely possess contraband. However, the research is mixed on who is actually more likely found with drugs as a result of traffic stop vehicle searches. Most studies, as previously explained, acknowledge that officers are less likely to find unlawful substances on Blacks.[14] A report that analyzed the Maryland State Police found that close to two-thirds of all drivers searched were not carrying any illegal drugs. In fact, Black drivers who had no drugs were far more likely to be stopped and searched than drug-free White drivers. Also, as stated earlier, while few in number, substantial quantities of illegal drugs were found on Black drivers (Gross and Barnes, 2002). So if an officer's objective in discretionary searches is to detect the transport of drugs (potentially large amounts), according to Hernandez (2004), at least in Missouri, a large share of the excess burden that Blacks face seems to be unrelated to legitimate law enforcement objectives. In other words, innocent Black motorists are being penalized for actions of a few law violators.

Engel and Johnson (2006) say that there is very little known about the reasons why there are such disparate patterns in police behavior when it comes to treatment of Blacks and Whites in search and seizure rates. Much of the research speculates that the

[14] (Zingraff et al., 2000; Knowles et al., 2001; Buerger, 2002; Engel et al., 2002; Gross and Barnes, 2002; Geiger and Phillips, 2003; Institute on Race and Poverty, 2003; Engel and Calnon, 2004; Steward and Totman, 2005; Engel and Johnson, 2006; Smith et al., 2006)

disparities are due to racism and biases potentially ingrained in the police subculture (Engel and Johnson, 2006). However, this supposition has been deluged with challenges.

Research Question 7: Drug Arrests

If it is more probable that officers believe Black motorists are more likely to carry or possess larger quantities of drugs, and if these assessments are accurate, there should be a strong association between Black population increases and arrests for possessing large quantities of drugs. Since racial profiling forms do not indicate the amount of drugs found, possession can only be measured by the dichotomous yes or no indicator on the forms. Again, this study assumes that when contraband is recorded in the data used for this research, an arrest is presumed to have occurred. Similar to outstanding warrants but to a greater degree, drivers make their own conscious decision to possess drugs. Unless officers plant evidence, complaints against officers for unreasonable drug arrests should be limited. Research question 7 addresses the relationship between Black populations and arrests for contraband, particularly drugs. A weak association between relative Black population percentage increases and arrests for possession of drugs might indeed cause some to be suspicious of stops and searches of Black drivers, particularly if Blacks are less likely to possess contraband. Although self report surveys indicate differently, there remains a public perception that Blacks are more likely to use drugs (Walker et al., 2004). Therefore, this dissertation asserts that Black population growth will increase the likelihood that Black motorists will be arrested for drugs at higher rates than White motorists. To the degree that pretextual stops are conducted to detect other violations,

officers might be more likely to search Black drivers and find contraband, which leads to more drug arrests. The following hypothesis is presented:

H7: When total population is controlled, as relative Black population growth increases, the Black-to-White drug arrest ratio for year 2002 (drug ratio) significantly increases. The effects of growth on drug ratio diminishes at higher levels of the 2000 Black-to-White population ratio, but become stronger at higher levels of the 2002 Black-to-White pretextual stop ratio.

So far arguments can be made that police motives to utilize the pretextual stop could be based on factors that involve legitimate law enforcement concerns, potentially Black population growth, or a combination of both. There is still difficultly drawing concrete conclusions about unequal treatment of minority drivers. Yet, there are other options that might develop a clearer picture of what occurs after the stop which could facilitate conclusions that race is indeed a large factor behind police profiling.

IMPORTANCE OF EXAMINING TRAFFIC VIOLATION ARRESTS

An arrest for the actual traffic violation can be a questionable practice. After an officer makes a traffic stop, it is rare that the driver will be arrested for that offense. In 1981, the United States Supreme Court ruled that police officers are allowed to search the passenger compartment of vehicles when the occupant has been lawfully arrested (Justia, 1981). This gave officers the incentive to arrest for the traffic violation and make further searches in cases when consent was refused or other probable cause was absent. Additionally, because officers and Black motorists are suspicious of each other before an encounter (Rosenfeld et al., forthcoming; Weitzer, 1999), altercations between police and

Black motorists may lead to traffic violation arrests. While Black citizens perceive police to be more disrespectful than what White citizens perceive (Walker et al., 2004; Durose et al., 2005), this implies that police potentially antagonize Black drivers in ways that leads to a reluctance to cooperate during the stop. On the other hand, as Mastrofski et al. notes, police are actually more likely to be disrespectful toward White subjects, but only when disrespect is initiated by that person (2002). Furthermore, officers have found ways to broaden the scope of their searches beyond the passenger compartment. Once an arrest is made, it was common practice for police to search a vehicle incident to the arrest (Ginsburg, 1968; Justia, 1981). By departmental policy in many cases, officers are generally required to conduct a more thorough inventory search of all contents within the vehicle to protect the owner's property (Reamey, 1983). Anything illegal found during this lawful search can be used as evidence against the driver. Particularly during pretextual stops, when officers are likely looking for other criminal activity, the custom of arresting a driver for a minor traffic violation could be great tool for drug interdiction.

Research Question 8: Traffic Violation Arrests

The question becomes what patterns are found when officer suspicion becomes more intense when the threat of an increasing Black population is more widespread. Therefore, research question 8 pertains to the likelihood that Blacks more than Whites will be arrested for traffic violations when the relative Black population increases over time. Again, this study expects to find that relative Black population increases become less threatening based on the size of the Black population which will affect traffic violation arrest ratios; as follows:

H8: When total population is controlled, the following is expected. As relative Black population growth increases, the Black-to-White traffic violation arrest ratio for year 2002 (TVA ratio) significantly increases. The effects of growth on TVA ratio diminishes at higher levels of the 2000 Black-to-White population ratio, but become stronger at higher levels of the 2002 Black-to-White pretextual stop ratio.

The arguments in this research concern how Black population growth influences pretextual stops which, in turn, influence traffic stop outcomes. The implications are that pretextual stops are seemingly unjustified or questionable. To avoid blatant allegations of discrimination, there are unwritten practices that warrant further exploration.

IMPORTANCE OF EXAMINING CITATIONS ISSUED DURING TRAFFIC STOPS

Recall that the research is mixed about Black drivers being more likely than White drivers to receive traffic citations (Engel, 2006; Engel and Calnon, 2004; Mosher et al., 2008; Ridgeway, 2006). In fact, an officer's decision to issue a traffic citation might depend on neighborhood characteristics, situational factors, and individual characteristics (Ingram, 2007; Mosher et al., 2008). Anecdotally speaking, this study argues that some officers have been taught that after making a lawful arrest after a questionable (pretextual) traffic stop, it is prudent that the officer issue a citation for the original stop violation. While this practice is not mandatory, it may prevent defendants from attempting to argue that failure to issue a citation questions the validity of the stop (Minnesota Court of Appeals, 2004). A written policy that requires officers to issue tickets for the original stop undermines an officer's use of discretion that is a corner stone to police operations. That said, officers might be less likely to fuel the fire and issue

traffic citations when questionable stops do not result in arrests. Unfortunately, there is very little, if any, scholarly literature that addresses the phenomenon of officers being required or trained to issue citations for the original stop when arresting a subject on a separate charge.

Research Question 9: Citations

While the minority group threat hypothesis would suggest that Black drivers will be more likely to receive traffic citations when the relative Black population increases, this study contends that an opposite effect will occur when pretextual stops and arrests are considered. It also expects to find that as the Black-to-White population increases over time, Black drivers will be more likely than White drivers to receive traffic citations, but only to a point when 2000 Black-to-White populations reach a certain level. Additionally, as Black-to-White pretextual stops increase and the likelihood that Blacks will be arrested at higher rates than Whites decreases, the effects of Black population growth will diminish.

H9: When total population is controlled, the following is expected. As relative Black population growth increases, the Black-to-White traffic citation ratio for year 2002 (citation ratio) significantly increases. The effects of growth on the citation ratio diminishes at higher levels of 2000 Black-to-White population ratio and when higher levels of Black-to-White pretextual stop ratio interacts with lower levels of Black-to-White arrest ratio.

This dissertation has proposed various relationships that might present patterns that deserve further examination. Pretextual stops have been an important variable to this

point and might be alarmingly associated with traffic stop outcomes when relative Black populations are taken into consideration. One must be cautious not to overstate the effects of minority populations on the likelihood to be stopped pretextually and traffic stop outcomes. As stated earlier, the presence or absence of a significant correlation does not necessarily indicate discrimination or non-discrimination. While there could be a correlation between populations and traffic stop outcomes, there might be other legitimate legal factors, such as an association between violent crime rates and minority presence, which condition effects on traffic stops and outcomes. In some cases, a relationship between these legal factors and the likelihood of being stopped or searched may allow police racial motives to become hidden. Nevertheless, this study addresses this potential connection. In other words, it could be discovered that Black population growth is only relevant in certain circumstances.

CHAPTER 4
COUNFOUNDING ISSUES IN RACIAL PROFILING STUDIES

OFFENDING PATTERNS MOTIVATE POLICE BEHAVIOR

To test the preceding hypotheses, alternative explanations that may account for Blacks being disproportionately stopped, searched, arrested, and/or cited are examined. There are studies that explain violent behavior from cultural and social structural perspectives. The cultural perspectives generally explain that minorities who experience historical atrocities adopt alternative values that are conducive to violent behavior. Structural explanations emphasize inequality in socioeconomic conditions that causes violent behavior and pushes various institutions to reproduce inequality toward minorities (Peterson and Krivo, 2005). Regardless of the perspective, there are overwhelming reports that minorities, particularly Blacks and Hispanics, commit violent crime at much higher rates than Whites. In fact, much of the criminological research finds that there is some correlation between minority population increases and violent crime rate increases (Neapolitan, 1992; Sloan, 1994; Hannon and Defronzo, 1998; Liska et al., 1998; Logan and Stults, 1999; Petrocelli et al., 2003; Siegel, 2005; Walker et al., 2005). With violence being a major source of citizen fear, it appears logical that citizens might push for punitive police actions against minorities.

Law enforcement policies develop from the perception that proactive and aggressive police activity, which includes more traffic stops, could indirectly decrease overall crime rates (Sampson and Cohen, 1988; Smith and Holmes, 2003). In this respect, there are studies that examine the correlation between crime rates and traffic stops (Weitzer, 1999; Petrocelli et al., 2003).

Research Question 10: Violent Crime

This dissertation attempts to put crime rates in a context that might explain the association between violence and pretextual stops along with traffic stop outcomes. The study further attempts to disentangle violent crime rates with the percentage of the Black population's influence on traffic stop outcomes and the likelihood that Blacks experience pretextual stops at higher rates than Whites. It is plausible that police officers will more likely attempt to jail individuals considered a threat to society. Having knowledge that Blacks are more likely to commit violent crime, officers might feel it necessary to become more intrusive on traffic stops, conduct more searches, and arrest Black motorists at higher rates. It is also likely that higher Black populations might drive police toward creating these outcomes. Therefore it was necessary to control for violent crime rates in the models previously presented to address to what extent Black populations influence traffic stop outcomes.

While violent crime might have some direct or indirect role in an officer's motive to carry out a pretextual stop or further an investigation that will lead to other traffic stop outcomes, there are other non-legal factors that potentially drive pretextual stops and traffic stop results.

SOCIAL STRUCTURE MOTIVATES POLICE BEHAVIOR

Having difficulty assessing individual officer motivations, some research began to focus on how citizens perceive being treated by the police.[15] While most of these studies contend that Blacks have a more negative perception than Whites toward the police, a

[15] (Jacob, 1971; Peek et al., 1981; Hagan and Albonetti, 1982; Polivka, 1983; Welch, 1989; Murty et al., 1990; Oramas, 1994; Frank et al., 1996; Priest and Carter, 1999; Henderson et al., 1997; Chandek, 1999; Son et al., 1998; Hurst et al., 2000; Brunson and Miller, 2006)

small group of studies claim that Blacks perceive police more positively than Whites (Frank et al., 1996; Hurst et al., 2000; Murty et al., 1990). The later studies acknowledge that the positive perceptions Blacks have of police are partly due to the predominant Black representation in local police forces and governments. In fact, the race of the police departments has a significant effect on citizen attitudes (Frank et al., 1996; Murty et al., 1990). The question becomes, as stated earlier, whether citizen perceptions are true assessments of how minorities are treated differently than Whites.

Other studies claim that race is not the determining factor that shapes citizen perceptions of police. While race remains important, age is found to be just as vital in some cases (Decker, 1981) and even stronger in others (Peek et al., 1981). While there are many criminological studies that explain perceptions of the police from an individual perspective, macro-level studies have begun to make headway (Reisig and Parks, 2003; Sampson and Bartusch, 1998). Macro-level studies explore police treatment as it relates to neighborhood characteristics, disadvantages, crime rates, suspect demeanor, and even social class.[16] As a result, conclusions on police perceptions are confounded between individual factors (particularly race) and neighborhood contextual factors (Weitzer, 1999; 2000).

Ronald Weitzer (1999, 2000) made an explicit attempt to unravel these perplexing issues by comparing race and neighborhood context from a qualitative perspective. After finding that race was a significant predictor of how individuals felt they were treated by the police in Washington, D.C., Weitzer also found that social class position of neighborhoods also conditioned resident's attitudes toward police. In other words,

[16] (Jacob, 1971; Decker, 1981; Dunham and Alpert ,1988; Davis, 1990; Alba et al., 1994; Cao et al., 1996; Klinger, 1996, 1997; Sampson and Bartuch, 1998; Logan and Stults, 1999; Wilson and Dunham, 2001, Mastrofski et al., 2002)

Blacks that lived in lower-class predominantly Black neighborhoods felt they were treated worse than how Whites in middle-class predominantly White neighborhoods felt they were treated. On the other hand, Blacks who lived in middle-class predominantly Black neighborhoods felt they were treated about the same as how Whites felt they were treated in predominantly White middle-class neighborhoods. In spite of those perceptions, Weitzer did discover that middle-class Blacks who encountered police outside their neighborhoods felt they were treated differently than how middle-class Whites felt they were treated when they traveled outside their own neighborhoods. Unfortunately, Weitzer was not able to locate a lower-class predominantly White neighborhood in Washington, D.C., to compare to the lower-class Black neighborhood. Therefore, his study was limited in completely extricating the perplexing issues between race and neighborhood context. Weitzer expresses being able to corroborate his findings with other urban neighborhood studies which lends support to Wilson's (1978) argument that class inequality and not racial discrimination is a more decisive factor that structures the Black experiences with social institutions (Weitzer, 2000). Acknowledging Wilson's contention, this study further examines how class inequality is imbedded in institutionalized racism and not the dichotomy as Wilson suggested. In other words finding that minorities are stopped at higher rates than Whites might be functioning simultaneously with social class conditions and individual officer motives.

Part of Blalock's minority threat hypothesis explains that discrimination might stem from the need for economic elites to preserve their status over the less fortunate (1967). With that being said, socioeconomic status could affect police actions depending on the minority population size. Assuming that police are subconsciously aware of assisting in

the preservation of the elite status that those with higher financial standing possess, the effects of relative Black population growth on traffic stop outcomes might be working through social structure such as median household income, unemployment and poverty rates, as well as municipal property values. The models presented in this study and summarized earlier will control for each of the social variables to obtain a stronger assessment of the confounding issues that attempt to explain racial profiling.

Median Household Income (MHI)

Median household income is important to control for because Blalock would argue that relative Black population increases might be functioning through relative MHI to the extent that rising Black incomes might reach levels that Blacks may afford to compete for what Blalock calls scarce resources that translate into power (1967). Police might find reason to target Black motorists who appear financially threatening to the White establishment. From this economic standpoint, Black population growth would affect police behavior only when Black incomes close the gap with White incomes. However, income status may also be working in another direction. Some studies argue that social unrest may be prevalent in places where income inequality is high (Smith and Holmes, 2003), which may lead to police targeting more Black drivers. Regardless of the motivations that lead police toward focusing more on Black drivers, relative MHI needs to be controlled in each of the models presented in chapter 3.

Unemployment and Poverty

Rising poverty and unemployment rates generally have similar effects on other phenomena. Crime rates increase, police are called and patrol more often, property values decrease and so on (Siegel, 2005; Walker et al., 2004). It is plausible therefore, that police will look at citizens in these areas with more caution than in other areas. It is also logical that vehicles in these areas will have more equipment violations as well due to the inability of drivers to afford appropriate repairs. Indeed these conditions could lead to more pretextual stops and produce more arrests for outstanding warrants and drugs. Additionally, the validity of equipment violation stops might increase the opportunity for negative police/citizen encounters, which might lead to more traffic violation arrests.

Sampson and Morenoff (2006) found that in Chicago poverty is generally concentrated and isolated within locations that are surrounded by predominantly White neighborhoods. These neighborhoods are generally occupied by minorities and are riddled with high crime rates. As Weitzer (1999, 2000) contends and this dissertation stated earlier, middle class Blacks who live in middle class neighborhoods feel they are treated differently once they leave their neighborhoods. This perception could be a function of the population of minorities that live in neighborhoods that are concentrated with poverty and high violent crime rates. Blacks who travel out of their middle class neighborhoods and enter surrounding neighborhoods within the municipality cannot be distinguished from residents in the lower class law violating neighborhoods and may be targeted by police (Terrill and Reisig, 2003). Concentrated poverty might explain why minority drivers in municipalities with very small minority populations still experience

disproportionate stop and search rates. Moreover, the condensed poverty could also explain why municipalities with low crime rates as a whole experience disproportionate minority stops and searches. High violent crime rates in small minority neighborhoods may not be salient at the municipal level, but they might still present a perceived threat to the larger municipal population (Weitzer, 1999; Weitzer and Tuch, 1999; Weitzer, 2000). That said, unemployment and poverty are also controlled in the models to ascertain the effects of relative Black population growth on pretextual stops and other traffic stop outcomes.

Property Values

A logical conclusion one could make is that property values are related to median household income and can also be factored into an officer's motivation to stop Black drivers. Rojek et al. (2004) found municipalities in Missouri where Blacks were stopped at considerably higher rates than Whites. Upon further examination, it happens that, according to the 2000 Missouri Census, these municipalities had very high property values and very small Black populations (United States Census, 2000). It could be discovered that in areas where property values are relatively high, the elitist attitude is further exacerbated to the extent that citizens become fearful and are motivated to pressure police to protect property from perceived threats. Furthermore, research reveals that as the Black population increases, property values decrease (Rent and Lord, 1978; Flippen, 2004). Therefore, the mere presence of minorities might trigger old biases that represent such threats that may put minorities at risk of being stopped at much higher rates than Whites. This condition assumes that police consciously or subconsciously stop

Blacks at higher rates to discourage them from traveling through or moving into an area. Similar to previous problems with racial profiling studies, it would be nearly impossible to prove officer motivations. Nevertheless, finding a pattern that connects property values with the likelihood of Blacks stopped at higher rates than Whites should not be ignored.

When analyzing the 2000 census, there is no racial breakdown comparing property values. Particularly, for the more affluent cities, the municipal rankings essentially mirror the overall median household income rankings. In other words, the cities that have the highest property values also had the highest MHI's. Although one may assume that Black drivers in these municipalities are more likely than Black drivers in less affluent cities to be able to pay fines and operate vehicles with proper equipment, it remains difficult to pinpoint the extent that Black residents contribute to high property values. The proximity of small minority populations within cities with high property values may be threatening. It is therefore also important to control for property values to make confident conclusions about the extent that relative Black population growth affects pretextual stops and traffic stop outcomes.

MAJOR HYPOTHESES

This study has pointed out some of the difficulties in precisely concluding that racial profiling is in full operation when there are significant disparities in traffic stop outcomes of Black and White motorists. The confounding issues of violent crime and socioeconomic factors that might condition traffic stop results are addressed. However, if

the minority group threat hypothesis is a major explanatory factor with respect to racial profiling, socioeconomic status and violent crime rates should be less relevant.

Research Question 11: Confounding Factors

Research question 11 expects to find that when violent crime and the socioeconomic variables (which are MHI, Black-to-White poverty and unemployment, and municipal property values) are controlled along with the total municipal population size, Black-to-White population ratio increases over time will significantly affect pretextual stops and traffic stop outcomes.

H10: When total population, and the social economic variables for census year 2000 (sociological variables) along with violent crime are controlled, the following is expected. As growth increases, the pretextual stop ratio and traffic stop outcomes significantly increase. The effects of growth on pretext stop ratios and the traffic stop outcomes diminish at higher levels of the 2000 Black-to-White population ratio. Growth becomes stronger at higher levels of the 2002 Black-to-White pretextual stop ratio in the other outcome models.

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Research Question 12: Outcome Influences on Pretextual Stops

While this study used pretextual stops as a control variable in the traffic stop outcome models, other potentially relevant control variables were not included in the models that used pretextual stops as the dependent variable. The argument is that the more likely Blacks experience pretextual stops at higher rates than Whites, the more likely Blacks will be at risk of being arrested for outstanding warrants, drugs, and traffic violations. This study has also made the argument that an officer's belief that Black motorists are more likely to be wanted or carry drugs might be the motivation behind the pretextual

stop. Officers may also be prepared and potentially willing to arrest for a traffic violation, if the officer's authority is questioned by the driver. Because causal time ordering affects the validity of this reasoning (Maxfield and Babbie, 1997), this study was reluctant to use the traffic stop outcomes as controls for pretextual stops. The logic is that the outcomes cannot explain the stop before hand. However, the difficulty in assessing officer motivations is already abstract to the extent that researchers may never provide accurate results without an officer's admission. Therefore, this study defied logic by using the outcomes as controls to bring forth discussion about potential motivations that create the cycle that keeps racial profiling near the forefront of criminological literature. Research question 12 addresses the following hypothesis.

H11: When total population and the social economic variables along with violent crime rate, warrant ratio, drug ratio, and TVA ratio are controlled, the following is expected. As growth increases, the 2002 Black-to-White pretextual stop ratio significantly increases. The effect of growth diminishes at higher levels of the 2000 Black-to-White population ratio.

MINORITY THREAT, RACIAL PROFILING, AND GOVERNMENT TYPE

There are speculations that police practices may vary in small, medium, and large municipalities (Rojek et al., 2004). With this being the case, this study previously added a control variable to account for population size. It seemed necessary to address population size when examining minority threat. Although Missouri does not classify municipalities by size but by the type of government rule (MML, 2004), the type of government rule has population implications. Generally, larger populated municipalities are flexible in choosing the form of government leadership while smaller municipalities

are limited. For instance, a municipality classified as a village can only use an elected board of trustees as the form of government rule. Only five trustees are elected in cities with populations below 2,500. If the population is larger, nine trustees may be elected. Municipalities with populations between 500 and 2,999 may choose a mayor/ board of aldermen or mayor/city administrator/aldermen form of government and are considered 4th class cities. Cities where there are between 3,000 and 29,999 residents, are considered 3rd class cities, and the mayor/council or the mayor/city administrator/council/manager commission form of government may be used (Dohm, 1995; MML, 2004). The legislative or special charter form of government has no population requirement and the form of government is set forth by individual legislative charter (Dohm, 1995; MML, 2004). The constitutional/home rule charter classification is based on populations of more than 5,000 and may use the form of government chosen by the people as approved in the charter (Dohm, 1995; MML, 2004). Although there is overlap when looking at the required population sizes for each category, the type of government rule or municipal classification is based in part on the population size (Dohm, 1995, MML, 2004).

There are roughly 760 municipalities in the State of Missouri that use the mayor/council form of government, which includes villages with a chairman and a board of trustees (MML, 2004). There are two types of the mayor/council form. The weak mayor/council form of government has a mayor with very little appointive power because voters elect most administrative officials. This leaves the mayor with very little authority over administrators who are responsible to their electorate (MML, 2004). On the other hand, the strong mayor/council form of government enables the mayor to appoint

administrators who are usually later approved by the council. The mayor and council may hold the officials accountable since they are not elected by the voters (MML, 2004).

There are 132 municipalities that use the mayor/city administrator/council form of government. This form of government allows the mayor and council to delegate specific duties to a city administrator who is accountable to the mayor and council. The city administrator is essentially responsible for appointing and discharging all other city officials, other than those elected (MML, 2004).

The council/manager form of government is used in thirty-six municipalities while two municipalities use the commission form of government (MML, 2004). Under the council/manager form of government, the council is responsible for setting municipal policy. The council will appoint a city manager to handle administrative matters for the city government. The council may fire the city manager at will. The mayor under this rule is simply a political figure who presides over council meetings but has no administrative authority or veto power (MML, 2004). The council is, of course, made up of elected officials. In some respects, municipal government should have similar checks and balances as our federal government to prevent hasty, unwise, and unjust actions by one government body and curb arbitrary and ill-advised acts of public officials (Durand, 1900; Ryan, 1911). That is, legislative and executive responsibilities should be clearly separated to prevent centralized power that may lead to corruption (Durand, 1900; Ryan, 1911).

With evidence that local government corruption tends to operate in larger municipalities more often than smaller cities (Rahn and Thomas, 2005), this study examines the various forms of government operated in each targeted municipality in this

study. Larger cities require more government officials including the police, and it becomes more difficult to monitor activities (Rahn and Thomas, 2005). It could be that the type of government rule is associated with the inability to hold department heads accountable for improprieties committed by their subordinates as a whole. As a result, police practices may include instances of racial profiling or, at minimum some form of improper police tactics. A note should be made that some municipalities with relatively smaller populations may still have governmental classifications similar to larger municipalities. In addition, there are economic characteristics that distinguish the types of government rule which could influence the outcomes in this study. For instance, in large cities that operate under the constitutional charter/home rule government, property values are lower than property values in the legislative or special charter government structure. White household incomes are relatively higher than Black incomes in class 3 cities compared to what is found in cities that operate under the mayor/board of aldermen or mayor/city administrator/aldermen form of government.

Research Question 13: Government Rule

To assess the effect on pretextual stops and traffic stop outcomes, the type of government rule was added as a control variable in the major hypotheses. It is expected that traveling through cities that operate under the constitutional charter rule, which have larger populations, will significantly increase the disparities in the traffic outcomes.

H12: When the conditions in hypothesis 11 are met, the disparities between Black and White pretextual stop ratios will increase when drivers travel through cities that operate under the constitutional/home charter rule.

H13: When the conditions in hypothesis 10 are met, the disparities between Black and White drivers will increase on the outcomes when drivers travel through cities that operate under the constitutional/home charter rule.

Without an officer's admission that the motivation to stop was indeed based in part on some combination of Black population increases and the desire to make an easy arrest, this study compared speed stops to pretextual stops. There is considerably less controversy over the speed stops than the pretextual stops. In fact, many Black drivers indicate that when they are stopped for speeding, they feel the stop is justified (Langan et al., 2001; Durose et al., 2005). The implications are that the motivating factor for the stop is the actual traffic violation and officers are not necessarily looking for other criminal activity. On the other hand, the pretextual stop allows for more officer discretion and potentially results in extra-legal factors driving an officer's decision to stop. Because of the questionable nature of the pretextual stop, this study tested and compared speed and pretextual stops by substituting speed stop ratio with pretextual stop ratio. The following hypothesis is expected.

H14: When the Black-to-White speed stop ratio replaces Black-to-White pretextual stop ratio in the models presented in hypotheses 12 and 13, relative Black population growth will have no effect on the relative speed stop ratio or the traffic stop outcome ratios. Additionally, the relative speed stop ratio will have no effect on the traffic stop outcome ratios.

THRESHHOLD POINT OF THREAT AND FEAR

Research Question 14: When Does Black Population Matter?

As stated earlier, in many circumstances poverty is concentrated within areas surrounded by predominantly White neighborhoods. These impoverished areas are generally occupied by minorities and are riddled with high crime rates especially but mostly, according to Sampson and Morenoff, once the minority population reaches more than seventy-five percent (2006). Other studies claim that once the minority population reaches twenty to thirty percent, threat becomes a factor and more law enforcement intervention becomes mobilized (Liska et al., 1985; Taylor, 1998) regardless of the degree of racial segregation. If Blalock's proposal is accurate, it is likely that Whites may equate large Black populations with high poverty and crime rates. Relative Black population increases will exacerbate the fear and perceived threat Whites have. Research question 14 asks at what percentage point does relative Black population growth creates fear that translates to pressure on authorities to control the perceived threat to the extent that it pushes police to initiate more contact with Black residents.

Concentrating on the relative Black population growth from 1990 to 2000 within a municipality, this study tested Liska et al's. (1998) twenty percentage point threshold. For instance, it is expected that once relative Black population growth in the targeted Missouri municipalities reach twenty percent or above, fear sets in. Black motorists are then significantly more likely than White motorists to experience pretextual stops, and the traffic outcomes in 2002 than what Black motorists experience in cities where they make up less than twenty percent of the population (see hypothesis 12).

H15: Black-to-White Pretextual Stop, Search, Outstanding Warrant Arrest, Drug Arrest, Traffic Violation Arrest rates, and Citations Issued in municipalities in 2002 with 20% or more Black residents in 2000 will be significantly higher than the Black-to-White outcomes in municipalities where Blacks make up less than 20% of the population in 2000.

Additionally, this study conducted analyses with respect to other Black population percentage points to assess how the effects on the outcomes diminish or ascend at significant levels. It also looked for a percentage point that triggered the likelihood that White motorists became over-represented in the outcomes.

CHAPTER 5
DATA AND METHODS

DESCRIPTION OF THE MISSOURI TRAFFIC STOP DATA

The traffic stop data in this study is the result of §590.650 of the Missouri Revised Statues, which mandates collection of traffic stop information. The purpose is to monitor and assess the extent of racial profiling. Over 86 percent of the 720 law enforcement agencies in Missouri reported traffic stop data to the Missouri Attorney General's office in 2002. Of these agencies, 495 were municipal police departments. To obtain a meaningful analysis, this dissertation presented data from municipalities with ninety or more Black residents in Missouri. Similar to the study conducted by Rojek et al. (2004), this population threshold was used to insure reliability for the number of traffic encounters and the circumstances surrounding the stops that were recorded in 2002. Because other races constituted a very small percentage of the population and because prior research has focused mostly on Blacks and Whites (Rojek et al., 2004), only Blacks and Whites were examined in this study. Using this criterion, one hundred and thirteen municipalities were included in this study.

LIKELIHOOD OF EXPERIENCING PRETEXTUAL STOPS

To determine a valid stop rate or the degree to which members of a particular group were over or under-represented in stops by the police, Rojek et al. (2004) developed a disproportionality index (DI). The DI was computed by dividing the proportion of stops accounted for by a given group by that group's proportion of the driving age population. Similar to the Rojek study, this research used a disproportionality index to examine

pretextual stops. The proportion of pretextual stops accounted for by a given group divided by that group's proportion of total stops in a given municipality represented that group's pretextual stop DI index. A disproportionality index value of 1 indicates no over or under-representation of a given group. A DI value less than 1 indicates under-representation, and a DI value greater than 1 indicates over-representation. To the extent that one group has a higher DI rate than the other, the following method was used. If the DI for Blacks was 1.21 and .95 for Whites in a given municipality, then Blacks were 27% (1.21/0.95 = 1.27) more likely than Whites to be stopped. This method was used to calculate the pretextual stop DI for Blacks and Whites in each municipality.

Pretextual stops were derived from data on minor traffic violations recorded in the 2002 racial profiling files. These included stops for faulty equipment, license violations, following too closely, failing to signal, and lane violations. The violations were aggregated for a total number of pretextual stops and separated by race.

LIKELIHOOD OF BEING SEARCHED AND OTHER SEARCH FACTORS

To obtain a disproportionality index for searches, the proportion of a given racial group represented in searches was divided by that racial group's proportion of stops in each municipality. The likelihood of Blacks being searched more than Whites was then assessed, as measured in the pretextual stop data, by dividing each Black search DI by the White search DI.

Discretionary Search Methods and Data

The data did not explicitly distinguish discretionary from mandatory searches. If an officer indicated a search was conducted, he/she checked all boxes that applied. The options included 1) consent; 2) inventory; 3) drug/alcohol odor; 4) incident to arrest; 5) plain view contraband; 6) drug dog alert; 7) reasonable suspicion-weapon [Terry Search]; and 8) probable cause/other searches. While there is certainly overlap in the type of search an officer selects, for instance, officers may check the inventory box which is more likely a mandatory search and the drug/alcohol odor box which is more likely a discretionary search, attempts are still needed to separate types of searches. This study uses drug/alcohol odor, plain view contraband, drug dog alert, reasonable suspicion, and probable cause/other variables to account for discretionary searches. As officers are likely to decide to search individuals under these circumstances, it remains the officer's discretion. These variables were aggregated to create one total discretionary search item. A DI was then created to determine the extent that Black motorists were searched under discretionary conditions at higher rates than White motorists. This was accomplished by dividing the proportion of Black motorists that experienced a discretionary search by the proportion of Black motorists searched. The Black discretionary search DI was then divided by the White discretionary search DI to obtain the Black-to-White discretionary search ratio.

It should be noted that, although the consent search could have been included as a discretionary search, the consent search provides implications in respect to driver cooperation. Additionally, because the level of discretion used for consent searches is higher than other so called low-discretion searches, and because some research argue that

the consent search contributes considerably to racial disparities in searches, it seems imperative to separate it from other discretionary searches.

Mandatory Search Methods and Data

Inventory and incident to arrest variables were aggregated to achieve one mandatory search category. The methods used with discretionary searches to obtain the DI and Black-to-White mandatory search ratio were used for this search measure.

Consent Search Methods and Data

The consent search is clearly distinguished as a category in the 2002 racial profiling data. Once again a DI was created for Black and White motorists who reportedly consented to a search by taking the proportion of a given group's consent searches divided by that group's proportion of total stops. The likelihood that Blacks will consent to a search at higher rates than Whites was then assessed by dividing the Black DI by the White DI.

This study acknowledges that perhaps the total proportion searched should have been used rather than the total proportion stopped as the denominator to determine the DI rates for the various types of searches. However, this research uses the latter because, the pretextual stop is key to this study. Using the proportion searched does not capture all drivers stopped and could potentially eliminate those stopped pretextually. Unfortunately the data does not distinguish whether drivers stopped pretexutally are searched; therefore, it is best to use stops to capture all drivers at risk of encountering one of the types of searches, which possibly provides a better picture of differential treatment. Nevertheless,

analyses that incorporated the proportion searched as the denominator is still examined and reported in chapter 7.

Outcome Test for Contraband

To supplement the search data, this study used outcome tests to examine the success rate that police officers had in discovering contraband during the stop. The 2002 racial profiling data provides a total number of times a traffic stop resulted in the discovery of contraband. Contraband is described as drugs/alcohol paraphernalia, currency, weapon, stolen property, and other. The number of searches that resulted in the discovery of contraband found in vehicles driven by Blacks was divided by the total number of Blacks searched and compared to contraband found in vehicles driven by Whites. The quotient was then multiplied by 1,000 to simplify the interpretation of the results.

LIKELIHOOD OF BEING ARRESTED

The racial profiling data presented a single variable that clearly referenced the total number of drivers arrested in each municipality. The types of arrests included outstanding warrant, resisting arrest, property crime, offenses against a person, drug violation, traffic violation, DWI/BAC, and other. To obtain the DI, the proportion of a given racial group's representation in the total number of arrests divided by that group's proportion of drivers stopped was computed. The arrest DI for Black drivers was divided by the arrest DI for White drivers to obtain the likelihood that Blacks were disproportionately arrested after the traffic stop compared to Whites.

Data and Methods for Various Types of Arrests

This study proposed to focus on certain types of arrests. To create a DI for Black motorists arrested for outstanding warrants, the proportion of Black drivers arrested on warrants was divided by the proportion of Black drivers represented in the total number stopped in each municipality. After doing the same for White drivers, the Black arrest for outstanding warrant DI was divided by the White arrest for outstanding warrant DI. It was then determined to what extent Black drivers are more or less likely than White drivers arrested for outstanding warrants. The same analyses were conducted for drug and traffic violation arrests. Again, it may have been prudent to use the total number arrested as the denominator rather than the total number stopped. As stated earlier, this method could potentially eliminate those stopped pretextually.

Outcome Test for Traffic Citations Issued

Similar to the outcome test method used for the previous variables, outcome tests were used for citations issued. The proportion of Black drivers issued traffic citations was divided by the proportion of Black drivers stopped and compared to the proportion of White drivers that received citations divided by the proportion of White drivers stopped. The Black-to-White citation ratio was derived by dividing the Black citation DI by the White citation DI.

CRIME RATE DATA

To assess violent crime rates, this research examines index crimes compiled in the Missouri Highway Patrol's (MSHP) 2002 Uniform Crime Report. The Missouri

Highway Patrol develops crime rates by examining total crime per 1,000 residents. Total crimes in the MSHP's 2002 index crime report include homicide, manslaughter, forcible rape, attempted rape, robbery, aggravated assault, burglary, larceny, motor vehicle theft, and arson. Violent crime is separated from property crime to further examine any confounding relationships. Homicide, manslaughter, forcible rape, attempted rape, robbery, and aggravated assault are the violent crimes listed by the MSHP. Burglary, larceny, motor vehicle theft, and arson are listed as property crime. Each total number of violent crimes reported in year 2002 for a particular municipality was divided by that city's total population. That value was then multiplied by 1,000 to obtain the crime rate. This study uses only violent crime because it is more likely to raise citizen fear.

POPULATION AND OTHER SOCIOLOGICAL DATA

Population Data

This study uses Missouri Census data for years 1990 and 2000 to calculate the Black and the White residential populations in each of the targeted municipalities and uses year 2000 Black-to-White population ratios to compare population sizes across municipalities. To obtain population ratios among Blacks and Whites in each municipality, the total percentage of the Black population in each city was be divided by the total percentage of the White population within each municipality. For instance, in a municipality where there are 100 Black residents and 200 White residents, the Black-to-White population percentage ratio is 33 to 66 or .5. See the example in Table 5.1.

Table 5.1. Example Calculating Black-to-White Population Percentage Ratio

Black population percentage equals (100/300 = .33 X 100 = 33)
White population percentage equals (200/300 = .66 X 100 = 66)
Black-to-White population percentage equals (33/66 = .5)

The example indicates that for every White citizen, there are .5 Black citizens in a given municipality. An increase in this value indicates that the Black population is closing the gap on the White population.

To obtain population ratio increases over time, the differences in the 1990 to 2000 Black-to-White population ratios were divided by the 1990 Black-to-White population ratio to create the percentage change over time. The change decreased if the 2000 Black-to-White population ratio was smaller than the 1990 Black-to-White population ratio. Minority threat was measured by observing the Black-to-White population ratio percentage increase from 1990 to 2000 in each city and the 2000 Black-to-White population ratio across municipalities. Black population increases alone were not used in this study because in locations where Blacks made up a very large portion of the population, Black population increases were useless in assessing White fear and perceived threat. White population increases alone were not used because minority group threat specifies the increase in the minority population and not the majority.

Sociological Data

Missouri Census data for year 2000 is used to analyze Black-to-White median household income, poverty level, and unemployment. It was also used to examine municipal property values. The total Black median household income was divided by the White median household income in each municipality to obtain a ratio. Smaller ratios

represent wider gaps between Black and White incomes. For poverty, the total number of Black residents that lived below the poverty level was divided by the total number of Black residents within a city to obtain a poverty rate. This measurement was also conducted for White residents. The Black poverty rate was then divided by the White poverty rate to obtain the Black-to-White poverty ratio. The method used for poverty was duplicated for analyzing unemployment. Increases in the poverty and unemployment ratios indicate that the proportion of Black residents living below the poverty level or unemployed is larger than the proportion of White residents living below the poverty level or unemployed. To analyze differences in property values across municipalities, this study examined the average property value reported by the census for each municipality.

Population Percentage Threat Threshold/Tipping Point

This study created a dummy variable for municipalities where Blacks made up twenty percent or more of the municipal population. Regressing Black-to-White pretextual stop rates on one dummy variable is the same as performing a two sample *t* test (Hamilton, 1998) for whether the mean Black-to-White pretextual stop rate is the same across municipalities where Blacks made up twenty percent or more of the population compared to municipalities in which they made up less than twenty percent of the population. If the pretextual stop rate was significantly higher in places where Blacks made up twenty percent or more of the population, then an argument can be made that threat of the Black population becomes prevalent at this percentage point. This process was conducted for various Black population percentage points to compare when significant differences in

pretextual stop, search, outstanding warrant arrest, drug arrest, traffic violation arrest rates, and traffic citation rates occurred.

GOVERNMENT STRUCTURE

To account for differences depending on the type of government structure in the targeted 113 municipalities, this study compared municipal classification type. This research uses data from the Missouri Municipal League (MML), which records information about Missouri cities to promote welfare, interest, and closer relations among municipalities to improve municipal government and administration in the state (Dohm, 1995). In doing so, the MML keeps records on the exact type of government each municipality uses in its daily operations. For purposes of this writing, each type of government rule was assigned a classification number. Municipalities classified by the MML as constitutional charter/home rule governments were assigned as class 1 municipalities. Legislative or special charter government classified cities were assigned as class 2 cities. Third and fourth class cities, as described by MML, were assigned class 3 and class 4 categories respectively, and villages were assigned class 5 municipalities.

With the class 1 category considered the highest classification and the class 5 category being the lowest in terms of professional government structure and resources, the MML's classification system generally appears to show higher classified cities with larger populations than the other municipalities, although as previously mentioned, there is some overlap. While the MML does not classify by size of population, this dissertation made the following distinctions between large, medium, and small municipalities. Municipalities with 40,000 or more residents were categorized as large cities, 10,000 to

39,999 were medium, and fewer than 10,000 were considered small. There was variation in the city size and classification type which is illustrated in Table 5.2.

Table 5.2. Missouri Municipal Classifications and Size

	Class 1	Class 2	Class 3	Class 4	Class 5	
Small	5	1	17	28	4	
Medium	16	1	15	12	0	
Large	11	0	1	2	0	
Total	32	2	33	42	4	N = 113 Municipalities

Having reason to believe that government classification influences Black-to-White pretextual stop rates and the other traffic stop outcomes, this study created five dummy variables from the municipal classification categories. The dummies were named class 1, class 2, class 3, class 4 and class 5. These categorical variables were added one at a time to the major regression equations to control for the type of government structure.

Regression Analysis

Bivariate and multivariate regression was used to examine associations between the various legal, extra-legal, and sociological variables presented in each hypothesis. The items were tested for multicollinearity. Additionally, outliers were examined and equations were transformed with proper log methods to obtain better fits when needed. Few equations were skewed to the extent that they needed transformation; therefore, the original equations were used in the results.

CHAPTER 6
DIFFERENTIAL TREATMENT IN TRAFFIC STOPS AND OUTCOMES

DESCRIPTIVE ANALYSIS OF RACIAL PROFILING DATA FOR YEAR 2002

Before examining the stated hypotheses, this study provides a description of the major variables and compares overall rates in disparities in treatment between Black and White motorists in the 2002 Missouri racial profiling data. Although this research was not overly concerned with total stops, the total stop data did provide a reference to other outcomes. Table 6.1 indicates that the rate at which Black motorists were stopped was higher than the rate for White motorists in the targeted municipalities. For every 1,000 Blacks in the driving age population of the targeted municipalities, 385.8 Black motorists were stopped by the police in 2002. The rate for Whites was 291.5. On average Blacks made up only 17 percent while Whites comprised close to 77 percent of the driving age population amongst the 113 cities analyzed. However, Blacks accounted for 22 percent of all stops while Whites accounted for 74 percent. This indicates that Blacks are disproportionately overrepresented in traffic stops (.22/.17=1.29) and Whites are underrepresented (.74/.77=.96). More importantly, Blacks are approximately 34 percent (1.29/.96=1.34) more likely than Whites to be stopped by the police in the targeted Missouri municipalities.

Table 6.1. Municipal Stop Disproportionality Index (DI) for Blacks and Whites for Year 2002 and Stop Rates per 1,000 Driving Age Population (Proportions in Parentheses)

	Driving Age (prop) Population	Stopped (prop)	Stop Rate	DI
Blacks	361,265 (.17)	139,374 (.22)	385.8	1.29
Whites	1,618,945 (.77)	471,949 (.74)	291.5	.96
Other	125,538 (.06)	25,711 (.04)	204.8	.66
Total	2,105,748 (1.00)	637034 (1.00)		

N= 113 Municipalities Black-to-White Stop Disproportionality Index = 1.34

Source: State of Missouri Attorney General's 2002 Traffic Stop Data

Not surprisingly, the stop rates in this study are consistent with other racial profiling research. The descriptive results on rates for pretextual stops, speed stops, and searches (see Table 6.2) are also consistent with much of the previous research. After breaking down the other traffic stop outcome variables, which is also presented in Table 6.2, this study finds that the highest disparity between Black and White motorists is for outstanding warrant arrest rates. For every 100 Black motorists stopped in the targeted cities, 5.51 were arrested for having an outstanding warrant. Only 1.67 White motorists were arrested on this charge for every 100 White motorists stopped. The Black rate was over 200 percent of the White rate. The smallest disparity was found in the consent search rate although Black motorists were more likely than White motorists to consent to a search. In fact, all the rates for Blacks were higher except for speeding. See Table 6.2 for these results. It should be noted that each of the rates were derived by dividing by a given race's total number stopped.

Table 6.2. Comparison of Black and White Pretextual Stop, Speed Stop, Search, Arrest and Citation Rates Per 100 Black and White Motorists Stopped in the Targeted Municipalities

Traffic Stop Outcome	Black Rate	White Rate
Pretextual Stop	45.38	31.66
Speed Stop	36.41	49.36
Search	12.74	7.16
Discretionary Search	2.08	1.35
Mandatory Search	9.58	4.90
Consent Search	3.28	2.61
Arrests	10.11	4.98
Outstanding Warrant Arrests	5.51	1.67
Drug Arrests	.86	.62
Traffic Violation Arrests	4.08	1.50
Citations	74.97	63.89

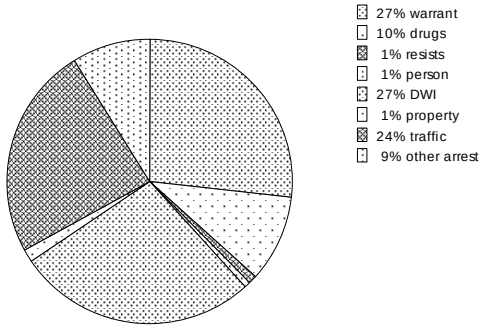
N= 113 Municipalities

Source: State of Missouri Attorney General's 2002 Traffic Stop Data

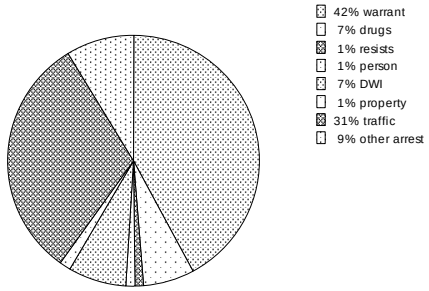
What this study finds to be interesting are the rate of arrests and the rate that drug contraband is found. It is certainly plausible to believe that Black arrest rates are higher than White arrest rates mostly because Blacks have higher outstanding warrant arrest rates. However, the question becomes the discrepancy between lower Black contraband hit rates (shown in Table 6.3) and higher Black drug arrest rates (previously shown in Table 6.2). Figure 6.1 shows both Black and White types of arrests by percentage.

Figure 6.1. Pie Chart Representing Percentages of Black and White Arrest Categories

White Drivers



Black Drivers



N = 113 Municipalities

Source: State of Missouri Attorney General's 2002 Traffic Stop Data

While the Black drug arrest rate is certainly higher for Black drivers, a smaller percentage of Black arrests involve drugs compared to the percentage of White drug arrests. After conducting outcome tests for contraband discovered, this research finds that the hit rate for White drivers is higher than the hit rate for Black drivers (see Table 6.3). Before assuming that White drivers are found with contraband but not necessarily arrested, recall that contraband discovered emanates from drugs/alcohol paraphernalia, currency, weapon, stolen property, and other. Having knowledge that White motorists are more likely to be arrested on alcohol related charges (Novak, 2004; Rojek et al., 2004; Walker et al., 2004), the force behind White contraband hit rates might stem from the drugs/alcohol paraphernalia variable. This study divided drugs/alcohol paraphernalia by total searches to obtain a separate hit rate for each racial group. Similar to the total overall contraband found, White drivers had higher hit rates than Blacks in the drugs/alcohol paraphernalia category. In fact, Figure 1 indicates that the percentage of Whites arrested for DWI is much higher than the percentage of Blacks arrested for DWI.

Unfortunately, the data does not separate drug contraband from alcohol. Therefore, this study attempts to disengage the two by further examining the types of searches. By virtue of the various types of provisions that justify a search, drug dog alert is the only variable that exclusively isolates drugs from alcohol. Also recall that the contraband hit rate was derived from contraband found divided by searches conducted for each racial category. An outcome test was conducted to determine a hit rate for drug dog alert that potentially resulted in an arrest. This rate was established by dividing drug dog alert accounted for by each race into the number of that race's drug arrests. This research acknowledges that drug dog alert does not necessarily signify a drug arrest, given that officers have the discretion to arrest and there may be errors in detection. However, such errors are normally due to the dog handler's misinterpretation of the dog's responses (Gordon, 2004). In fact, many dogs are nearly perfect in detecting narcotics; moreover, the United States Supreme Court declares them highly reliable (Bird, 1996). Coupled with the idea that officers are likely to arrest when drugs are found (Hernandez and Knowles, 2004; Durose et al., 2005), this study concludes that most dog alert searches result in an arrest. That said, Table 6.3 also displays various outcome tests that pertain to contraband found and drug dog alert searches. It shows that the drug dog alert hit rate is higher for White drivers. In other words, of the population of White drivers arrested for drugs, they had a higher rate of undergoing a dog alert search than Black drivers arrested for drugs in conjunction with dog alert searches. On the other hand, of the Black drivers stopped by the police, they experienced a higher rate of drug dog alert searches than White drivers stopped by the police. Yet, Black drivers still had a higher rate of total drug arrests. It appears that Black drivers are more often arrested for drugs under

circumstances other than canine dogs alerting the police. One option could be that Black drivers arrested for outstanding warrants likely constitute mandatory searches which potentially reveal illegal substances and prompt officers to additionally check the drug arrest box on the racial profiling form. The same could be true for Black drivers arrested for traffic violations. The data does not provide individual information that shows specific circumstances surrounding each stop.

Table 6.3. Contraband Hit Rates, Drug/Alcohol Hit Rates, Drug Dog Alert Arrest Rate, and Drug Dog Alert Search Rate per 1,000 Black Drivers and 1,000 White Drivers

	Black	White
Contraband Found	149.2	175.7
Drug/Alcohol Contraband Found	107.6	154.1
Drug Dog Alert Search Divided by Arrests	103.2	126.7
Drug Dog Alert Search Divided by Stops	.88	.79

N = 113 Municipalities

Source: State of Missouri Attorney General's 2002 Traffic Stop Data

This study also constructed a descriptive table for the median disproportionality indices to determine to what extent Black motorists were more likely than Whites to be treated differently. Once again, as Table 6.4 indicates, only in the speeding category were Blacks less likely than Whites to be stopped. Not surprisingly, Black motorists were 204 percent more likely than White motorists arrested for an outstanding warrant. The only variable that indicates near parity between the races is the citation indices. Black motorists were actually overrepresented in all categories except consent searches, citations issued, and stops for speeding. As the overall Black-to-White disproportionality index on searches showed that Blacks were more likely to be searched by police, there

was more disparity when it came to mandatory searches. This incongruity could be a direct result of outstanding warrant and traffic violation arrests.

Table 6.4. Disproportionality Index for Black-to-White Pretextual Stop, Speed Stop, Search, Low-Discretionary Search, Mandatory Search, Consent Search, Arrests, Outstanding Warrant Arrest, Drug Arrest, Traffic Violation Arrest Rates, and Rate of Citations Issued

	Black DI	White DI	B/W DI
Pretextual Stop	1.34	.91	1.47
Speed	.37	.49	.76
Search	1.68	.89	1.89
Discretionary Search	1.77	.85	2.08
Mandatory Search	1.78	.80	2.23
Consent Search	.32	.21	1.52
Arrests	1.71	.82	2.09
Outstanding Warrant Arrests	2.13	.7	3.04
Drug Arrests	1.51	.88	1.72
Traffic Violation Arrests	1.52	.72	2.11
Citations	.99	.97	1.01

N = 113 Municipalities

Source: State of Missouri Attorney General's 2002 Traffic Stop Data

The preceding descriptions provide an examination of stop disparities and circumstances that occurred after the stop. One could conclude that the differences might be justified and not necessarily driven by an officer's biases. However, some activity is still left un-explained. We now turn to results related to the minority group threat hypothesis.

EXPLAINING STOPS THROUGH THEORY

The descriptive analyses informed that as a whole, Blacks were stopped, searched, and arrested at higher rates than Whites in the 113 targeted municipalities. This is consistent with most research. As previously indicated, an explicit theory should accompany explanations on traffic stops. Thus, a simple regression equation (y=a+bx+e) using ordinary least squares (OLS) is used to assess the minority group threat hypothesis as a possible explanation for Black overrepresentation in stops, searches, and other traffic stop outcomes in Missouri. Using the 2002 Black-to-White stop rate as the dependent variable in a bivariate regression analysis, it is discovered that the minority group threat hypothesis cannot explain the likelihood that Blacks would be stopped at higher rates than Whites across municipalities in year 2002. The study found that after examining the Black-to-White population percentage increase from 1990 to 2000, there is no significant relationship as Table 6.5 indicates. The analysis also reveals that the Black-to-White population percentage ratio across municipalities is not significantly related to stop rates across municipalities.

Table 6.5. Bivariate Regression: The Effect of Black-to-White Population Percentage Change from 1990 to 2000 (B/W Growth) and Year 2000 Black-to-White Population Increase Across Municipalities (B/W 2000) on the 2002 Black-to-White (B/W) Stop Index (N = 113)[a]

	B/W Stop Index		
	b	Beta	R^2
B/W Growth	.002 (.001)	.157	.02
B/W 2000	-.081 (.044)	-.171	.03

[a] Standard error in parentheses.
**p < .01 *p < .05

Source: State of Missouri Attorney General's 2002 Traffic Stop Data; 1990 and 2000 Missouri Census Bureau

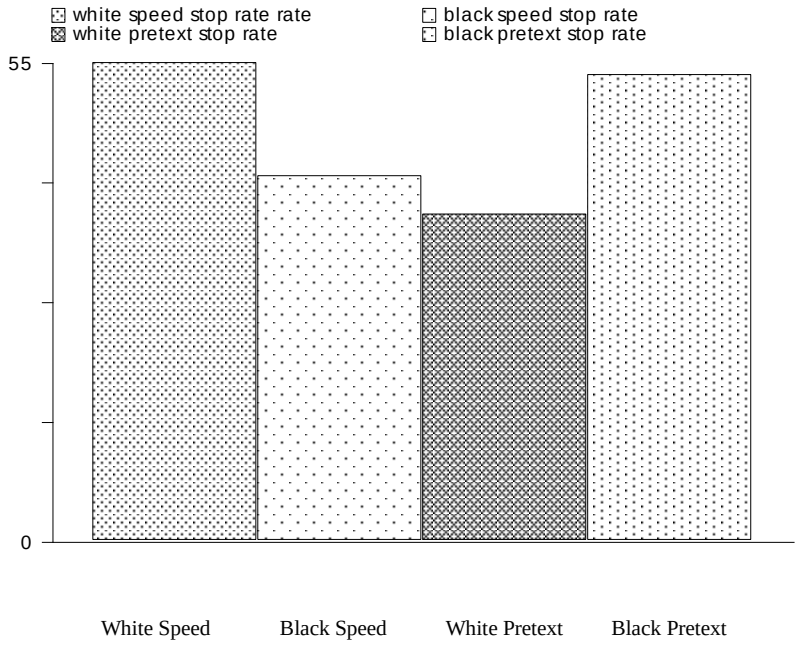
The preceding regression models were used to set the foundation for this research's major hypotheses. While there is no intent to ignore overall stop rates, this study is more concerned with pretextual stops which have become central when analyzing racial profiling data.

CHAPTER 7
REGRESSION RESULTS FOR MAJOR STOP VARIABLES AND OUTCOMES

PRETEXTUAL STOPS AND MINORITY GROUP THREAT

There could be simple and justifiable reasons why Blacks are stopped more often than Whites. This study compared Black and White motorists stopped for serious and non-serious traffic violations. Figure 7.1 shows the mean stop rate for Blacks and Whites stopped for serious traffic offenses (speed stops) and Blacks and Whites stopped for non-serious traffic offenses (pretextual stops). As indicated in the previous chapter, roughly 49 percent of the White drivers stopped in the targeted Missouri cities were stopped for speeding while approximately 37 percent of Black drivers were stopped for this reason. However, 45 percent of Black and 32 percent of White drivers were stopped for faulty equipment, license violations, following too closely, failing to signal, or lane violations. This is consistent with most research that indicates that Black motorists are more likely than Whites to be detained as a result of a pretextual stop. With evidence that the legality of the pretextual stop has been challenged in court but ruled constitutional, the question becomes whether or not an association can be drawn between these types of stops and the minority group threat hypothesis. Police might use the pretextual stop as a legal disguise to hide race-based motives to stop minorities. In fact, the pretextual stop might be an important variable that predicts differential treatment of minorities after the stop.

Figure 7.1. Mean White and Black Stop Rates for Speeding and Pretextual Stops



Source: State of Missouri Attorney General's 2002 Traffic Stop Data

Simple Bivariate Regression Analyses: Black Populations and Traffic Stop Outcomes

Using bivariate regression (none shown), this study finds that there were generally no significant relationships between relative Black population growth and any of the dependent variables used as outcomes. Relative Black population growth also has no significant effect on the confounding violent crime or socio-economic variables. On the other hand, Black-to-White pretextual stop ratio is significantly and positively associated with Black-to-White outstanding warrant arrests, drug arrests, traffic violation arrests, municipal violent crime, and municipal property values. While Black-to-White median household income is also significantly related to pretextual stops, a negative relationship is found. However, it is premature to make reliable conclusions with the bivariate analyses.

Regressing Population Growth and Pretextual Stops

To answer research question 1, the following was discovered using multivariate regression. Table 7.1 shows that when the total municipal population and the Black-to-White population for year 2000 was controlled, the relative Black population growth from 1990 to 2000 across the targeted Missouri municipalities had no significant effect on the 2002 Black-to-White pretextual stop ratios in these cities. However, the analysis did find a significant main effect between relative size of the Black population for year 2000 and Black-to-White pretextual stop ratios. Hypothesis 1 also stated that the effect of Black population growth on the ratio of Black-to-White pretextual stops should weaken in areas with relatively large Black populations. The results were consistent with that expectation. The analysis observed a significant negative effect of the interaction variable (B/W Growth X B/W2000) on pretextual stops of Blacks relative to Whites ($b_{\text{B/W Growth X B/W2000}} = -.000151$, $p < .001$).

Table 7.1. Multivariate Regression: The Effect of Relative Black Population Growth from 1990 to 2000 on 2002 Black-to-White Pretextual Stop Ratios When Total Municipal Population is Controlled. Also B/W Growth is Interacting with Black-to-White Population Ratio (N = 113)[a]

	B/W Pretext	
	b	Beta
Independent Variable		
B/W Growth	.0001	.050
	(.0002)	
B/W 2000	.035 *	.366
	(.014)	
TotPop	2.74e-06	.306
	(7.80e-07)	
B/W Growth X B/W2000	-.000151 **	-.537
	(.00004)	
R^2	.19	

Notes: B/W Pretext = Black-to-White pretextual stops for year 2002 TotPop = Total municipal population for year 2000
B/W Growth = Black-to-White population ratio from 1990 -2000 B/W 2000 = Year 2000 Black-to-White population ratio
B/W Growth X B/W2000 = B/W Growth interacting with B/W 2000

[a] Standard error in parentheses.
**p < .01 *p < .05
Source: State of Missouri Attorney General's 2002 Traffic Stop Data; 2000 Missouri Census

So the minority group threat hypothesis is certainly relevant with the interaction term in the model. Community accountability theory also may be important. In other words, the results imply that Black population increases produce fear that pushes police toward more contact with Black motorists. However, where Blacks make up a larger fraction of the population, and presumably exert more political power, the police are less likely to stop Black motorists on minor traffic violations.

Regressing Population Growth on Overall, Low-Discretionary, Consent, and Mandatory Searches

Hypotheses 2, 3, 4, and 5 are all rejected as Table 7.2 shows that relative Black population growth has no effect on overall search ratios or search ratios separated by type. Likewise, the interaction terms have no effect. However, the analysis does show that the Black-to-White pretextual stop ratio has a significant main effect on overall Black-to-White search ratio ($b_{B/W\ pretext} = .465$, $p < .05$).

Table 7.2. Multivariate Regression: The Effect of Relative Black Population Growth from 1990 to 2000 on 2002 Black-to-White Overall, Low-Discretionary, Consent, and Mandatory Search Ratios When Total Municipal Population for Year 2000 is Controlled. Also Year 2000 Black-to-White Population Ratio and Year 2002 Black-to-White Pretextual Stop Ratios are Interacting and with B/W Growth (N = 113)

	Dependent Variables							
	B/W Searches		B/WLow-Descr		B/W Consent		B/W Mandatory	
Independent Variables	b	Beta	b	Beta	b	Beta	b	Beta
B/W Growth	-.001	- .220	-.002	-.156	-.0003	-.071	-.001	-.140
	(.0009)		(.003)		(.0009)		(.001)	
B/W 2000	-.063 *	-.333	-.011	-.019	-.015	-.091	-.084	-.276
	(.030)		(.096)		(.028)		(.045)	
TotPop	3.58e-06 *	.203	4.760e-06	.091	1.62e-06	.105	-9.68e-07	-.034
	(1.65e-06)		(5.39e-06)		(1.58e-06)		(2.50e-06)	
B/W Pretext	.465 *	.236	-.277	-.047	-.108	-.062	1.637 **	.517
	(.200)		(.649)		(.191)		(.303)	
B/W Growth X B/W2000	.0001	.250	-.00004	-.022	9.51e-06	.020	.0002	.225
	(.00009)		(.0003)		(.00009)		(.0001)	
B/W Pretext X B/W Growth	.0004	.118	.0005	.047	-.00006	-.020	-.00002	-.003
	(.0006)		(.002)		(.0006)		(.001)	
R^2	. 19		.03		.03		.28	

Notes: B/W Pretext = Black-to-White pretextual stop ratio for year 2002
B/W Growth = Black-to-White population ratio from 1990 to 2000
B/W 2000 = Year 2000 Black-to-White population ratio
TotPop = Total municipal population for year 2000
B/W Searches = Black-to-White search ratio for year 2002
B/WLow-Descr = Low discretionary search ratio for year 2002
B/W Consent = Consent search ratio for year 2002
B/W Mandatory = Mandatory search ratio for year 2002
B/W Pretext X B/W Growth = B/W pretext interacting with B/W Growth
B/WGrowth X B/W2000 = B/W Growth interacting with B/W 2000

[a] Standard error in parentheses.
**p < .01 *p < .05
Source: State of Missouri Attorney General's 2002 Traffic Stop Data; 2000 Missouri Census

The pretextual stop ratio is also significantly and positively associated with mandatory searches ($b_{B/W\ pretext}$ = 1.637, p < .001). Although the minority group threat hypothesis cannot explain the likelihood that Black motorists are searched at higher rates than White motorists, future research should examine the pretextual stop as it relates to searches.

Regressing Population Growth on Outstanding Warrant, Drug, and Traffic Violation Arrests Along with Traffic Citations Issued

Similar to the search results, relative Black population growth has no significant effect on arrest outcomes or traffic citations. Considering the lack of a significant association with population growth and the interaction variables, hypotheses 6, 7, 8 and 9 are rejected. Again, there are significant associations between certain arrests and pretextual stops. Table 7.3 indicates that as the Black-to-White pretextual stop ratio increases, the Black-to-White outstanding warrant and traffic violation arrest ratios significantly increase ($b_{B/W\ pretext}$ = 5.905, $p < .001$) and ($b_{B/W\ pretext}$ = 1.411, $p < .001$) respectively.

Table 7.3. Multivariate Regression: The Effect of Relative Black Population Growth from 1990 to 2000 on 2002 Black-to-White Outstanding Warrant, Drug, Traffic Arrests Ratios when Total Municipal Population for Year 2000 is Controlled. Also Year 2000 Black-to-White Population Ratio and Year 2002 Black-to-White Pretextual Stop Ratios are Interacting with B/W Growth (N = 113)

	Dependent Variables					
	B/W Warrant Arrest		B/W Drug Arrest		B/W Traffic Arrest	
Independent Variables	b	Beta	b	Beta	b	Beta
B/W Growth	-.002 (.004)	-.098	-.001 (.002)	-.142	-.0007 (.002)	-.079
B/W 2000	-.168 (.140)	-.173	-.057 (.055)	-.173	-.070 (.056)	-.201
TotPop	-.00001 (7.84e-06)	-.153	1.90e06 (3.05e-06)	.062	-7.03e.07 (3.11e-06)	-.022
B/W Pretext	5.905** (.950)	.589	.692 (.369)	.202	1.411** (.377)	.391
B/WGrowth X B/W2000	.0007 (.0004)	.235	.0001 (.001)	.102	.0002 (.0002)	.240
B/W Pretext X B/W Growth	.0005 (.003)	.030	-.00001 (.001)	.002	.0002 (.001)	.029
R^2	.29		.09		.14	

Notes: B/W pretext = Black-to-White pretextual stop ratio for year 2002
B/W 2000 = Year 2000 Black-to-White population ratio
B/WGrowth X B/W2000 = B/W Growth interacting with B/W 2000
B/W Drug arrest = Drug arrest ratio for year 2002
Pretext X B/W Growth = B/W pretext interacting with B/W Growth
B/W Growth = Black-to-White population ratio from 1990 to 2000
TotPop = Total municipal population for year 2000
B/W Warrant arrest = warrant arrest ratio for year 2002
B/W Traffic arrest = traffic arrest ratio for year 2002

[a] Standard error in parentheses.
**p < .01 *p < .05
Source: State of Missouri Attorney General's 2002 Traffic Stop Data; 2000 Missouri Census

Interestingly, while interactions between pretextual stop and arrest ratios were insignificant, Table 7.4 shows the following. As Blacks are more likely than Whites to be arrested after a traffic stop, Blacks are significantly more likely to receive a traffic citation ($b_{B/W\ arrest}$ = .195, $p < .001$). This appears consistent with this study's anticipation that police might unofficially be trained to issue citations for the original stop violation once a lawful arrest is made during a questionable stop.

Table 7.4. Multivariate Regression: The Effect of Relative Black Population Growth from 1990 to 2000 on 2002 Black-to-White Traffic Citation Ratio when Total Municipal Population for Year 2000 is Controlled. Also Year 2000 Black-to-White Population Ratio is Interacting with B/W Growth While Year 2002 Black-to-White Pretextual Stop Ratio is Interacting with Black-to-White Arrest Ratio (N = 113)

	Dependent Variables	
	B/W Citation	
Independent Variables	b	Beta
B/W Growth	.00004	.029
	(.0001)	
B/W 2000	.004	.079
	(.009)	
TotPop	-2.39e-09	-.0005
	(4.83e-7)	
B/W Pretext	.120	.218
	(.126)	
B/W Arrest	.195 **	.807
	(072)	
B/W Growth X B/W2000	-.00001	-.081
	(.00003)	
B/W Pretext X B/W Arrest	-.066	-.672
	(.042)	
R^2	.13	

Notes: B/W Pretext = Black-to-White pretextual stop ratio for year 2002; B/W Growth = Black-to-White population ratio from 1990 to 2000; B/W 2000 = Year 2000 Black-to-White population ratio; TotPop = Total municipal population for year 2000; B/W Growth X B/W2000 = B/W Growth interacting with B/W 2000; B/W Arrest = Overall arrest ratio for year 2002; B/WPretext X B/WArrest = B/W pretext interacting with B/W arrest; B/W Citation = Ratio of citations issued for year 2002

[a] Standard error in parentheses.
**p < .01 *p < .05
Source: State of Missouri Attorney General's 2002 Traffic Stop Data; 2000 Missouri Census

At this point, Table 7.1 seems to indicate that relative Black population growth at certain levels of Black-to-White population size does possibly explain why Black

motorists are more likely than White motorists to experience pretextual stops. In turn, Table 7.2 implies that the pretextual stop positions police to negotiate further general searches or, more specifically, find other illegal activity that require a mandatory search. Moreover, Table 7.3 provides speculative reasons to believe that law enforcement officials are aware that by making this type of stop there is a significant chance that an outstanding warrant arrest is possible, and that, if Black drivers become un-cooperative in the absence of other legal justifications to make an arrest, police might be inclined to arrest Black drivers for the original traffic violation. And finally, Table 7.4 implies that when the likelihood to make an arrest decreases, perhaps due to the driver's cooperation or the lack of other illegal activity, the likelihood that Black drivers are issued traffic citations decreases. Unfortunately, there remains too much speculation to make concrete conclusions without analyzing other potential effects.

CHAPTER 8
REGRESSION RESULTS FOR CONFOUNDING VARIABLES

VIOLENT CRIME REGRESSION

Violent crime, which is associated with Black population increases and potentially produces citizen fear, might give officers an added incentive to make questionable, albeit lawful pretextual stops of Black motorists at higher rates than White motorists. Model 1 in Table 8.1 is taken from the results in Table 7.1 to show sequential changes after violent crime is introduced (shown in Model 2 of Table 8.1). It shows that when violent crime for year 2002, Black-to-White population ratio, and total population for year 2000 are controlled, the effect of the relative Black population growth on the Black-to-White pretextual stop ratio continues to significantly depend on the relative size of the Black population for year 2000 ($b_{B/WGrowth\ X\ B/W2000} = -.0001$, $p < .001$). Again, the results consistently show that growth weakens on pretextual stops when Black populations are relatively high.

8.1. Multivariate Regression: The Effect of Relative Black Population Growth from 1990 to 2000 on 2002 Black-to-White Pretextual Stop Ratio when Total Municipal Population for Year 2000 and Violent Crime are Controlled. Also Year 2000 Black-to-White Population Ratio is Interacting with B/W Growth (N = 113)

	B/W Pretext			
	Model 1		Model 2	
Independent Variables	b	Beta	b	Beta
B/W Growth	.0001 (.0002)	.050	.00008 (.0002)	.033
B/W 2000	.035 * (.014)	.366	.028 (.016)	.291
TotPop	2.74e-06 (7.80e-07)	.306	2.56e-06 ** (8.03e-06)	.286
Violcrime			.007 (.008)	.094
B/W Growth X B/W2000	-.000151 ** (.00004)	-.537	-.0001 ** (.0004)	-.483
R^2	. 19		.20	

Notes: B/W Pretext = Black-to-White pretextual stops for year 2002
B/W Growth = Black-to-White population ratio from 1990 to 2000
B/W 2000 = Year 2000 Black-to-White population ratio
TotPop = Total municipal population for year 2000
B/W Growth X B/W2000 = B/W Growth interacting with B/W 2000
Violcrime = Municipal violent crime recorded for year 2002

[a] Standard error in parentheses.
**p < .01 *p < .05
Source: State of Missouri Attorney General's 2002 Traffic Stop Data; 2002 Missouri Highway Patrol's UCR

When the municipal violent crime rate was controlled to determine the extent that relative Black population growth affected relative overall searches, warrant, drug, and traffic violation arrests, there were no significant effects on Black-to-White pretextual stops. However, the Black-to-White pretextual stop ratio significantly and positively had a main effect on overall Black-to-White searches ($b_{B/W\ pretext}$ = .481, p < .05), Black-to-White warrant arrests ($b_{B/W\ pretext}$ = 5.908, p < .001), and Black-to-White traffic violation arrests ($b_{B/W\ pretext}$ = 1.406, p < .001) see Table 8.2.

Table 8.2. Multivariate Regression: The Effect of Relative Black Population Growth from 1990 to 2000 on 2002 Black-to-White Overall Search Ratio, Outstanding Warrant, Drug, and Traffic Arrests Ratios when Total Municipal Population for Year 2000 and Municipal Violent Crime Rate are Controlled. Also Year 2000 Black-to-White Population Ratio and Year 2002 Black-to-White Pretextual Stop Ratios are Interacting with B/W Growth (N = 113)

	Dependent Variables							
	B/W Searches		B/W Warrant Arrest		B/W Drug Arrest		B/W Traffic Arrest	
Independent Variables	b	Beta	b	Beta	b	Beta	b	Beta
B/W Growth	-.001 (.0009)	-.224	-.002 (.004)	-.098	-.001 (.002)	-.141	-.0007 (.002)	-.078
B/W 2000	-.039 (.033)	-.205	-.164 (.158)	-.169	-.067 (.062)	-.201	-.077 (.063)	-.222
TotPop	4.15e-06 * (1.68e-06)	.235	-.00001 (8.06e-06)	-.152	1.68e.06 (3.13e-06)	.055	-8.74e-07 (3.20e-06)	-.027
B/W Pretext	.481* (.199)	.244	5.908 ** (.956)	.589	.686 (.371)	.200	1.406 ** (.379)	.389
Violcrime	-.025 (.016)	-.168	-.004 (.075)	-.004	.010 (.029)	.037	.008 (.030)	.027
B/W Growth X B/W2000	.00009 (.0001)	.166	.0007 (.0005)	.233	.0001 (.0002)	.121	.0003 (.0002)	.254
B/WPretext X B/WGrowth	.0005 (0006)	.056	.0005 (.003)	.031	-.00006 (.001)	-.010	.0001 (.001)	.022
R^2	.21		.29		.10		.14	

Notes: B/W Pretext = Black-to-White pretextual stop ratio for year 2002
B/W Growth = Black-to-White population ratio from 1990 to 2000
B/W 2000 = Year 2000 Black-to-White population ratio
TotPop = Total municipal population for year 2000
B/WGrowth X B/W2000 = B/W Growth interacting with B/W 2000
B/W Warrant Arrest = warrant arrest ratio for year 2002
B/W Drug Arrest = Drug arrest ratio for year 2002
B/W Traffic Arrest = traffic arrest ratio for year 2002
B/W Searches = Black-to-White search ratio for year 2002
B/WPretext X B/WGrowth = B/W pretext interacting with B/W Growth
Violcrime = Municipal violent crime recorded for year 2002

[a] Standard error in parentheses.
**p < .01 *p < .05
Source: State of Missouri Attorney General's 2002 Traffic Stop Data; 2002 Missouri Highway Patrol's UCR

Table 8.3 shows that controlling for violent crime rates also makes no difference with respect to the effect of relative Black population on Black-to-White citations issued. It does indicate that the arrest ratio continues to have a significant main effect on the citation ratio ($b_{B/W\ arrest}$ = .196, $p < .001$). While violent crime makes no discernable differences in the models, it cannot be ignored until other variables that might explain traffic stop outcomes are examined.

Table 8.3. Table 8.3. Multivariate Regression: The Effect of Relative Black Population Growth from 1990 to 2000 on 2002 Black-to-White Traffic Citation Ratio when Total Municipal Population for Year 2000 and Municipal Violent Crime Rate are Controlled. Also Year 2000 Black-to-White Population Ratio is Interacting with B/W Growth while Year 2002 Black-to-White Pretextual Stop Ratio is Interacting with Black-to-White Arrest Ratio (N = 113)

	Dependent Variable	
	B/W Citation	
Independent Variables	b	Beta
B/W Growth	.00002 (.0001)	.011
B/W 2000	.00008 (.010)	.002
TotPop	-1.00e-07 (4.93e-07)	-.020
B/W Pretext	.107 (.127)	.196
B/W Arrest	.196 ** (.072)	.812
Violcrime	.005 (.005)	.109
B/W Growth X B/W2000	-4.60e-06 (.00003)	-.030
B/W Pretext X B/WArrest	-.064 (.042)	-.660
R^2	.14	

Notes: B/W Pretext = Black-to-White pretextual stop ratio for year 2002
B/W Growth = Black-to-White population ratio from 1990 to 2000
B/W 2000 = Year 2000 Black-to-White population ratio
TotPop = Total municipal population for year 2000
B/W Growth X B/W2000 = B/W Growth interacting with B/W 2000
B/W Arrest = Overall arrest ratio for year 2002
B/WPretext X B/WArrest = B/W pretext interacting with B/W arrest
B/W Citation = Ratio of citations issued for year 2002
Violcrime = Municipal violent crime recorded for year 2002

[a] Standard error in parentheses.
**p < .01 *p < .05
Source: State of Missouri Attorney General's 2002 Traffic Stop Data; 2002 Missouri Highway Patrol's UCR

SOCIAL FACTORS THAT EXPLAIN PRETEXTUAL STOPS AND TRAFFIC STOP OUTCOMES

With economic inequality embedded in institutionalized discrimination, Table 8.4 describes the economic breakdown using the sociological variables to be analyzed. Consistent with most sociological research, the median household income for Blacks was lower than that of Whites. On average, Blacks had higher unemployment rates and were

two times more likely than Whites to live below the poverty level. Before the regression analyses were conducted, this researcher checked and found the following. It was discovered that Black-to-White unemployment and poverty ratio variables were highly correlated. Therefore this study used Black-to-White poverty and not unemployment because previous research cited in this dissertation used poverty to reference the percentage point that Black population causes fear. Multicollinearity was not a problem with the other chosen variables (see correlation matrix in Appendix D).

Table 8.4. Municipal Level Black and White Median Household Income, Black and White Unemployment Rate Percentage and Black and White Poverty Rate Percentage Per 1,000 Residents

	Median Household Income	Unemployment	Poverty
Blacks	$32,063	4	21
Whites	$42,111	3	10

N= 113 Municipalities Black/White Med Income = .76 Black/White Unemployment rate = 1.67
Black/White Poverty Rate = 2.09

Source: 2000 Missouri Census

Hypothesis 10 was partially accepted. After adding Black-to-White median household income, poverty, and municipal property values (socio-economic variables) to the models as controls, model 3 in Table 8.5 indicates that the interaction between relative Black population growth and the Black-to-White population ratio continues to affect the Black-to-White pretextual stop ratio as previously observed ($b_{B/WGrowth\ X\ B/W2000} = -.0001$, $p < .001$).

Table 8.5. Multivariate Regression: The Effect of Relative Black Population Growth from 1990 to 2000 on 2002 Black-to-White Pretextual stop Ratio when Total Municipal Population for Year 2000, Violent Crime, Black-to-White Income and Poverty, and Municipal Property Values are Controlled. Also Year 2000 Black-to-White Population Ratio is Interacting with B/W Growth (N = 113)

Dependent Variable	B/W Pretext					
	Model 1		Model 2		Model 3	
Independent Variables	b	Beta	b	Beta	b	Beta
B/W Growth	.0001 (.0002)	.050	.00008 (.0002)	.033	.0002 (.0002)	.067
B/W 2000	.035 * (.014)	.366	.028 (.016)	.291	.031 (.016)	.319
TotPop	2.74e-06 (7.80e-07)	.306	2.56e-06 ** (8.03e-06)	.286	2.43e-06 ** (7.71e-07)	.271
Violcrime			.007 (.008)	.094	.012 (.007)	.158
B/W Income					-.170 (.088)	-.165
B/W Poverty					.012 (.015)	.068
Propval					1.37e-06 (5.73e-07)	.211
B/WGrowth X B/W2000	-.000151 ** (.00004)	-.537	-.0001 ** (.0004)	-.483	-.0001 ** (.00004)	-.479
R^2	.20		.20		.29	

Notes: B/W Pretext = Black-to-White pretextual stops for year 2002
B/W Growth = Black-to-White population ratio from 1990 to 2000
B/W 2000 = Year 2000 Black-to-White population ratio
TotPop = Total municipal population for year 2000
B/WGrowth X B/W2000 = B/W Growth interacting with B/W 2000
Violcrime = Municipal violent crime recorded for year 2002
B/W Income = Black-to-White MHI ratio for year 2000
B/W Poverty = Black-to-White Poverty ratio for year 2000
Propval = Municipal property value

[a] Standard error in parentheses.
**p < .01 *p < .05
Source: State of Missouri Attorney General's 2002 Traffic Stop Data; 2002 Missouri Highway Patrol's UCR; 2000 Missouri Census

Black population growth had no effect on Black-to-White warrant, drug, or traffic violation arrests when the sociological variables were controlled even after the interaction measures were added. However, as presented in Table 8.6, Black-to-White pretextual stop ratios continued to significantly affect the likelihood that Black motorists were arrested on warrants ($b_{B/W\ pretext}$ = 5.600, $p < .001$) or for traffic violations ($b_{B/W\ pretext}$ = 1.244, $p < .001$) at higher rates than White motorists. Only the total municipal population size had a significant and positive association to Black-to-White searches when the

sociological variables were added and controlled in the model (b_{TotPop} = 4.21e-06, $p < .05$).

8.6. Multivariate Regression: The Effect of Relative Black Population Growth from 1990 to 2000 on 2002 Black-to-White Overall Search Ratio, Outstanding Warrant, Drug, and Traffic Arrests Ratios when Total Municipal Population for Year 2000, Municipal Violent Crime Rate, Black-to-White Income and Poverty, and Municipal Property Values are Controlled. Also Year 2000 Black-to-White Population Ratio and Year 2002 Black-to-White Pretextual Stop Ratios are Interacting with B/W Growth (N = 113)

	Dependent Variables							
	B/W Searches		B/W Warrant Arrest		B/W Drug Arrest		B/W Traffic Arrest	
Independent Variables	b	Beta	b	Beta	b	Beta	b	Beta
B/W Growth	-.001 (.0009)	-.234	-.002 (.004)	-.090	-.001 (.002)	-.146	-.0006 (.002)	-.074
B/W 2000	-.032 (.033)	-.169	-.164 (.159)	-.169	-.050 (.061)	-.150	-.072 (.064)	-.206
TotPop	4.21e-06 * (1.68e-06)	.238	-.00001 (8.03e-06)	-.147	2.03e.06 (3.11e-06)	.066	-6.47e-07 (3.22e-06)	-.020
B/W Pretext	.388 (.211)	.197	5.600 ** (1.008)	.558	.412 (.390)	.120	1.244 ** (.404)	.345
Violcrime	-.024 (.016)	-.159	.031 (.077)	.041	.019 (.030)	.074	.019 (.031)	.069
B/W Income	-.333 (.186)	-.164	.158 (.890)	.015	-.560 (.345)	-.158	-.145 (.356)	-.139
B/W Poverty	-.0007 (.032)	- .002	-.142 (.152)	-.079	.048 (.059)	.077	-.022 (.061)	-.034
Propval	1.03e-07 (1.22e-06)	.008	.0001 (5.82e-06)	.165	2.10e-06 (2.25e-06)	.094	3.29e-06 (2.33e-06)	.140
B/W Growth X B/W2000	.00007 (.00009)	.134	.0006 (.0004)	.230	.00008 (.0002)	.084	.0002 (.0002)	.241
B/W Pretext X B/W Growth	.0006 (.0006)	.187	.0005 (.003)	.029	.0002 (.001)	.027	.0002 (.001)	.032
R^2	.23		.32		.13		.16	

Notes: B/W Pretext = Black-to-White pretextual stop ratio for year 2002; B/W Growth = Black-to-White population ratio from 19990 to 2000; B/W 2000 = Year 2000 Black-to-White population ratio; TotPop = Total municipal population for year 2000; B/W Growth X B/W 2000 = B/W Growth interacting with B/W 2000; B/W Warrant Arrest = warrant arrest ratio for year 2002; B/W Drug Arrest = Drug arrest ratio for year 2002; B/W Traffic Arrest = traffic arrest ratio for year 2002; B/W Searches = Black-to-White search ratio for year 2002; B/W Pretext X B/W Growth = B/W pretext interacting with B/W Growth; Violcrime = Municipal violent crime recorded for year 2002; B/W Income = Black-to-White MHI ratio for year 2000; B/W Poverty = Black-to-White Poverty ratio for year 2000; Propval = Municipal property value

[a] Standard error in parentheses.
**p < .01 *p < .05
Source: State of Missouri Attorney General's 2002 Traffic Stop Data; 2002 Missouri Highway Patrol's UCR; 2000 Missouri Census

While population growth has no effect on Black-to-White citation ratios, the sociological variables did make a difference. Table 8.7 shows that in areas where the Black-to-White median household income ratio increases, the likelihood that Black motorists receive traffic citations significantly more than White motorists decreases ($b_{B/W\ income} = -.157$, $p < .001$). When Black poverty decreases relative to White poverty, Blacks are more likely than Whites to receive traffic citations ($b_{B/W\ poverty} = -.026$, $p < .001$). The interaction variables in this model were insignificant.

8.7. Table 8.3. Multivariate Regression: The Effect of Relative Black Population Growth from 1990 to 2000 on 2002 Black-to-White Traffic Citation Ratio when Total Municipal Population for Year 2000, Municipal Violent Crime Rate, Black-to-White Income and Poverty, and Municipal Property Values are Controlled. Also Year 2000 Black-to-White Population Ratio is Interacting with B/W Growth while Year 2002 Black-to-White Pretextual Stop Ratio is Interacting with Black-to-White Arrest Ratio (N = 113)

	Dependent Variable	
	B/W Citation	
Independent Variables	b	Beta
B/W Growth	.00003 (.0001)	.021
B/W 2000	.003 (.009)	.059
TotPop	-2.85e-07 (4.62e-07)	-.058
B/W Pretext	-.00002 (.00003)	- .117
B/W Arrest	.140 (.075)	.581
Violcrime	.003 (.004)	.069
B/W Income	-.157** (.057)	-.278
B/W Poverty	-.026** (.009)	-.263
Propval	-6.47e-07 (3.33e-07)	-.182
B/WGrowth X B/W2000	-4.60e-06 (.00003)	-.030
B/W Pretext X B/W Arrest	-.020 (.044)	-.205
R^2	.27	

Notes: B/W Pretext = Black-to-White pretextual stop ratio for year 2002; B/W Growth = Black-to-White population ratio from 1990 to 2000; B/W 2000 = Year 2000 Black-to-White population ratio; TotPop = Total municipal population for year 2000; B/WGrowth X B/W2000 = B/W Growth interacting with B/W 2000; B/W Arrest = Overall arrest ratio for year 2002; B/W Pretext X B/W Arrest= B/W pretext interacting with B/W arrest; B/W Citation = Ratio of citations issued for year 2002; Violcrime = Municipal violent crime recorded for year 2002; B/W Income = Black-to-White MHI ratio for year 2000; B/W Poverty = Black-to-White Poverty ratio for year 2000; Propval = Municipal property value

[a] Standard error in parentheses.
**p < .01 *p < .05
Source: State of Missouri Attorney General's 2002 Traffic Stop Data; 2002 Missouri Highway Patrol's UCR; 2000 Missouri Census

Controlling for Warrant, Drug, and Traffic Violation Arrests

Again acknowledging the fallacy that accompanies attempts to use traffic stop outcomes (warrant, drug, and traffic violation arrests) to explain pretextual stops, model 4 in Table 8.8 shows that when these outcome variables are controlled, along with the sociological variables, municipal violent crime rate, and total population, hypothesis 11 is partially accepted. Black population growth does have a significant effect on the likelihood that Black motorists experience pretextual stops at higher rates than White motorists. As expected, the effect of relative Black population growth on the Black-to-White pretextual stop ratio weakens at higher levels of the 2000 Black-to-White population ratio when all other variables are constant ($b_{B/WGrowth\ X\ B/W2000} = -.0001$, $p < .001$). However, this effect does not predict pretextual stops alone. Total municipal population size, Black-to-White warrant and traffic violation arrests also affect the likelihood that Black motorists are more likely than White motorists stopped pretextually. A note should be made that the search and citation outcome variables were not used as controls because logic does not present these as major motivating factors. While the motivation behind pretextual stops might be to search for other illegal activity, this study argues that officers are looking for the end result to be an arrest. In fact, if officers are looking to make an easy arrest for an outstanding traffic warrant, there is no motivation to search until the arrest is made. The same holds true with citations. The purpose for the pretextual stop is arguably to subsequently make an arrest. This study previously argued and found that there was no significant association between the likelihood of experiencing a pretextual stop and receiving a traffic citation. Citations were only

significantly related to the likelihood of being arrested on any charge as Table 8.3 indicates.

8.8. Multivariate Regression: The Effect of Relative Black Population Growth from 1990 to 2000 on 2002 Black-to-White Pretextual Stop Ratio when Total Municipal Population for Year 2000, Violent Crime, Black-to-White Income and Poverty, Municipal Property Values, and Traffic Stop Outcomes are Controlled. Also Year 2000 Black-to-White Population Ratio is Interacting with B/W Growth (N = 113)

Dependent Variable	B/W Pretext							
	Model 1		Model 2		Model 3		Model 4	
Independent Variables	b	Beta	b	Beta	b	Beta	b	Beta
B/W Growth	.0001 (.0002)	.050	.00008 (.0002)	.033	.0002 (.0002)	.067	.0001 (.0002)	.079
B/W 2000	.035 * (.014)	.366	.028 (.016)	.291	.031 (.016)	.319	.032 * (.014)	.329
TotPop	2.74e-06 (7.80e-07)	.306	2.56e-06 ** (8.03e-06)	.286	2.43e-06 ** (7.71e-07)	.271	2.32e-06 ** (6.69e-07)	.259
Violcrime			.007 (.008)	.094	.012 (.007)	.158	.007 (.007)	.086
B/W Income					-.170 (.088)	-.165	-.126 (.077)	-.123
B/W Poverty					.012 (.015)	.068	.016 (.013)	.087
Propval					1.37e-06 (5.73e-07)	.211	4.20e-06 (5.17e-07)	.065
B/W Warrant Arrest							.040 ** (.008)	.403
B/W Drug Arrest							-.005 (.023)	-.020
B/W Traffic Arrest							.045 * (.021)	.163
B/WGrowth X B/W2000	-.000151 ** (.00004)	-.537	-.0001 ** (.0004)	-.483	-.0001 ** (.00004)	-.479	-.0001 ** (.00004)	-.473
R^2	.20		.20		.29		.49	

Notes: B/W Pretext = Black-to-White pretextual stops for year 2002
B/W 2000 = Year 2000 Black-to-White population ratio
B/W Growth X B/W2000 = B/W Growth interacting with B/W 2000
B/W Income = Black-to-White MHI ratio for year 2000
Propval = Municipal property value
B/W Drug Arrest = Drug arrest ratio for year 2002
B/W Growth = Black-to-White population ratio from 1990 to 2000
TotPop = Total municipal population for year 2000
Violcrime = Municipal violent crime recorded for year 2002
B/W Poverty = Black-to-White Poverty ratio for year 2000
B/W Warrant Arrest = warrant arrest ratio for year 2002
B/W Traffic Arrest = traffic arrest ratio for year 2002

[a] Standard error in parentheses.
**p < .01 *p < .05
Source: State of Missouri Attorney General's 2002 Traffic Stop Data; 2002 Missouri Highway Patrol's UCR; 2000 Missouri Census

An important finding is that neither Black population growth nor Black-to-White pretextual stops is significantly related to the likelihood that Blacks are arrested at higher rates than Whites for drug violations. Recall in chapter 6 that the descriptive analyses show that Black motorists are arrested at higher rates than White motorists for drugs, but Whites are found with contraband at higher rates than Blacks. These results certainly raise questions concerning the inconsistencies with respect to drug arrests. Nevertheless, this study has provided a better understanding of what drives police to make pretextual stops of Black drivers at higher rates than White drivers which potentially leads to other traffic stop outcomes. Finding that relative Black population differences are an important variable to examine in racial profiling data, it is paramount to examine the extent to which racial profiling operates beyond individual officer behavior or police organization tolerance.

CHAPTER 9
THE IMPORTANCE OF RACE AND GOVERNMENT STRUCTURE

MUNICIPAL CLASSIFICATION AND RACIAL PROFILING

This study previously discussed the effects that size of the municipal population may have on how police and other government officials behave. Research question 13 is informed by the notion that police will only behave in ways they are allowed to act. In other words, if certain types of behaviors are covertly or even openly condoned, unequal justice might play a major role in law enforcement daily operations. Moreover, if cities are structured in ways that make negative police activity difficult to detect due to complex organizational styles, the potential for corruption might also consume daily operations. At minimum, this study argues that Black motorists are likely to experience differential treatment by police when larger citizen populations necessitate larger police organizations. These organizations become less manageable depending on how the city's organizational structure holds police managers accountable for their officer's actions.

Recall that the municipal classifications, such as class 1, 2, and 3 cities generally either required higher populations than class 4 and 5 municipalities, or they had no population requirements. With that being the case, higher populations in this study's targeted cities were indeed located in class 1, 2, and 3 cities. In the thirty-two class 1 cities, the mean population size was 58,120 and 28,763 when excluding the four cities with more than 100,000 citizens which skewed the mean. In the two class 2 cities, the mean population size was 17,474. In the thirty-three class 3 cities, the mean population size was 11,339. In the forty-two class 4 cities the mean population size was 11,653. And the mean population size in the four class 5 cities was 2,300.

After controlling for government classification type by introducing each to the regression models, this study tested hypotheses 12 and 13. The hypotheses stated that the pretextual and traffic stop outcome ratios respectively will increase when motorists travel through class 1 (constitutional charter rule) municipalities. However, the results in Table 9.1 show that hypothesis 12 must be rejected. The ratio of the pretextual stop only significantly decreased in class 3 cities. After observing effects on the other traffic stop outcomes, hypothesis 13 was also rejected. Class 2 municipalities showed a significant increase in the outstanding warrant arrests ratio, while class 5 cities showed a significant increase in the Black-to-White citation ratio. It should be noted that these two models are not shown because the number of observations were too small to make valid conclusions. There were only two class 2 and four class 5 municipalities in the data.

9.1. Multivariate Regression: The Effect of Relative Black Population Growth from 1990 to 2000 on 2002 Black-to-White Pretextual Stop Ratio when Total Municipal Population for Year 2000, Violent Crime, Black-to-White Income and Poverty, Municipal Property Values, Traffic Stop Outcomes and Municipal Government Structure are Controlled. Also Year 2000 Black-to-White Population Ratio is Interacting with B/W Growth (N = 113)

Dependent Variable	B/W Pretext									
	Model 1		Model 2		Model 3		Model 4		Model 5	
Independent Variables	b	Beta	b	Beta	b	Beta	b	Beta	b	Beta
B/W Growth	.0002 (.0001)	.082	.0001 (.0002)	.081	.0001 (.0002)	.048	.0001 (.0002)	.060	.0002 (.002)	.106
B/W 2000	.032 * (.014)	.329	.032* (.014)	.329	.030 * (.013)	.310	.030 * (.013)	.315	.032* (.014)	.335
TotPop	2.17e-06 ** (7.24e-07)	.242	2.32e-06 ** (6.72e-07)	.259	1.97e-06 ** (6.74e-07)	.220	2.48e-06 ** (6.67e-07)	.277	2.30e-06** (6.69e-07)	.257
Violcrime	.007 (.007)	.089	.007 (.007)	.087	.009 (.007)	.113	.007 (.007)	.091	.006 (.007)	.076
B/W Income	-.127 (.078)	-.123	-.127 (.078)	-.123	-.172 * (.078)	-.167	-.160 * (.079)	-.155	-.130 (.077)	-.126
B/W Poverty	.014 (.013)	.079	.016 (.013)	.087	.011 (.013)	.058	.016 (.013)	.090	.017 (.013)	.094
B/W Propval	4.09e-07 (5.19e-07)	.063	4.22e-07 (5.19e-07)	.065	1.80e-07 (5.18e-07)	.028	1.89e-07 (5.27e-07)	.029	3.00e-07 (5.32e-07)	.046
B/W Warrant Arrest	.041 ** (.008)	.407	.040 ** (.008)	.404	.039 ** (.008)	.388	.041** (.008)	.414	.045 ** (.010)	.457
B/W Drug Arrest	-.007 (.023)	-.023	-.005 (.023)	-.018	-.003 (.022)	-.012	-.004 (.023)	-.015	-.009 (.023)	-.029
B/W Traffic Arrest	.043 (.022)	.155	.045* (.021)	.162	.043 * (.021)	.157	.049 * (.021)	.176	.042 (.022)	.153
B/W Growth X B/W2000	-.000132 ** (.00004)	-.471	-.0001 ** (.0004)	-.473	-.0001 ** (.00004)	-.477	-.0001 ** (.00004)	-.486	-.0001** (.00004)	-.486
Class1	.051 (.090)	.047								
Class2			.065 (.271)	.017						
Class3					-.190 * (085)	-.176				
Class4							.145 (.081)	.143		
Class5									-.233 (.245)	-.087
R^2	.49		.49		.51		.50		.49	

Notes: B/W Pretext = Black-to-White pretextual stops for year 2002
B/W Growth = Black-to-White population ratio from 1990 to 2000
B/W 2000 = Year 2000 Black-to-White population ratio
TotPop = Total municipal population for year 2000
B/W Growth X B/W2000 = B/W Growth interacting with B/W 2000
Violcrime = Municipal violent crime recorded for year 2002
B/W Income = Black-to-White MHI ratio for year 2000
B/W Poverty = Black-to-White Poverty ratio for year 2000
Propval = Municipal property value
B/W Warrant Arrest = warrant arrest ratio for year 2002
B/W Drug Arrest = Drug arrest ratio for year 2002
B/W Traffic Arrest = traffic arrest ratio for year 2002
Class 1 = Constitutional Charter Rule
Class 2 = Legislative or Special Charter Government
Class 3 = Mayor/council; Mayor/City Administrator/council/manager
Class 4 = Mayor/Board of Alderman or Mayor/City Administrator
Class 5 = Villages (elected board of trustees)

[a] Standard error in parentheses.
**p < .01 *p < .05
Source: State of Missouri Attorney General's 2002 Traffic Stop Data; 2002 Missouri Highway Patrol's UCR; Missouri Municipal League; 2000 Missouri Census

At this point it is necessary to note that this study changed the disproportionality indices to reflect search outcomes derived from search populations and arrest outcomes derived from arrest populations. Recall the methods used for this dissertation were the population of drivers stopped in each racial category. After conducting the analyses, there were no significant changes to the results in respect to relative Black population increases. However, the Black-to-White pretextual stop ratio became significantly correlated to the Black-to-White mandatory search ratio. Additionally, when the overall search ratio is used as the denominator to obtain the rates for the various types of searches, Black motorists are less likely to be searched in all the categories. Recall that Table 6.2 indicates that Whites are less likely searched in each search category. The same is true when the total arrest ratio is used as the denominator to obtain the rates for the different types of arrests except for outstanding warrants. Black motorists remain more likely arrested for outstanding warrants regardless of the denominator used. Readers must be reminded that this method potentially misses some drivers stopped pretextually. Thus, the total number stopped remained the denominator for this writing.

The final hypothesis (14) substituted Black-to-White speed stop ratio (not shown) for Black-to-White pretextual stop ratio. As expected, hypothesis 14 was accepted because there were no significant associations in either model. In other words, when all other variables remained the same, motorists stopped for speeding might have been more a function of driving habits rather than police motivation. Officers have little incentive to produce further traffic stop outcomes during stops for speeding because the initial reason to stop is usually for the traffic violation and not for other underlying purposes.

POINT OF FEAR

Recall in chapters 2 and 4 the research indicated a tipping point that triggered reactions in response to Black population percentages. Testing Liska et al's. (1985) 20% threshold, the final hypothesis stated the following. The statistical means for the Black-to-White pretextual stop and the other traffic stop outcome ratios will be significantly higher in cities where Black residents accounted for 20% or more of the population than in cities where Blacks made up less than 20% of the population. Hypothesis 16 was partially accepted because a significant difference at this percentage point was only found in the pretextual stop data and not the other traffic stop outcome data. In municipalities where Blacks made up 20% or more of the population, the likelihood that Black motorists experienced pretextual stops at higher rates than White motorists was significantly higher than the Black-to-White pretextual stop ratios in cities where Blacks accounted for less than 20% of the population. Although the 20% mark is significant, it was important to find exactly when the difference occurred.

Further data analyses found that the actual population ratio tipping point was at .08 when Blacks made up approximately 7% and Whites made up approximately 91% of the population. Of the 113 municipalities in the sample, Blacks made up 7% or more of the population in 59 cities. After using two sample *t* tests, the results (not shown) reveal that the mean Black-to-White pretextual stop ratio is significantly .187 points higher in these municipalities than in the remaining 54 cities where Blacks make up less than 7% of the residents. In fact, the mean pretextual stop ratio was 1.60 as indicated in Table 9.2 and 1.41 in municipalities with less than 7% of Black residents. These results suggest that once the Black population reached 7% in a given municipality, Black citizen visibility

raised citizen fear and police caution. However, once the relative Black population size reached the .51 ratio point or higher, which had Blacks accounting for 31% or higher and Whites accounting for 61% or lower of the population, the differences compared to the relative Black population size in cities where Blacks accounted for less than 31% of the population became insignificant. The study further discovered that in locations where Blacks made up 80% or more of the population, Black motorists were less likely than White motorists to experience a pretexual stop although the difference was not significant.

Even though the 20% Black population mark shows no significant differences in Black-to-White search rates, a significant difference is found at the 76% threshold. For most municipalities in which Blacks do not make up 76% or more of the total population, the Black-to-White search ratio does not vary significantly across those municipalities, even though Blacks are searched at higher rates than Whites. The mean ratio for Black-to-White searches in cities where Black residents accounted for 76% or more of the population was .761 points lower than in cities where Blacks made up less than 76% of the population. In fact, as Table 9.2 indicates, the mean Black-to-White search rate was .957 in the cities where Blacks represented 76% or more of the population. This meant that Black motorists were less likely to be searched than White motorists. This difference was also statistically significant. In some of these cities, Blacks represented more than 90% of the municipal population while Whites made up 20% or lower of these populations. A note should be made that Black residents made up 76% or more of the municipal population in 10 of the 113 cities analyzed, so these results must be taken with caution.

Table 9.2 Two Sample *t* test Showing Mean Traffic Stop Outcome Ratio Differences by Black Population Percentage

Black Population Percentage	Blk Pop = or > 7%		Blk Pop < 7%		Black Pop = or > 76%		Black Pop < 76%	
Mean Ratio Category	mean	s.d.	mean	s.d.	mean	s.d.	Mean	s.d.
B/W Pretext	1.60*	.54	1.41	.40	1.58	.77	1.49	.46
B/W Searches	1.78	1.07	1.80	.87	.96 *	.75	1.87	.96
B/W Warrant Arrests	4.36	6.38	3.16	2.57	6.48	14.26	3.54	2.88
B/W Drug Arrests	1.72	1.72	1.88	1.69	.97	.57	1.88	1.75
B/W Traffic Arrests	1.95	1.93	2.35	1.61	2.04	1.15	2.15	1.84
B/W Citations	1.02	.28	.99	.27	.99	.02	1.01	.28
Number of Cities	59		54		10		103	

N= 113 Municipalities

NOTE: * Group mean in targeted municipality with the listed percentage point is significantly different from the mean for other cities at $p < .01$ $^{**}p < .01$ $^{*}p < .05$ difference

Source: State of Missouri Attorney General's 2002 Traffic Stop Data; 2000 Missouri Census

While the remainder of the outcome variables showed no significant differences when Black population percentages reached a certain point, there were, although few, times when Black motorists were less likely to experience a given traffic stop outcome. For instance, in cities where Black residents accounted for 76% or more of the population, Black drivers were significantly less likely than White drivers to be searched by the police as indicated earlier. This was also the case, although not significantly, with Black-to-White drug arrests and citations issued. The table also shows that Blacks were less likely than Whites to receive citations in cities where Black residents made up less than 7% of the municipal population. While minority group threat is limited in explaining when fear becomes essential to police practices, there is evidence that relative Black population increases are important factors to examine in racial profiling studies.

CHAPTER 10
CONCLUSION

DISCUSSION OF RESULTS

This study sought to explain differential treatment of Black motorists by the police through the minority group threat hypothesis. Efforts were made to better understand the dynamics behind the results to the extent that racial profiling played a major role in police behavior and was apparent in various cities in Missouri. But before the theory was tested, this study described the disparities that existed under certain circumstances between Black and White drivers.

Descriptive and Outcome Tests Conclusion

Initially, the descriptive results were not surprisingly different from much of the racial profiling research. Black motorists were certainly subjected to various police encounters at higher rates than White motorists in most accounts. Through methods using outcome tests, other than stops for speeding and contraband found, Blacks had higher rates for the various overall stops, searches, and arrests.

While the outcome tests for most of the variables were straightforward, the contraband variable was somewhat misleading. The recorded racial profiling data did not provide a clear distinction on the type of contraband found. For instance, by White drivers having a higher contraband hit rate, some would expect that White motorists should have been arrested for drugs at higher rates than Blacks. With the opposite being the case, this study adjusted by isolating variables that pertained to drugs alone. The contraband found variable grouped alcohol and drug related offenses together which might have driven the

White hit rate higher. After making these adjustments, it was discovered that when examining the entire population of motorists stopped, Black motorists were searched by police after a canine drug alert at a higher rate than White motorists. When taking the population of drivers arrested for drugs in consideration, White drivers were searched after a canine drug alert at higher rates than Black drivers. Again, assuming that arrests followed the drug alert searches coupled with findings that Black drivers had higher drug arrests rates, this study concludes that Black drivers are seemingly arrested for drugs at higher rates than Whites under other conditions not related to the canine alert. Given the high probability of Black drivers arrested for outstanding warrants and traffic violations, it is plausible to believe that drugs were being found during the search incident to the arrest. More importantly, to prevent researchers from having the urge to prematurely conclude that Black motorists were unfairly targeted for drug violations when contraband is found on White motorists at higher rates, there needs to be more clarity in the type of contraband found. Having described the outcomes, regression analyses were conducted to assess an explanation for such disparities.

Conclusions on Regression Analyses for Pretextual Stops and Traffic Outcomes

Bivariate regression made it difficult to conclude that minority group threat affected any of the traffic stop outcomes or pretextual stops. Additionally, relative Black population growth had no significant effect on violent crime rates or any of the sociological variables. However, while violent crime and municipal property values affected the pretextual stop variable, the pretextual stop variable was important in explaining some of the traffic stop outcomes.

Once interaction terms were introduced with all relevant control variables, Model 3 in Table 9.1 provided the best results. Minority group threat did become relevant depending on the size of the Black population in year 2000. It made sense that relative growth had no main effect on pretextual stops without taking relative Black population size into account. By only taking into account relative Black growth from 1990 to 2000 it would have implied that citizens and officers, in year 2000, were aware of the population dynamics in year 1990 to the extent that they had a reference point to base their perception of threat that would affect traffic stop outcomes in year 2002. Therefore, minority group threat was not able to provide the sole explanation for pretextual stop ratio increases. Because the effects on growth diminished once the relative size of the Black population reached a particular point, community accountability theory also had some explanatory power. Model 3 additionally showed that outstanding warrant and traffic violation arrests were significantly associated with Black-to-White pretextual stop ratios. Again, this study acknowledged the problem with time ordering because, as Table 8.6 illustrated, the pretextual stop ratio consistently affected the ratios for outstanding warrant and traffic violation arrests. Statistically speaking, this fatal fallacy of circularity presents serious problems and can be challenged by many scholars who strictly adhere to the rules of statistical analyses. On the other hand, it may take this type of drastic measure to provoke further discussion to pinpoint what motivates police action.

Finding that relative Black population growth and Black-to-White pretextual stop increases do not significantly affect the rate that Blacks are more likely than Whites arrested for drugs appears to indicate that other variables affect police decisions. Having found that canine alert searches are used at higher rates on Black drivers than White

drivers stopped, there could be speculation that White drug arrest rates might be higher if police use dog alerts at similar rates used on Blacks. Particularly, since the overall contraband hit rate indicates that Whites are found with contraband at higher rates than Blacks. As the contraband hit rates are derived from using searches as the benchmark, it is difficult to determine if drug arrests occur as a result of searches conducted during pretextual stops. Nevertheless, Blacks are still arrested for drugs at higher rates, which might indicate that police efforts to find drugs on Blacks result in drug arrests regardless of the type of stop. In fact, since Blacks are more likely arrested on warrants and traffic violations, mandatory searches might be the driving force behind higher Black drug arrest rates. However, it remains difficult to exclude the possibility that police indeed make pretextual stops because the potential to make outstanding warrant and traffic violation arrests are high, even if drugs are not found. This study also noted, as predicted, that racial profiling was imbedded in economic inequality. Model 3 in Table 9.1 furthermore showed that lower Black household incomes compared to higher White household incomes affected the pretextual stop ratio.

Bringing the study to the last point of regression, it was discovered that after controlling for government structure, class 3 cities showed a negative effect on pretextual stop ratios. When Black motorists traveled through class 3 cities, the likelihood that Black drivers were subjected to pretextual stops at higher rates than White drivers decreased. The form of government in class 3 cities ranged from the mayor/council or the mayor/city administrator/council/manager commission. Within these options, the Missouri Municipal League does not provide any further distinctions of the particular type of government structure in class 3 municipalities. However, it could be that the

strong mayor/council form of government dominates these types of cities. As indicated in chapter 4, this form of government enables the mayor to appoint and hold administrative officials accountable, since the officials are not elected by the voters (MML, 2004).

Finally, the research found that Black population growth affected the pretextual stop outcome when Black populations reached 7%. However, the significant effect diminished as the Black population percentages increased. While there was a significant difference in the Black-to-White pretextual stop rate between the two groups of municipalities, a 7% percent threshold, subjectively speaking, does not seem to account for much to make such a difference. This would assume that it does not take a large portion of Black residents in the population to cause fear and push more police activity. But as Quillian (2006) might suggest, the mere site of a Black person could subconsciously trigger old stereotypes including fear of victimization. Not only could one potentially fear for his/her own safety, but altruistic fear, that is fear for the safety of others, could also play an important role in the fear factor (Warr, 2000). There are some indications that altruistic fear could sometimes be stronger than self fear (Warr, 2000). These subconscious thoughts might cause police to watch Black motorists more carefully. The question is, are citizens fearful of such a small Black population, and are police acting altruistically for what they perceive to be in the interest of the community? Nevertheless, research must continue to attempt to explain these differences. The data found that there were no other significant tipping points except that Blacks became less likely than Whites to be searched in populations where Black residents accounted for 76% or more. Again, this seemed to point to the community accountability theory as an

explanatory variable for searches as officers might be reluctant to detain Black drivers further when Black representation in highly populated Black cities is evident.

The study set out to illustrate the complexities that make racial profiling accusations difficult to prove. After analyzing various conditions that confound traffic stops, the minority group threat hypotheses proved a valuable resource to making a determination on whether or not police are conducting race based stops. Recall in chapter 3 that this study would be guided by two viewpoints, the criminological and the economic perspectives. Understanding police behavior toward certain groups was the major focus of the criminological perspective. Its premise was that law enforcement should be proportional across groups based on criminal behavior of a given group. The economic perspective was concerned with the equality of outcomes. It also argued that law enforcement should be proportional across racial/ethnic groups depending on their crime involvement (Engel, 2008). To the extent that Blacks were more likely to experience pretextual stops at higher rates than Whites, this study contends the following. With the pretextual stop being a legal technique for officers, it is understandable, if police efficiency is measured by the number of arrests made, that officers will maximize arrests by stopping drivers whom they (police) believe are more likely to have outstanding warrants. To the extent that Black motorists are more likely wanted than White motorists, Black drivers place themselves in the position to be subjected to different outcomes during traffic stops. Finding a correlation between Black-to-White pretextual stops and traffic violation arrests potentially confirms that encounters between officers and Black drivers become awry, and police are poised and ready to arrest when authority is perceptually challenged. While population increases over time appeared consistent

with the minority group threat hypothesis up to a certain population percentage point, it may not necessarily have been fear that drove the pretextual stop. For citizens to pressure political authorities, citizens have to be able to access authorities to push for mobilization to stop perceived threats. That said, the consistent relationship found might have had more to do with the officer's motivation to make arrests. This seemed apparent when relative Black population size became large. The community accountability theory appeared to explain the pretextual stop in these circumstances. Nevertheless, pretextual stops appeared to be based on race and have allowed this research to conclude that racial profiling is an active part of police behavior in the targeted municipalities. These circumstances seemed to be less prevalent in class 3 cities where police chiefs are likely held responsible for rank and file officers. Researchers are now provided the opportunity to examine more closely the type of government rule in various municipalities and determine to what extent police behavior is held accountable.

LIMITATIONS

The Data

While an explicit theory was used throughout this dissertation, there were limitations to the data presented. Given that only Missouri traffic stop data for year 2002 was used, this study cannot sufficiently determine the effect of populations over time as it related to pretextual stop rates over time. The traffic stop data collection efforts were started fairly recently. It would be better to analyze the growth of minority populations within each municipality and the increase in pretextual stops and outcomes during this growth. Time

series studies may show that one variable may act on a dependent variable differently at different times when studying 1980, 1990, and 2000 data. Political climate changes, which affect fear of crime, could also be a factor over time (Jacobs and Carmichael, 2001). Additionally, after the 9/11 attacks on the World Trade Centers in New York, there are indications that racial profiling increased against Middle Eastern citizens. Results from the 2002 traffic stop data could have been in response to the 9/11 attacks in 2001, as increased police patrols may have put Black motorists at further risk of being targeted. In other words, a major event change during the period of relative Black population growth might flaw the results.

Additionally, it would be better to analyze the circumstances surrounding each pretextual stop within municipalities. For instance, the Missouri racial profiling data only recorded aggregated information in each municipality. However, there is no way to cross reference each stop and the outcomes of those stops without analyzing each racial profiling data form within each city. Cross referencing would show specific details, such as how many minorities did not have outstanding warrants and were not found in possession of contraband but were still searched. It would also show a more valid assessment of the connection between pretextual stops and the outcomes. This study had to rely on several assumptions which limit the conclusions, for instance, assumptions were made that arrests accompanied mandatory searches and drug dog alert searches.

Although the traffic stop data is official data, it comes from self reports by individual police accounts of each stop. Given the nature of self report data (Maxfield and Babbie, 1997), there could be inconsistencies and possibly improper reporting by officers

attempting to hide information. Officers may report the least intrusive activity in case racial profiling allegations are presented.

Although some studies report that minority officers are just as likely as White officers to treat minority drivers more harshly than White drivers (Buerger and Farrell, 2002), the Missouri data would better serve this study if it included the race of the officer on each traffic stop. Having knowledge of the racial makeup of each police department within a given municipality might also help, but it does not provide information specific to each stop. On the other hand, White officers dominate the informal networks, which shape the police subculture (us vs. them); therefore, the officer's race may not be much of a factor (Feagin and Bolton, 2004). Nevertheless, having knowledge of the officer's race would lend assistance to this study.

While this research finds patterns that might imply that racial profiling does exist in some circumstances, it still does not definitively determine whether racial motives are the driving forces surrounding pretextual stops and traffic outcomes. Nevertheless, this study presents patterns that cannot be ignored by criminal justice practitioners, criminologists, and sociologists.

The Methods

Outcome tests, particulary when analyzing search hit rates, have been challenged because, as Engel (2008) argues, there are underlying assumptions made about police and citizen behavior that are not consistent with what is known about decision making during police and citizen encounters. For instance, the search hit rate assumes that police discretion is similar across officers. It does not take into account how some

circumstances, such as time of day, location, and the driver's behavior might influence an officer's decision to stop and search a vehicle (Engel, 2008; Ridgeway, 2006). The same can be said for the outcome tests developed in this writing for outstanding warrants, drug arrests and traffic violation arrests. The appropriate numerators and denominators might be too simplistic to conclude validly that disparities in outcomes are racially driven without accounting for the variations in the behaviors of officers and citizens. Nevertheless, outcome tests are gaining recognition and have been considered by some a better measurement of racial profiling data than multivariate modeling (Engel, 2008; Ridgeway, 2006).

This study recognizes the limitations in multivariate regression. It acknowledges that omission of variables that may influence dependent variables is problematic and creates specification error when attempting to explain the variances in each model (Engel et al., 2006). For instance, neighborhood characteristics might have a significant effect on the likelihood that Black motorists will encounter pretextual stops. However, the existing racial profiling data does not provide neighborhood qualities. Furthermore, multivariate regression, in this study, is not able to assess police and citizen attitudes which might influence pretextual stops and outcomes (Ridgeway, 2006).

Generalizability

This study is certainly only applicable to the municipalities described. By testing the minority group threat hypothesis, it was imperative that this study used municipalities that had a sizable Black population. However, it recognizes that the Black population growth within a municipality may not be the only driving force behind racial profiling.

There are numerous cities that have very small, if any, minority populations. These cities may account for a large portion of the racial profiling allegations. While including more cities would provide for better statistical operations, it would diminish the ability to validly test the minority threat hypothesis.

Circularity

As previously mentioned, this study acknowledges that attempting to explain pretextual stops through warrant and traffic violation arrests is flawed when pretextual stops explain warrant and traffic violation arrests. Nevertheless, it is extremely important that researchers find methods to uncover the motives behind pretextual stops.

POLICY IMPLICATIONS

Change Racial Profiling Form

Some believe the pretextual stop should be banned. It has allowed racial profiling to become more problematic as officers are given the ability to subjectively select drivers for further scrutiny beyond the reason stopped (Crawford, 2000). This study acknowledges that the pretextual stop is a valuable tool for police to expose and arrest drug traffickers. However, the pretextual stop must be scrutinized more carefully. If there is genuine concern to eliminate racial profiling, a category on the racial profiling form should include whether the officer made the stop pretextually. With the pretexual stop remaining legal, officers with integrity should not resist the opportunity to allow their motives to be transparent when making a traffic stop. If minorities are made aware

of an officer's intent, minorities could potentially have greater confidence in the police, which should decrease racial profiling allegations. In fact, minority drivers might be willing to accept better the consequences of their own actions.

As part of Missouri's racial profiling initiative, supervisors are required to counsel officers who have questionable patterns of stopping minorities. It might be worth reporting the number of times supervisors counsel officers in each agency that reports to the Attorney General's office. In fact, the number of times officers are counseled can be taken into account when racial profiling statistics indicate a given department has high disproportionality indices. The department would certainly become accountable for their officers' actions.

Another change to the racial profiling form should be to provide separate categories that pertain to drugs and alcohol. Currently, drugs, alcohol, and paraphernalia are grouped together in one variable under contraband found. Drugs and alcohol are also grouped together under the category for reasons officers conduct searches. As previous studies have shown that Whites are more likely to violate liquor laws and arguably Blacks are more likely to be found with illicit drugs, it seems reasonable to separate the two for racial profiling studies to provide more explicit conclusions behind police behavior.

Changing the Ability to Arrest for Traffic Violations

While it remains legal for officers to arrest an individual for a traffic violation, this practice gives officers the opportunity to circumvent the constitution when citizens exercise their right to refuse a vehicle search. Additionally, when citizens question an

officer's authority, particularly during questionable stops, officers are implicitly allowed to retaliate by making an arrest for the traffic violation. Finding that Black motorists are subjected to these practices at higher rates than White motorists, this practice does nothing for race relations. This is certainly a great tool against drug carriers; however, as the utilitarian approach would suggest, we must concentrate more on respecting the rights of citizens in the absence of probable cause. In turn, citizens might be more willing to assist with apprehending law violators.

Changing the Way Outstanding Warrants are Handled

Although traffic tickets accumulate revenue for cities, this would only be beneficial if traffic violators pay their fines. This study has found that Blacks are more likely than Whites to have outstanding warrants, which this study assumes comes in large part from Blacks' failure to pay traffic fines. That said, it is reasonable to believe that a large portion of Blacks who fill the jail cells are there as a result of being arrested for omitting to pay traffic fines. Economic reasons might contribute to their failure to pay. Blacks, who are generally unemployed at higher rates than Whites, might feel that they have more time than money and might rather choose to spend time in jails. Furthermore, Blacks might feel defiantly reluctant to contribute their limited finances toward what they consider an unjust criminal justice system. The problem potentially exacerbates when Black populations increase. Arrests for outstanding warrants deplete municipal budgets while citizens' taxes continue to go toward housing these individuals.

By taking a financial approach, cities might save money by requiring individuals with outstanding warrants to rid themselves of the warrants by working at various sites where

paid employees would have been otherwise deployed. For instance, if municipalities pay employees to clean parks, this could become the responsibility of those with outstanding warrants, who should also be required to sign agreements that relieve cities from injury liabilities. Paid employees can be assigned to other essential locations. By providing this incentive, fewer individuals will spend time in jail, and tax funds may be used on other services.

While some cities participate in amnesty programs that give citizens the opportunity to wipe their slate clean of warrants, it can be taken a step further. Eliminate the ability for officers to arrest for outstanding or "failure to appear" warrants after making a traffic stop. Instead, with today's technology, issue a citation that restricts a person's driving privileges until the warrant is removed by that driver's payment of the appropriate fines or by that driver's work as previously explained. After an individual has been stopped a third time and has not taken provisions to remove the warrant, police car computers or dispatchers should indicate to officers that this is the third stop and that this driver has not satisfied warrant removal obligations. At that point, officers should have the option to make the arrest for the outstanding warrant.

With officers having knowledge that they cannot arrest on warrants until these requirements are met, officers may be less likely to conduct pretextual stops in hopes to make an arrest. In fact, the burden increases for officers to establish probable cause to arrest an individual after a traffic stop. It will also shift more burdens on drivers to take responsibility to avoid these types of arrests. Furthermore, it will provide racial profiling researchers with the ability to make better conclusions about the prevalence of racial profiling within communities.

REFERENCES

Alba, Richard D. John R. Logan, and Paul E. Bellair. 1994. Living With Crime: The Implications of Racial/Ethnic Differences in Suburban Location. Social Forces. 73 (2): 395-434.

Avakame, Edem F., James J. Fyfe, and Candace McCoy. 1999. *"'Did you call the police? What did they do?' An empirical assessment of Black's theory of mobilization of Law."* Justice Quarterly. 16 (4): 765-92.

Avakame, Edem F. and James J. Fyfe. 2001. *"Differential police treatment of male-on-female spousal violence: Additional evidence on the leniency thesis."* Violence Against Women. 7 (1): 22-45.

Barlow, David E. and Melissa Hickman Barlow. 2002. "Racial profiling: A survey of African American police officers." Police Quarterly. 5 (3): 334-58.

Batton, Candice and Colleen Kadleck. 2004. *"Theoretical and Methodological Issues in Racial Profiling Research."* Police Quarterly. 7 (1): 30-64.

Baumer, Eric P., Steven F. Messner, and Richard Rosenfeld. 2003. "*Explaining spatial variation in support for capital punishment: A multilevel analysis."* The American journal of sociology. 108 (4): 844-75.

Binder, Arnold and Peter Scharf. 1982. *"Deadly Force in Law Enforcement."* Crime and Delinquency Hackensack New Jersey. 28 (1): 1-23.

Bird, Robert C. 1996. *"An Examination of the Training and Reliability of the Narcotics Detection Dog."* Kentucky Law Journal. 85: 405-33.

Blalock, Hubert M. Jr. 1967. Toward a Theory of Minority-Group Relations. John Wiley and Sons. New York, NY.

Blumstein, Alfred. 1982. *"On the racial disproportionality of United States' prison populations."* Journal of Criminal Law and Criminology. 73 (3): 1-10.

Brandl, Steven G. Meghan S. Stroshine, and James Frank. 2001. *"Who are the Complaint-Prone Officers? An Examination of the Relationship Between Police Officers' Attributes, Arrest Activity, Assignment, and Citizens' Complaints About Excessive Force."* Journal of Criminal Justice. 29:521-29.

Bridges, George S. and Sara Steen. 1998. *"Racial Disparities in Official Assessments of Juvenile Offenders: Attributional Stereotypes as Mediating Mechanisms."* American Sociological Review. 63 (4): 554-70.

Brunson, Rod K. and Jody Miller. 2006. *"Young Black Men and Urban Policing in the United States."* British Journal of Criminology. 46; 613-40.

Buerger, Michael E. 2002. *"Supervising Challenges Arising from Racial Profiling Legislation."* Police Quarterly. 5 (3): 380-408.

Buerger, Michael E. and Amy Farrell. 2002. "*The evidence of Racial Profiling: Interpreting Documented and Unofficial Sources."* Police Quarterly. 5 (3): 272-305.

Bursik, Robert J. 1986. "Ecological stability and the dynamics of delinquency." In A. Reiss and M. Tonry (eds). *Communities and Crime*. (35-66). University of Chicago Press.

Cao, Liqun, James Frank, and Francis T. Cullen. 1996. "*Race, Community Context and Confidence in the Police*." American Journal of Police. 15 (1): 3-22.

Chamlin, Mitchell B. and Steven G. Brandl. 1998. *"A quantitative analysis of vagrancy arrests in Milwaukee, 1930-1972."* Journal of Crime and Justice. 21 (1): 23-40.

Chandek, Meghan S. 1999. *"Race, Expectations and Evaluations of Police Performance: An Empirical Assessment."* Policing: An International Journal of Police Strategies and Management. 22(4): 675-95.

Cordner, Gary, Williams, Brian, and Velasco, Alfredo. 2002. *Vehicle Stops in San Diego: 2001*. City of San Diego, CA. http://www.sandiego.gov/police/pdf/stoprpt.pdf

Correl, Joshua, Bernadette Parks, and Charles M. Judd. 2002. "*The police officer's dilemma: Using ethnicity to disambiguate potentially threatening individuals*." Journal of Personality and Social Psychology. 83 (6): 1314-29.

Cox, Stephen M. 2002. *"Guest Editor's Introduction."* Police Quarterly. 5 (3): 270-271.

Crawford, Charles. 2000. *"Race and Pretextualual Stops: Noise Enforcement in Midwest City."* Social Pathology: A Journal of Reviews. 6 (3): 213-227.

Davis, James R. 1990. A Comparison of Attitudes Toward the New York City Police. Journal of Police Science and Administration. 17 (4): 233-42.

Decker, Scott H. 1981. Citizen Attitudes Toward the Police: A Review of Past Findings and Suggestions for Future Policy. Journal of Police Science and Administration. 9 (1): 80-7.

Doerner, William G. and Tai-ping Ho. 1994 *"Shoot—don't shoot: police use of deadly force under simulated field conditions."* Journal of Crime and Justice. 17(2): 49-68.

Dohm, Richard R. 1995. "Municipal Government in Missouri." In R. Hardy, R. Dohm, and D. Leuthold (eds). *Missouri Government and Politics*. (345-357). University of Missouri Press. Columbia, MO.

Donohue, John J. and Steven D. Levitt. 2001. *"The Impact of Race on Policing and Arrests."* Journal of Law and Economics. 44: 367-394.

Donohue, Michael. 1983. "Halt...police! An analysis of the police use of deadly force in a large Midwestern city. Ann Arbor, MI: University Microfilms International, (Dissertation, Michigan State University.), 441 pp.

Dunham, Roger G. and Geoffrey P. Alpert. 1988. Neighborhood Differences in Attitudes Toward Policing: Evidence for a Mixed-Strategy Model of Policing in a Multi-Ethnic Setting. The Journal of Criminal Law and Criminology. 79 (2): 504-21.

Durand, Dana E. 1900. *Council Government Versus Mayor Government. II.* Political Science Quarterly. 15 (4): 675-709.

Durose, Matthew R., Erica L. Scmitt, and Patrick A. Langan. 2005. *Contacts between police and the public: Findings from the 2002 National Survey.* Washington, DC. U.S. Department of Justice.

Eitle, David L., Stewart J. D'Alessio, and Lisa Stolzenberg. 2002. *"Racial Threat and Social Control: A Test of the Political, Economic, and Threat of Black Crime Hypotheses."* Social Forces. 81 (2): 557-76.

Eitle, David L., Lisa Stolzenberg, and Stewart J. D'Alessio. 2005. *"Police organizational factors, the racial composition of the police, and the probability of arrest."* Justice Quarterly. 22 (1): 30-57.

Engel, Robin Shepard. 2003. *"Explaining suspects' resistance and disrespect toward police."* Journal of Criminal Justice. 31 (5): 475-92.

Engel, Robin S. 2008. "A Critique of the 'Outcome Test' in Racial Profiling Research." *Justice Quarterly* 25: 1-36.

Engel, Robin Shepard, Jennifer M. Calnon. 2004. *"Examining the influence of drivers' characteristics during traffic stops with police: Results from a national survey."* Justice Quarterly. 21 (1): 49-90.

Engel, Robin S. and Richard Johnson. 2006. "Toward a Better Understanding of Racial and Ethnic Disparities in Search and Seizure Rates." *Journal of Criminal Justice* 34: 605-17.

Engel, Robin Shepard, Jennifer M. Calnon, and Thomas J. Bernard. 2002. *"Theory and Racial Profiling: Shortcomings and Future Directions in Research."* Justice Quarterly. 19 (2): 249-73.

Engel, Robin. James Frank, Rob Tillyer, and Charles Klahm. 2006. Cleveland Division of Traffic Stop Data Study: Final Report. University of Cincinnati Division of Criminal Justice. 178 pp. Abstracts.

Erez, Edna. 1984. *"Self-defined "desert" and citizen's assessment of the police."* Journal of Criminal Law and Criminology. 75 (4): 1276-99.

Fagan, Jeffrey and Garth Davies. 2000. *Street Stops and Broken Windows: Terry, Race, and Disorder in New Yourk City*. Fordham Urban Law Journal. 28. 457-504.

Farrell, Amy, Jack McDevitt, and Michael E. Buerger. 2002. "*Moving Police and Community Dialogues Forward Through Data Collection Task Forces."* Police Quarterly. 5 (3): 359-379.

Feagin, Joe R. and Kenneth Bolton. 2004. Black In Blue: African American Police Officers and Racism. Routledge. New York, NY.

Fisk, James G. 1974. The police officer's exercise of discretion in the decision to arrest: relationship to organizational goals and societal values. Retrieved from internet on 08/01/07. www.-mdl.csa.com.ezproxy.umsl.edu/ids70view_record.php?id&recnum&1SID

Flippen, Chenoa. 2004. *"Unequal Returns to Housing Investments? A Study of Real Housing Appreciation among Black, White, and Hispanic Households.* Social Forces. 82 (4): 1523-51.

Frank, James, Steven G. Brandl, Francis T. Cullen, and Amy Stichman. 1996. *"Reassessing the Impact of Race on Citizens' Attitudes Toward the Police: A Research Note."* Justice Quarterly. 13 (2): 322-34.

Fyfe, James J. 1982. *"Blind Justice: Police Shootings in Memphis."* Journal of Criminal Justice and Criminology Chicago. 73 (2): 707-22

Gaines, Larry K. and Roger LeRoy Miller. 2006. Criminal Justice in Action: The Core 3rd edition. Thomson/Wadsworth. Belmont, CA.

Garner, Joel H., Christopher D. Maxwell, and Cedrick G. Heraux. 2002. *"Characteristics associated with the prevalence and severity of force used by the police."* Justice Quarterly. 19 (4): 705-46.

Geiger-Oneto, Stephanie and Scott. Phillips. 2003. *"Driving while Black: The role of race, sex, and social status."* Journal of Ethnicity in Criminal Justice. 1 (2):1-25.

Ginsburg, Allen J. 1968. *"Stopping for Traffic Violation Does not Justify Unlimited Search."* Journal of Criminal Law, Criminology & Police Science. 59 (2): 277.

Gordon, Harvey. 2004. *"The Use of Drug Dogs in Psychiatry."* The Psychiatrist. 28: 196-98.

Gross, Samuel R. and Katherine Barnes. 2002. "*Road work: Racial profiling and drug interdiction on the highway."* Michigan Law Review. 101 (3): 653-754.

Hagan, John and Celesta Albonetti. 1982. *"Race, Class, and the Perception of Criminal Injustice in America."* AJS. 88 (2): 329-55.

Hamilton, Lawrence C. 1998. Statistics with STATA 5. Duxbury Press. Pacific Grove, CA.

Hannon, Lance and James Defronzo. 1998. *"The truly disadvantaged, public assistance and crime."* Social Problems. 45 (3): 383-92.

Harris, David. 1997. *"Driving While Black and all Other Traffic Offenses: The Supreme Court and Pretextualual Traffic Stops."* Journal of Criminal Law and Criminology. 87: 544-82.

Harris, David. 1999. The Stories, the Statistics, and the Law: Why 'Driving While Black' Matters. Minnesota Law Review. 84: 265-325.

Hemmens, Craig and Daniel Levin. 2000. *"Resistance is futile: The right to resist unlawful arrest in an era of aggressive policing."* Crime and Delinquency. 46 (4): 472-96.

Henderson, Martha, Francis Cullen, Liqun Cao, Sandra Browning, and Renee Kopache. 1997. *"The Impact of Race on Perceptions of Criminal Injustice."* Journal of Criminal Justice 447-62.

Hernandez-Murillo, Ruben and John Knowles. 2004. "*Racial Profiling or Racist Policing? Bounds Tests in Aggregate Data*." International Economic Review. 45 (3): 959-89.

Hindelang, Michael J. Travis Hirchi, and Joseph G. Weis. 1979. *"Correlates of delinquency: the illusion of discrepancy between self-report and official measures."* American Sociological Review Washington DC, vol. 44, no. 6, pp. 995-1014.

Ho, Tai-ping. 1994. *"Individual and situational determinants of the use of deadly force: a simulation."* American Journal of Criminal Justice. 18 (1): 41-60.

Hurst, Yolander G. James Frank, and Sandra Lee Browning. 2000. *"The Attitudes of Juveniles Toward the Police: A Comparison of Black and White Youth."* Policing: An International Journal of Police Strategies and Management. 23 (1): 37-53.

Ingram, Jason R. 2007. *"The Effect of Neighborhood Characteristics on Traffic Citation Practices of the Police."* Police Quarterly. 10 (4): 371-93.

Institute on Race and Poverty. 2003. MINNESOTA STATEWIDE RACIAL PROFILING REPORTS. Minn. Retreived November 26, 2006 from http://www1.umn.edu/irp/mnrpreport.html

Jackson, Pamela Irving. 1989. Minority Group Threat, Crime, and Policing: Social Context and Social Control. New York: Praeger Press.

Jacob, Herbert. 1971. *"Black and White Perceptions of Justice in the City. Law and Society Review."* 6 (1): 69-89.

Jacobs, David and Robert M. O'Brien. 1998. *"The determinants of deadly force: a structural analysis of police violence."* American Journal of Sociology. 103 (4): 837-62.

Jacobs, David and Jason T. Carmichael. 2001. *"The politics of punishment across time and space: A pooled time-series analysis of imprisonment rates."* Social Forces. 80 (1): 61-89.

Jacobs, David and Jason T. Carmichael. 2002. *"The Political Sociology of the Death Penalty: A Pooled Time-Series Analysis."* American Sociological Review. 69: 109-31.

Johnson, Brian D. 2003. "*Racial and Ethnic Disparities in Sentencing Departures Across Modes of Conviction."* Criminology. 41 (2): 449-90.

Justia US Supreme Court Center. 1981. New York vs. Belton. Retrieved from internet on 01/13/2010. http://supreme.justia.com/us/453/454/case.html

Kane, Robert J. 2003. *"Social control in the metropolis: A community-level examination of the minority group-threat hypothesis."* Justice Quarterly. 20 (2): 265-95.

Kent, Stephanie L. and David Jacobs. 2005. Minority Threat and Police Strength from 1980 to 2000: A Fixed-Effects Analysis of Nonlinear and Interactive Effects in Large U.S. Cities. Criminology. 43 (3): 731-60.

Klinger, David A. 1996. *"More on Demeanor and Arrest in Dade County."* Criminology. 34: 61-82.

Klinger, David A. 1997. *"Negotiating Order in Police Work: An Ecological Theory of Police Response to Deviance."* Criminology 35 (2): 277-306.

Knowles, John, Nicola Persico, and Petra Todd. 2001. *"Racial Bias in Motor Vehicle Searches: Theory and Evidence."* Journal of Political Economy. 109 (1): 203-29.

Lamberth, John. (1996). A Report to the ACLU. New York: ACLU. Retrieved October 15, 2006 from http://www.aclu.org/court/lamberth.html

Langan, Patrick A., L.A. Greenfeld, S.K. Smith, Mathew R. Durose, and D.J. Levin. (2001). *Contacts between police and the public: Findings from the 1999 National Survey.* Washington, DC. U.S. Department of Justice.

Levin, Jack and Alexander R. Thomas. 1997. *"Experimentally Manipulating Race: Perceptions of Police Brutality in an Arrest: A Research Note."* Justice Quarterly. 14 (3): 577-86.

Liska, Allen E., John R. Logan, and Paul E. Bellair. 1998. *"Race and Violent Crime in the Suburbs."* American Sociological Review. 63 (1): 27-38.

Liska, Allen E, Michael B. Chamlin, and Mark D. Reed. 1985. "*Testing the economic production and conflict models of crime control*." Social Forces. 64 (1): 119-38.

Logan, John R and Brian J Stults. 1999. *"Racial Differences in Exposure to Crime: The City and Suburbs of Cleveland in 1990."* Criminology. 37 (2): 251-76.

Loewen, James W. 2006. Sundown Towns: A Hidden Dimension of American Racism. Powell's Books. Portland, Oregon.

Maloney, Thomas N. and Warren C. Whatley. 1995. "*Making the Effort: The Contours of Racial Discrimination in Detroit's Labor Market, 1920-1940*." Journal of Economic History. 55 (3): 465-93.

Mastrofski, Stephen D., Jeffrey B. Snipes, Roger B. Parks, et. al. 2000. *"The helping hand of the law: Police control of citizens on request."* Criminology. 38 (2): 307-42.

Mastrofski, Stephen D., Michael D. Reisig, and John D. McCluskey. *"Police Disrespect Toward the Public: vAn Encounter-Based Analysis."* Criminology. 40 (3): 519-51.

Maxfield, Michael G. and Earl Babbie. 1997. Research Methods for Criminal Justice and Criminology. 2cn ed. Belmont, CA. Wadsworth Publishing Company.

Meehan, Albert J. and Michael Ponder. 2002. *"How Roadway Composition Matters in Analyzing Police Data on Racial Profiling."* Police Quarterly. 5 (3): 306-33.

Minnesota Court of Appeals. 2004. State v. Beardemphl. State of Minnesota, Respondent, v. Joshuea Lee Beardemphl, Appellant No. A03-449. Retrieved from Internet on 10/01/2010. http://caselaw.findlaw.com/mn-court-of-appeals/1354870.html

Missouri Attorney General. 2008. Executive Summary. Retrieved from Internet on 02/12/2010. http://ago.mo.gov/racialprofiling/2002/racialprofiling2002.htm

Missouri Municipal League. 2004. Manual for Missouri Municipal Clerks. Missouri Municipal League Publisher.

Missouri Municipal League. 2009. Retrieved on 05/21/2009. http://www.mocities.com/UserFiles/Application(1).pdf

Mosher, Clayton J., Mitch Peckerill, Travis Pratt, and Nicholas Lovrich. 2008. *"The importance of context in understanding biased policing: state patrol traffic citations in Washington State."* Police Practice and Research. 9 (1): 43-57.

Moyer, Imogene L. 1982. *"Police responses to women offenders in a Southeastern city."* Journal of Police Science and Administration. 10 (4): 376-83.

Murty, Komanduri S., Julian B. Roebuck, and Joann D. Smith. 1990. *"The Image of the Police in Black Atlanta Communities."* Journal of Police Science and Administration. 17 (4): 250-57.

Myers, Martha A. 1990. "Black threat and incarceration in postbellum Georgia." Social Forces. 69 (2): 373-93.

Neapolitan, Jerry. 1992. *"Poverty, race, and population concentrations: interactive associations to violent crime."* American Journal Of Criminal Justice. 16 (2): 143-53.

Nixon, Jay. 2003. 2002 Annual Report: Missouri Traffic Stops. Jefferson City: Missouri Attorney General's Office.

Novak, Kenneth J. 2004. *"Disparity and Racial Profiling in Traffic Enforcement."* Police Quarterly. 7 (1): 65-96.

Oramas, Major Nelson. 1994. Drug Enforcement in Minority Communities: The Minneapolis Police Department 1985-1990. Police Executive Research Forum, Washington, DC. http://www.umsl.edu:2437/htbin/ids65/procskel.cgi

Parker, Karen, F., Brian J. Stults, and Stephen K. Rice. 2004. *"Racial threat, concentrated disadvantage and social control: Considering the macro-level sources of variation in arrests."* Criminology. 43 (4): 1111-1134.

Peek, Charles W., George D. Lowe, and Jon Pl Alston. 1981. *"Race and Attitudes Toward Local Police: Another Look."* Journal of Black Studies. 11 (3): 361-74.

Persico, Nicola and Petra Todd. 2008. *"The hit rates test for racial bias in motor vehicle Searches."* Justice Quarterly. 25 (1): 37-53.

Peterson, Ruth D. and Lauren J. Krivo. 2005. *"Macrostructural Analyses of Race, Ethnicity, and Violent Crime: Recent Lessons and New Directions for Research."* Annual Review of Sociology. 31: 331-56.

Petrocelli, Matthew, Alex R. Piquero, and Michael R. Smith. 2003. "*Conflict theory and racial profiling: An empirical analysis of police stop data."* Journal of Criminal Justice. 31 (1): 1-11.

Polivka, Lawrence J. 1983. Public Perceptions of Police Functions and Behavior. University of Michigan. University Microfilms International. Ann Arbor, MI.

Powell, Dennis D. 1990. *"A study of police discretion in six southern cities."* Journal of Police Science and Administration. 17 (1): 1-7.

Priest, Thomas B. and Deborah Brown Carter. 1999. *"Evaluations of Police Performance in an African American Sample."* Journal of Criminal Justice. 27 (5): 457-65.

Quillian, Lincoln. 2006. "New Approaches to Understanding Racial Prejudice and Discrimination." Annual Review of Sociology. 32: 299-328.

Rahn, Wendy M. and Thomas J. Rudolph. 2005. A Tale of Political Trust in American Cities. The Public Opinion Quarterly. 69 (4): 530-560.

Reamey, Gerald S. 1983. "Reevaluating the Vehicle Inventory." Criminal Law Bulletin. 19 (4): 325-48.

Rent, George S. and Dennis J. Lord. 1978. *"Neighborhood Racial Transition and Property Value Trends in a Southern Community."* Social Science Quarterly. 59 (1): 51-59.

Ridgeway, Greg. 2006. *"Assessing the Effect of Race Bias in Post-traffic Stop Outcomes Using Propensity Scores."* Journal of Quantitative Criminology. 22 (1): 1-29.

Rogers, Tammi S. and Scott L. Johnson. 2000. *"Less than lethal: An analysis of the impact of oleoresin capsicum."* International Journal of Police Science and Management. 3 (1): 55-67.

Rojek, Jeff, Richard Rosenfeld, and Scott Decker. 2004. *"The Influence of Driver's Race on Traffic Stops in Missouri."* Police Quarterly. 7 (1): 126-47.

Rosenfeld, Richard, Jeff Rojek, and Scott Decker. Forthcoming. "*Age Matters: Race Differences in Police Searches of Young and Older Male Drivers."* Journal of Research in Crime and Delinquency.

Ryan, Oswald. 1911. The Commission Plan of City Government. The American Political Science Review. 5 (1): 38-56.

Ruddell, Rick and Martin G. Urbina. 2004. "*Minority threat and punishment: A cross-national analysis."* Justice Quarterly. 21 (4): 903-31.

Sampson, Robert J. and Dawn Jeglum Bartusch. 1998. *"Legal Cynicism and (Subculture) Tolerance of Deviance: The Neighborhood Context of Racial Differences."* Law and Society Review. 32 (4): 777-801.

Sampson, Robert J. and Jacqueline Cohen. 1988. *"Deterrent effects of the police on crime: a replication and theoretical extension."* Law & society review. 22 (1): 163-189.

Sampson, Robert J. and Jeffrey Morenoff. 2006. Durable Inequality: Spatial Dynamics, Social Processes, and the Persistence of Poverty in Chicago Neighborhoods. Pp. 176-203 In *Poverty Traps*, edited by Samuel Bowles, Steve Durlauf, and Karla Hoff. Princeton, N.J.: Princeton University Press.

Schuck, Amie M., 2004. *"The masking of racial and ethnic disparity in police use of physical force: The effects of gender and custody status."* Journal of Criminal Justice. 32 (6): 557-64.

Schuerman, L. and S. Kobrin. 1986. "Communities and Careers in Crime." In A. Reiss and M. Tonry (eds). *Communities and Crime*. (35-66). University of Chicago Press.

Scmitt, Erica Leah, Patrick A. Langan, and Mathew R. Durose. 2002. Characteristics of drivers stopped by police, 1999. Washington, DC: U.S. Bureau of Justice Statistics.

Sealock, Miriam D. and Sally S. Sampson. 1998. *"Unraveling bias in arrest decisions: the role of juvenile offender type-scripts."* Justice Quarterly. 15 (3): 427-57.

Shannon, Lyle W. 1978. Assessing the Relationship of Adult Criminal Careers to Juvenile Careers. Retrieved August 23, 2007. www-mi5.csa.ezproxy.umsl.edu/ids70/view_record.php?id=3&recnum=0&SID=…

Siegel, Larry J. 2005. Criminology: The Core. 2nd edition. Thomson/Wadsworth. Belmont, CA.

Sloan, John J. 1994. *"The correlates of campus crime: an analysis of reported crimes on and university campuses."* Journal of Criminal Justice. 22 (1): 51-61.

Smith, Brad W. and Malcolm D. Holmes. 2003. *"Community accountability, minority threat, and police brutality: An examination of civil rights criminal complaints."* Criminology, 41 (4):1035-1063.

Smith, Douglas A., Christy A. Visher, and Laura A. Davidson. 1984. *"Equity and discretionary justice: the influence of race on police arrest decisions."* Journal of Criminal Law and Criminology. 75 (1): 234-49.

Smith, Michael R. and Matthew Petrocelli. 2001. *"Racial Profiling? A Multivariate Analysis of Police Traffic Stop Data."* Police Quarterly. 4 (1): 4-27.

Smith, Michael R., Matthew Makarios, and Geoffrey P. Alpert. 2006. *"Differential Suspicion: Theory Specification and Gender Effects in the Traffic Stop Context."* Justice Quarterly. 23 (2): 271-95.

Son, In Soo, Mark S. Davis, and Dennis M. Rome. 1998. *"Race and Its Effect On Police Officers' Perceptions of Misconduct."* Journal of Criminal Justice. 26 (1): 21-28.

Sorensen, Jonathan R., James W. Marquart, and Deon E. Brock 1993. *"A comparison of factors related to the killing of felons by police and citizens."* Journal of Police and Criminal Psychology. 9 (1): 20-33.

Sparger, Jerry R. and David J. Giacopossi. 1992. *"Memphis revisited: a reexamination of police shootings after the Garner decision."* Justice Quarterly. 9 (2): 211-25.

Steward, D. and M. Totman. (2005). Don't mind if I take a look, do ya? An examination of consent searches and contraband hit rates at Texas traffic stops. Retrieved November 24 from http://www.umsl.edu:3468/ids70/results.php?SID=620a494239bc457dfcd077dec3360d3a&id=11

Stolzenberg, Lisa., Stewart J. D'Alessio, and David L. Eitle. 2004. *"A multilevel test of racial threat theory."* Criminology. 42 (3): 673-98.

Taylor, Marylee C. 1998. *"How White Attitudes Vary With the Racial Composition of Local Populations: Number Count."* American Sociological Review. 63 (4): 512-35.

Tomaskovic-Devey, Donald, Marcinda Mason, and Matthew Zingraff. 2002. *"Looking For the Driving While Black Phenomena: Conceptualizing Racial Bias Processes and Their Associated Distributions."* Police Quarterly. 7 (1): 3-29.

Tonry, Micheal. 1995. *Malign Neglect: Race, Crime, and Punishment in America*. New York, NY: Oxford University Press.

Terrill, William and Michael D. Reisig. 2003. *"Neighborhood Context and Police Use of Force."* Journal of Research in Crime and Delinquency. 40 (3): 291-321.

US Census Bureau. (2000). Decennial census. Summary File 3: *2000.* Washington, DC: US Department of Commerce.

Walker, Samuel. 2001. *"Searching for the Denominator Problems with Police Traffic Stop Data and an Early warning System Solution."* Justice Research and Policy. 3 (1): 63-95.

Walker, Samuel, Cassia Spohn, and Miriam Delone. 2004. The Color Of Justice: Race, Ethnicity, and Crime in America. 3rd ed. Thomson and Wadsworth. Belmont, CA.

Walsh, William F. 1986. *"Patrol officer arrest rates: a study of the social organization of police work."* Justice Quarterly. 3(3): 271-90.

Warr, Mark. 2000. Public Perceptions of the Reactions to Crime. Pp.13-32, In C*riminology: A Contemporary Handbood*, 3rd edition. edited b*y* by Joseph F. Sheley, Belmont, CA.: Wadsworth.

Weitzer, Ronald. 1999. *"Citizens' Perceptions of Police Misconduct: Race and Neighborhood Context."* Justice Quarterly. 1: 819-46.

Weitzer, Ronald. 2000. *"Racialized Policing: Residents' Perceptions in Three Neighborhoods."* Law and Society Review. 34: 129-55.

Weitzer, Ronald J. and Steven A. Tuch. 1999. *"Race Class and Perceptions of Discrimination by the Police."* Crime and Delinquency. 45:494-507.

Welch, Robert Ellis. 1989. The Distribution of Urban Police Services: Who Gets What and Why. http://www.umsl.edu:2437/htbin/ids65/procskel.cgi

Wilson, W.J. 1978. The Declining Significance of Race. Chicago: University of Chicago Press.

Wilson George, and Roger Dunham. 2001. *"Race, Class, and Attitudes Toward Crime Control: The Views of the African American Middle Class."* Criminal Justice and Behavior An International Journal. 28 (3): 259-78.

Withrow, B. L. 2004. "*Driving while different: A potential theoretical explanation for race-based policing*." Criminal Justice Policy Review. 15 (3): 344-64.

Zingraff, Matthew T., H. Marcinda Mason, William R. Smith, Donald Tomaskovic-Devey, Patricia Warren, Harvey L. McMurray, and C. Robert Fenlon. 2000.

Appendix A

COMMUNITY ACCOUNTABILITY HYPOTHESIS: AN ALTERNATIVE EXPLANATION

While this research focused on minority population growth as a potential explanation of racial profiling, it was discovered that smaller minority populations were also correlated to differential treatment of Black drivers. The community accountability hypothesis states that the characteristics of a police department, i.e. racial, ethnic, and gender make-up, "foster police-minority tensions and promote police violence" (Smith and Holmes, 2003: p. 1037). It proposes that minority representation in police departments helps break down barriers between White police and minority citizens. As the street-level behavior of police entails a high degree of discretion and low visibility, police are able to use extralegal factors in their decisions to handle whom they consider a threat to their well being (Smith and Holmes, 2003). White police are not held accountable for their actions against minorities when influential minorities are not present in the community or police agencies (Smith and Holmes, 2003). The assumption is that White officers are more sensitive to minority concerns and likely sensitive to the perceptions other minority officers may have on White officer's actions (Smith and Holmes, 2003).

Smith and Holmes (2003) note studies that examine individual level observational data of police brutality. They generally showed that minority recruitment is not related to Black's attitudes toward police. They also revealed that the race of an officer had no effect on the use of excessive force (2003). However, they did acknowledge that there were few instances of police brutality in the research they conducted. Several of the

studies incorporated citizen observation methods when citizens would accompany police on duty, observe police behavior, and record instances of police brutality to researchers (Smith and Holmes, 2003). Officers having knowledge that observers are watching might alter an officer's behavior, which might have otherwise been more forceful during encounters with minority citizens. This certainly created a problem with the validity of Smith's and Holmes' (2003) study.

Smith and Holmes also use structural level analysis to test community accountability by relying on official citizen complaints of police brutality (2003). There is little research that support or challenge the validity of the community accountability hypothesis; however, Smith and Holmes did analyze previous structural level studies that used variables similar to their research. They found that the structural studies contradicted community accountability's proposition (2003). For instance, increased numbers of minorities and females on police forces and the presence of citizen review boards either had no effect or actually increased the likelihood of citizen excessive force complaints (2003). The contradictions were explained by the likelihood that minorities, particularly Blacks, patrolled more dangerous neighborhoods where there were large portions of Black citizens and more violent behavior. Officers are then inclined to use more coercive force which might foster greater numbers of complaints (Smith and Holmes, 2003). Also, where citizen review boards exist, citizens are more confident in the complaint system and therefore are more inclined to report instances of brutality (Smith and Holmes, 2003). Because of these issues, and after juxtaposing community accountability and minority group threat, Smith and Holmes (2003) leaned toward the

latter as a better explanation for police excessive force while they acknowledged the former's lesser explanatory capability.

While the community accountability hypothesis focuses on explaining police brutality, it is quite likely that it also explains lower levels of police actions such as traffic stops and other outcomes. In fact, disproportionate minority stops might be more pronounced in areas where minority representation in the community and police agencies is nearly non-existent. For instance, Dr. James Loewen (2006) reports on how "sundown towns" still exist in mostly the Midwestern United States. A sundown town is a location where Blacks are forbidden to travel or even exist. This unwritten rule disadvantages Blacks to the extent that they would very likely be stopped and harassed by the police when traveling these locations (Loewen, 2006).

Appendix B:
Racial Profiling form B

VEHICLE STOP INFORMATION

DATE ____ ____ ____ TIME ____ ○AM ○PM
MM DD YY

1 VIOLATION RESULTING IN STOP (✔ all that apply)

☐MOVING ☐EQUIPMENT ☐LICENSE ☐INVESTIGATIVE

If a "moving" violation, (✔ category of violation)

☐SPEED ☐LANE VIOLATION ☐FOLLOW TOO CLOSE
☐CVE ☐FAIL TO SIGNAL ☐OTHER MOVING VIOLATION

2 RESULT OF STOP (✔ all that apply)

☐CITATION ☐WARNING ☐NO ACTION ☐OTHER

3 DRIVER'S RACE/MINORITY STATUS (based **only** on visual observation)

☐WHITE ☐BLACK/AFRICAN-AMERICAN ☐HISPANIC/LATINO
☐AMERICAN INDIAN/ALASKA NATIVE ☐ASIAN ☐OTHER/UNKNOWN

4 DRIVER'S AGE ☐UNDER 18 ☐18-29 ☐30-39 ☐40+

5 DRIVER'S GENDER ☐MALE ☐FEMALE

6 LOCATION OF STOP

☐INTERSTATE HIGHWAY ☐U.S. HIGHWAY ☐STATE HIGHWAY
☐COUNTY ROAD ☐CITY STREET ☐OTHER

7 WAS A SEARCH INITIATED? ☐YES ☐NO

If YES, probable cause/authority for search (✔ all that apply)

☐CONSENT ☐INVENTORY ☐DRUG/ALCOHOL ODOR
☐INCIDENT TO ARREST ☐PLAIN VIEW CONTRABAND ☐OTHER
☐DRUG DOG ALERT ☐REASONABLE SUSPICION-WEAPON (TERRY STOP)

8 WHAT WAS SEARCHED?

☐DRIVER ONLY ☐PROPERTY ONLY ☐DRIVER AND PROPERTY

9 DURATION OF SEARCH

☐0-15 MINUTES ☐16-30 MIN. ☐31+ MIN.

10 WAS CONTRABAND DISCOVERED? ☐YES ☐NO

If YES, type of contraband (✔ all that apply)

☐DRUGS/ALCOHOL/PARAPHERNALIA ☐CURRENCY
☐WEAPON ☐STOLEN PROPERTY ☐OTHER

11 WAS DRIVER ARRESTED? ☐YES ☐NO

12 IF ARREST MADE, CRIME/VIOLATION ALLEGED (✔ all that apply)

☐OUTSTANDING WARRANT ☐OFFENSE AGAINST PERSON
☐RESISTING ARREST ☐DRUG VIOLATION ☐DWI/BAC
☐PROPERTY CRIME ☐TRAFFIC VIOLATION ☐OTHER

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VEHICLE STOP INFORMATION

DATE ____ ____ ____ TIME ____ ○AM ○PM
MM DD YY

1 VIOLATION RESULTING IN STOP (✔ all that apply)

☐MOVING ☐EQUIPMENT ☐LICENSE ☐INVESTIGATIVE

If a "moving" violation, (✔ category of violation)

☐SPEED ☐LANE VIOLATION ☐FOLLOW TOO CLOSE
☐CVE ☐FAIL TO SIGNAL ☐OTHER MOVING VIOLATION

2 RESULT OF STOP (✔ all that apply)

☐CITATION ☐WARNING ☐NO ACTION ☐OTHER

3 DRIVER'S RACE/MINORITY STATUS (based **only** on visual observation)

☐WHITE ☐BLACK/AFRICAN-AMERICAN ☐HISPANIC/LATINO
☐AMERICAN INDIAN/ALASKA NATIVE ☐ASIAN ☐OTHER/UNKNOWN

4 DRIVER'S AGE ☐UNDER 18 ☐18-29 ☐30-39 ☐40+

5 DRIVER'S GENDER ☐MALE ☐FEMALE

6 LOCATION OF STOP

☐INTERSTATE HIGHWAY ☐U.S. HIGHWAY ☐STATE HIGHWAY
☐COUNTY ROAD ☐CITY STREET ☐OTHER

7 WAS A SEARCH INITIATED? ☐YES ☐NO

If YES, probable cause/authority for search (✔ all that apply)

☐CONSENT ☐INVENTORY ☐DRUG/ALCOHOL ODOR
☐INCIDENT TO ARREST ☐PLAIN VIEW CONTRABAND ☐OTHER
☐DRUG DOG ALERT ☐REASONABLE SUSPICION-WEAPON (TERRY STOP)

8 WHAT WAS SEARCHED?

☐DRIVER ONLY ☐PROPERTY ONLY ☐DRIVER AND PROPERTY

9 DURATION OF SEARCH

☐0-15 MINUTES ☐16-30 MIN. ☐31+ MIN.

10 WAS CONTRABAND DISCOVERED? ☐YES ☐NO

If YES, type of contraband (✔ all that apply)

☐DRUGS/ALCOHOL/PARAPHERNALIA ☐CURRENCY
☐WEAPON ☐STOLEN PROPERTY ☐OTHER

11 WAS DRIVER ARRESTED? ☐YES ☐NO

12 IF ARREST MADE, CRIME/VIOLATION ALLEGED (✔ all that apply)

☐OUTSTANDING WARRANT ☐OFFENSE AGAINST PERSON
☐RESISTING ARREST ☐DRUG VIOLATION ☐DWI/BAC
☐PROPERTY CRIME ☐TRAFFIC VIOLATION ☐OTHER

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Appendix C
DATA FILES DECRIPTION

File by File Description

File Name: Missouri Minority Threat Data

File Structure

File Dimensions: Number of Cases: 113

Number of Variables: 316

Type of File: STATA

Variable Description

Variable List

Variable Name	Variable Label
agency	corresponding number assigned in attorney general's report
agenname	Name of municipal police department
phone	police department's telephone number
census1	total residential driving age population
whpopulas	census 2000 total white population
whresdpop	total white residential driving age population
blpopulas	census 2000 total black population
blresdpop	total white residential driving age population

bwpopratio	Black-to-White population ratio in corresponding municipality
totstop	total number of stops
moving	total number of stops as a result of a moving violation
equipment	total number of stops as a result of equipment violations
license	total number of stops as a result of a license violations
speed	total number of stops as a result of speeding
laneviol	total number of stops as a result of a lane violation
followclose	total number of stops as a result of following to close
failtosig	total number of stops as a result of Filing to signal
cve	commercial vehicle enforcement
othervio	total number of stops as a result of other violations
citation	total number of stops resulting in a citation issued
warning	total number of stops resulting in a warning issued
whstops	total number of white drivers stopped
blstops	total number of black drivers stopped
under18	total number of drivers under age 18
age18to29	total number of drivers between ages 18 and 29
age30to39	total number of drivers between ages 30 and 39
age40pl	total number of drivers ages 40 and above
male	total number of male drivers
female	total number of female drivers

interstate	total number of drivers stopped on the interstate
ushwy	total number of drivers stopped on United States highways
statehwy	total number of drivers stopped on Missouri State highways
countyrd	total number of drivers stopped on Missouri county roads
citystreet	total number of drivers stopped on the corresponding municipal street
location	total number of stops at other locations
stopsearch	total number of stops resulting in a search
searchdri	total number of stops resulting in search of driver
searchprop	total number of stops resulting in search of property
inventor	total number of searches as part of a vehicle inventory
drugalch	total number of searches with drugs or alcohol found
incident	total number of searches as part of the incident to the arrest
plainview	total number of searches as result of illicit contraband in reasonable suspicion weapon
reason	terry search drugdog
drugdog	drug dog alert search
probable	probable cause search
whitepoverty	total number of whites living in poverty divided by whites in population
blackpoverty	total number of blacks living in poverty divided by blacks in population

whitesearch	total number of whites stopped that were searched
blacksearch	total number of blacks stopped that were searched
blsearind	number of blacks searched divided by blacks stopped
whsearind	number of whites searched divided by whites stopped
btowsearratio	blacks searched divided by whites searched
btowpoverty	black poverty rate divided by white poverty rate
violentcrime	violent crime over total population times 1000 (rate)
proptycrime	property crime over total population times 1000 (rate)
totcrime	violent and property crime over total population times 1000 (rate)
popratchange	Black-to-White population rate change from 1990 to 2000
blpopchange	raw black population change from 1990 to 2000
blackwarrant	total number of blacks stopped who were wanted
whitewarrant	total number of whites stopped who were wanted
blackconsent	total number of blacks searched who consented
whiteconsent	total number of whites searched who consented
blconsind	black consent rate: total number of blacks that consented to search over the number of blacks searched
whconsind	white consent rate: total number of whites that consented to search over the number of whites searched
btowconratio	black consent rate divided by white consent rate

blcontrab	total number of blacks searched who had contraband
whcontrab	total number of whites searched who had contraband
blcontraind	black contraband rate: total number of blacks with contraband over the number of blacks searched
whcontrabind	white contraband rate: total number of whites with contraband over the number of whites searched
bwcontratio	black consent rate divided by white consent rate
blunemployed	total number of blacks unemployed
whunemployed	total number of whites unemployed
bunemplind	black unemployment rate: total number of blacks unemployed divided by the total number of blacks in the population of a given municipality
wunemplind	white unemployment rate: total number of whites unemployed divided by the total number of whites in the pulation of a given municipality
bwunempratio	black unemployment rate divided by white unemployment rate
blincidarr	number of blacks stopped who were taken into custody incident to the arrest
whincidarr	number of whites stopped who were taken into custody incident to the arrest
bincidarrind	black incident to arrest rate: total number of blacks taken into custody incident to the arrest divided by the total number of blacks stopped
wincidarrind	white incident to arrest rate: total number of whites taken into custody incident to the arrest divided by the total number of whites stopped
bwincarratio	black incident to arrest rate divided by white incident to arrest

blackincome	black median household income
whiteincome	white median household income
btowincome	Black-to-White median household income for year 1999
blpretext	total number of pretext stops: blacks stopped for faulty equipment, license violation, following too closely, failing to signal, and lane violations
whpretext	total number of pretext stops: whites stopped for faulty equipment, license violation, following too closely, failing to signal, and lane violations
blpretin	black pretext stop rate: black pretext stops divided by black stops
whpretin	white pretext stop rate: black pretext stops divided by black stops
btowpreratio	black pretext stop index divided by white pretext stop index
blspeedind	total number of blacks stopped for speeding divided by total number of blacks stopped
whspeedind	total number of blacks stopped for speeding divided by total number of blacks stopped
btowspdratio	black speed index divided by white speed index
propvalue	median value for owner occupied housing units
TotPop	Total Population in each municipality size small, median, or large municipal population size category
size1	dummy variable 1 = large population and 0 = other size
size2	dummy variable 1 = medium population and 0 = other size
size3	dummy variable 1 = small population and 0 = other size

class	municipal classification type
Wpropop	proportion of whites in total driving age population
Wpropstop	proportion of whites stopped from total stops
Wstopindex	proportion of white driving population divided by proportion white stops
Bproppop	proportion of Blacks in total driving age population
Bpropstop	proportion of Blacks stopped from total stops
Wstopindex	proportion of Black driving population divided by proportion white stops
BWstopratio	Black-to-White stop rate
bcontraind	Black contraband hit rate = Black contraband found divided by black searches
wcontraind	White contraband hit rate = White contraband found divided by black searches
percblack	percent of total population who is Black
percwhite	percent of total population who is White
bwpopperct	Black-to-White population percentage ratio
nintybpoperc	1990 Black population percentage
nintywpoperc	1990 White population percentage
ninetybwperc	1990 Black-to-White population percentage ratio
perchng1990	Black-to-White population percent ratio change from 1990 to 2000
blperchnge	Black population percent change from 1990 to 2000
bpop40	Dummy variable: 1 = 40 percent or more Blacks living in municipality
bpoptwen1	Dummy variabe1e: 1 = municipalities where Blacks are less than 20 percent of the municipal population

bpoptwen2	Dummy variable: 1 = municipalities where Blacks are 20 percent or more of the population
bpopthrt1	Dummy variabe1e: 1 = municipalities where Blacks are less than 30 percent of the municipal population
bpopthrt2	Dummy variable: 1 = municipalities where Blacks are 30 percent or more of the population
bpop6	Dummy variable: 1 = 6 percent or more Blacks living in municipality
bpopsix1	Dummy variabe1e: 1 = municipalities where Blacks are less than 6 percent of the municipal population
bpopsix2	Dummy variable: 1 = municipalities where Blacks are 6 percent or more of the population
bpop77	Dummy variable: 1 = 77 percent or more Blacks living in municipality
bpop771	Dummy variabe1e: 1 = municipalities where Blacks are less than 77 percent of the municipal population
bpop772	Dummy variable: 1 = municipalities where Blacks are 77 percent or more of the population
bpop76	Dummy variable: 1 = 76 percent or more Blacks living in municipality
bpop761	Dummy variabe1e: 1 = municipalities where Blacks are less than 76 percent of the municipal population
bpop762	Dummy variable: 1 = municipalities where Blacks are 76 percent or more of the population
bpop75	Dummy variable: 1 = 75 percent or more Blacks living in municipality
bpop751	Dummy variabe1e: 1 = municipalities where Blacks are less than 75 percent of the municipal population
bpop752	Dummy variable: 1 = municipalities where Blacks are 75 percent or more of the population
totpretxt	total number of pretext stops for Whites and Blacks

totsearch	Total number of Blacks and Whites searched
totarrest	Total number of Blacks and Whites arrested
blarrestprop	Number of Blacks arrested divided by number of total arrests
bldrgarrind	Black drug arrest index: Black drug proportion divided by Black arrest proportion
wharrestprop	Number of Whites arrested divided by number of total arrests
whdrgarrind	White drug arrest index: Black drug proportion divided by White arrest proportion
totdrugarr	Total drug arrest black and white drivers
whdrgarrprop	number of whites arrested for drugs divided by total drug arrests
bldrgarrprop	number of blacks arrested for drugs divided by total drug arrests
bwdrgarrindx	black drug arrest index divided by white drug arrest index
blarrestindx	black arrest proportion divided by proportion blacks stopped
wharrestindx	white arrest proportion divided by proportion whites stopped
bwaresind	black arrest index divided by white arrest index
totoutwarr	total number of outstanding warrant arrests
bloutwprop	number of blacks arrested for outstanding warrants divided by total outstanding warrant arrests
whoutwprop	number of whites arrested for outstanding warrants divided by total outstanding warrant arrests
blwarindex	black warrant arrest proportion divided by proportion blacks stopped

whwarindex	white warrant arrest proportion divided by proportion whites stopped
bwwarindex	black warrant arrest index divided by white warrant arrest index
tottrafarr	total number of traffic violation arrests
bltrafarprop	number of blacks arrested for traffic violation divided by total traffic violation arrests
bltrafarindx	black traffic violation arrest proportion divided by proportion blacks stopped
whtrafarprop	number of whites arrested for traffic violation divided by total traffic violation arrests
whtrafarindx	white traffic violation arrest proportion divided by proportion whites stopped
bwtrafarindx	black traffic violation arrest index divided by white traffic violation arrest index
mandsearch	total number of mandatory searches
consent	total number of consent searches
totcondis	total number of contraband found indicators but not necessarily an arrest
drugcondis	drug/alcohol/paraphernia contraband discovered
bldiscsear	total number of black discretionary searches
whdiscsear	total number of white discretionary searches
blmandsear	total number of black mandatory searches
whmandsear	total number of white mandatory searches
bldisearprop	black discretionary search divided by total discretionary searches
bldissearind	black discretionary search proportion divided by proportion blacks stopped

whdisearprop	white discretionary search divided by total discretionary searches
whdissearind	white discretionary search proportion divided by proportion whites stopped
blmansearprop	black mandatory search divided by total mandatory searches
blmansearind	black mandatory search proportion divided by proportion blacks stopped
whmanearprop	white mandatory search divided by total mandatory searches
whmansearind	white mandatory search proportion divided by proportion whites stopped
blspeed	total number of blacks stopped for speeding
class 1	dummy variable 1 = class 1 municipality
class 2	dummy variable 1 = class 2 municipality
class 3	dummy variable 1 = class 3 municipality
class 4	dummy variable 1 = class 4 municipality
class 5	dummy variable 1 = class 5 municipality
blcitation	total number of blacks issued a citation
blcitprop	black citations issued divided by total citations issued
whcitation	total number of whites issued a citation
whcitprop	white citations issued divided by total citations issued
whpropstop	total whites stopped divided by total stops
blpropstop	total blacks stopped divided by total stops
blcitind	black citations issued proportion divided by proportion blacks stopped

whcitind	white citations issued proportion divided by proportion whites stopped
bwcitindex	black citation issued index divided by white citation issued index
ratioXchang	year 2000 black to white population percentage ratio times black to white percentage change from 1990 to 2000
prechng	black to white pretextual stop ratio times black to white percentage change from 1990 to 2000
wharrind	white arrest proportion divided by proportion whites stopped
blarrind	black arrest proportion divided by proportion blacks stopped
bwarrind	black arrest index divided by white arrest index
arrpret	black to white arrest times black to white pretextual stop index
bwararrest	total black warrant arrests
bdrgarrest	total black drug arrests
bresarst	total black arrest for resisting
bpersarst	total black arrest for crime against person
bdwi	total black arrest for DWI
bproperty	total black arrest for property crime
btraffic	total black arrest for traffic violation
botherarst	total black arrest for other crime
warrant	total white warrant arrests
drug	total white drug arrests
resists	total white arrest for resisting

person	total white arrest for crime against person
dwi	total white arrest for DWI
property	total white arrest for property crime
traffic	total white arrest for traffic violation
other	total white arrest for other crime
spdchng	black to white speed stop ratio times black to white percentage change from 1990 to 2000
bwpop20	generating dummy variable 1 = municipality with 20% or more black residents
bwpoptwen1	dummy variable 0 = municipality with less than 20% black residents
bwpoptwen2	dummy variable 1 = municipality with 20% or more black residents
bwpop10	generating dummy variable 1 = municipality with 10% or more black residents
bwpopten1	dummy variable 0 = municipality with less than 10% black residents
bwpopten2	dummy variable 1 = municipality with 10% or more black residents
bwpop8	generating dummy variable 1 = municipality with 8% or more black residents
bwpopeght1	dummy variable 0 = municipality with less than 8% black residents
bwpopeght2	dummy variable 1 = municipality with 8% or more black residents
bwpop7	generating dummy variable 1 = municipality with 7% or more black residents
bwpopsev1	dummy variable 0 = municipality with less than 7% black residents

bwpopsev2	dummy variable 1 = municipality with 7% or more black residents
bwpop75	generating dummy variable 1 = municipality with 75% or more black residents
bwpop751	dummy variable 0 = municipality with less than 75% black residents
bwpop752	dummy variable 1 = municipality with 75% or more black residents
bwpop50	generating dummy variable 1 = municipality with 50% or more black residents
bwpop501	dummy variable 0 = municipality with less than 50% black residents
bwpop502	dummy variable 1 = municipality with 50% or more black residents
bwpop95	generating dummy variable 1 = municipality with 95% or more black residents
bwpop951	dummy variable 0 = municipality with less than 95% black residents
bwpop952	dummy variable 1 = municipality with 95% or more black residents
bwpop80	generating dummy variable 1 = municipality with 80% or more black residents
bwpop801	dummy variable 0 = municipality with less than 80% black residents
bwpop802	dummy variable 1 = municipality with 80% or more black residents
bwpopsxteen	generating dummy variable 1 = municipality with 16% or more black residents
bwpopsxteen1	dummy variable 0 = municipality with less than 16% black residents

bwpopsxteen2	dummy variable 1 = municipality with 16% or more black residents
bwpop30	generating dummy variable 1 = municipality with 30% or more black residents
bwpop301	dummy variable 0 = municipality with less than 30% black residents
bwpop302	dummy variable 1 = municipality with 30% or more black residents
bwpop40	generating dummy variable 1 = municipality with 40% or more black residents
bwpop401	dummy variable 0 = municipality with less than 40% black residents
bwpop402	dummy variable 1 = municipality with 40% or more black residents
bwpop39	generating dummy variable 1 = municipality with 39% or more black residents
bwpop391	dummy variable 0 = municipality with less than 39% black residents
bwpop392	dummy variable 1 = municipality with 39% or more black residents
bwpop42	generating dummy variable 1 = municipality with 42% or more black residents
bwpop421	dummy variable 0 = municipality with less than 42% black residents
bwpop422	dummy variable 1 = municipality with 42% or more black residents
bwpop47	generating dummy variable 1 = municipality with 47% or more black residents
bwpop471	dummy variable 0 = municipality with less than 47% black residents

bwpop472	dummy variable 1 = municipality with 47% or more black residents
bwpop48	generating dummy variable 1 = municipality with 48% or more black residents
bwpop481	dummy variable 0 = municipality with less than 48% black residents
bwpop482	dummy variable 1 = municipality with 48% or more black residents
bwpop51	generating dummy variable 1 = municipality with 51% or more black residents
bwpop511	dummy variable 0 = municipality with less than 51% black residents
bwpop512	dummy variable 1 = municipality with 51% or more black residents
bwpop76	generating dummy variable 1 = municipality with 76% or more black residents
bwpop761	dummy variable 0 = municipality with less than 76% black residents
bwpop762	dummy variable 1 = municipality with 76% or more black residents
bwpop88	generating dummy variable 1 = municipality with 88% or more black residents
bwpop881	dummy variable 0 = municipality with less than 88% black residents
bwpop882	dummy variable 1 = municipality with 88% or more black residents
bwpop92	generating dummy variable 1 = municipality with 92% or more black residents
bwpop921	dummy variable 0 = municipality with less than 92% black residents

bwpop922	dummy variable 1 = municipality with 92% or more black residents
bwpop5	generating dummy variable 1 = municipality with 5% or more black residents
bwpop51	dummy variable 0 = municipality with less than 5% black residents
bwpop52	dummy variable 1 = municipality with 5% or more black residents
bwpop69	generating dummy variable 1 = municipality with 69% or more black residents
bwpop691	dummy variable 0 = municipality with less than 69% black residents
bwpop692	dummy variable 1 = municipality with 69% or more black residents
bwpop6	generating dummy variable 1 = municipality with 6% or more black residents
bwpop061	dummy variable 0 = municipality with less than 6% black residents
bwpop062	dummy variable 1 = municipality with 6% or more black residents
bwpop1	generating dummy variable 1 = municipality with 1% or more black residents
bwpop011	dummy variable 0 = municipality with less than 1% black residents
bwpop012	dummy variable 1 = municipality with 1% or more black residents
bwpop77	generating dummy variable 1 = municipality with 77% or more black residents
bwpop771	dummy variable 0 = municipality with less than 77% black residents

bwpop772	dummy variable 1 = municipality with 77% or more black residents
bwpop53	generating dummy variable 1 = municipality with 53% or more black residents
bwpop531	dummy variable 0 = municipality with less than 53% black residents
bwpop532	dummy variable 1 = municipality with 53% or more black residents
bwpop61	generating dummy variable 1 = municipality with 61% or more black residents
bwpop611	dummy variable 0 = municipality with less than 61% black residents
bwpop612	dummy variable 1 = municipality with 61% or more black residents
bwpop70	generating dummy variable 1 = municipality with 70% or more black residents
bwpop701	dummy variable 0 = municipality with less than 70% black residents
bwpop702	dummy variable 1 = municipality with 70% or more black residents
blconprop	Black consent search divided by total consent search
whconprop	White consent search divided by total consent search
blsearprop	Black total search divided by total search
whsearprop	White total search divided by total search
newbconind	new Black consent search proportion divided by Black search proportion
newwconind	new White consent search proportion divided by White search proportion

nwbwconind	new Black consent index divided by new White consent index
newbdiscind	new Black low-discretion search proportion divided by Black search proportion
newwdiscind	new White low-discretion search proportion divided by White search proportion
nwbwdiscind	new Black low-discretion index divided by new White low-discretion index
newbmanind	new Black mandatory search proportion divided by Black search proportion
newwmanind	new White mandatory search proportion divided by White search proportion
nwbwmanind	new Black mandatory index divided by new White mandatory index
newbwarind	Black warrant arrest proportion divided by Black arrest proportion
newwwarind	White warrant arrest proportion divided by White arrest proportion
nwbwwarind	new Black warrant arrest index divided by new White warrant arrest index
nwbdrugarind	Black drug arrest proportion divided by Black arrest proportion
nwwdrugarind	White drug arrest proportion divided by White arrest proportion
nwbwdrgarind	new Black drug arrest index divided by new White drug arrest index
newbtrafind	Black traffic violation arrest proportion divided by Black arrest proportion
newwtrafind	White traffic violation arrest proportion divided by White arrest proportion
nwbwtrafind	new Black traffic violation arrest index divided by

new White traffic violation arrest index

Appendix D
CORRELATION MATRIX

	btowse~o	btowpo~y	violen~e	btowin~e	btowpr~o	btowsp~o	propva~e	TotPop	bwpopp~t	per~1990	bwdrga~x	bwwari~x	bwtrfa~x	bwcitindex	bwarrindx
btowseratio	1.0000														
btowpoverty	0.0714	1.0000													
violentcrime	-0.1351	-0.0664	1.0000												
btowincome	-0.2503	-0.1513	0.0715	1.0000											
btowpreratio	0.2953	0.1134	0.1948	-0.2093	1.0000										
btowspdratio	-0.2139	-0.0418	-0.2162	0.0966	-0.5316	1.0000									
propvalue	0.1417	0.1027	-0.2886	-0.1633	0.1958	-0.0277	1.0000								
TotPop	0.2972	0.0042	0.1692	-0.0758	0.3126	-0.1218	-0.0101	1.0000							
bwpopperct	-0.2028	-0.1226	0.3507	0.1069	-0.0848	-0.1476	-0.1762	-0.0814	1.0000						
perchnge1990	-0.1496	-0.0804	0.1467	0.1098	-0.0770	0.0263	-0.1382	-0.1031	0.2163	1.0000					
bwdrgarrindx	0.2977	0.1386	0.0053	-0.2338	0.2211	-0.0257	0.1620	0.1458	-0.1434	-0.1702	1.0000				
bwwarindex	0.2257	-0.0035	0.0425	-0.1122	0.5079	-0.1840	0.2621	0.0341	-0.0377	-0.0638	0.2823	1.0000			
bwtrfarindx	0.1829	0.0226	0.0424	-0.1330	0.3504	-0.1800	0.2017	0.1037	-0.0514	-0.0476	0.1994	0.3260	1.0000		
bwcitindex	0.2688	-0.1552	0.0645	-0.276	0.1168	-0.1097	-0.0959	0.0069	0.0007	0.0030	0.1469	0.0619	0.0508	1.0000	
bwarrindx	0.5796	0.2193	-0.0698	-0.1932	0.5279	-0.2379	0.2367	0.1740	-0.0987	-0.0802	0.4620	0.4930	0.4214	0.3137	1.0000

Appendix E
STATISTICAL ANALYSIS COMMANDS FOR STATA SOFTWARE

Bivariate Regression

Command = reg *dependent variable independent variable*

Multiple Regression

Command = reg *dependent variable independent variable independent variable*

Bar graph

Command = graph *variable variable variable variable*, bar

Create Dummy Variable for Government Type

Command = tabulate *variable* (government type)
tabulate *variable*, generate (*variable*)
describe
list place *variable variable1 – variable5*

Create Dummy Variable to Check Differences in Municipal Population Size

Command = generate newvariable = 0 if *variable* < percent
Replace *newvariable* = 1 if *variable* > = percent & *variable*! =.
Tab *newvariable*, gen (*newvariable*)
Desc *newvairable1-newvariable2*

Two Sample *t* test

Command = reg *newvariable variable*

Test for Skewness

Command for table = sktest *variable*

Command for graph = graph *variable*, xlabel ylabel bin (8) norm

Command to transform skewed data = boxcox *variable*, nolog level (95) gen (newvariable)

Command to graph skewed data = graph *newvar*, bin (8) ylabel xlabel norm t1 (transformed data)