PREDICTING RACE-SPECIFIC DRUG ARRESTS: THE UNDEREXPLORED ROLE OF POLICE AGENCIES

By

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Abstract

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This study builds on research that explains *why* differences in drug arrest rates exist across space and by race, and sheds light on *how* these differences are produced. By identifying police organizational arrangements and practices associated with race-specific drug arrest rates, this research highlights the influence law enforcement agencies have on producing drug arrests, and identifies potential mechanisms that help to explain how disproportionate drug arrest rates across space and by race are produced. Using data gathered from the Law Enforcement Management and Administration Statistics: 2000 Sample Survey of Law Enforcement Agencies, the Uniform Crime Reporting Program Data: Arrests by Age, Sex, and Race 1999, 2000, and 2001, and the 2000 decennial Census for city-level demographic information, findings demonstrate that police organizational arrangements and practices influence drug arrest rates.

Key findings from this study indicate that (1) the presence of specialized drug unit personnel and the practice of police agencies supplementing their budgets with drug asset forfeitures are significantly associated with higher drug arrest rates. The positive associations are twice as strong on the black population as the white population; (2) indicators of bureaucratic

conditions of structural control, structural complexity and officer diversity are associated with drug arrest rates; and, (3) the practice of police agencies supplementing their budget with drug asset forfeitures is not significantly associated with black or white drug trafficking arrest rates, but is significantly and positively associated with black and white drug possession arrest rates. This indicates that drug asset forfeiture programs may not be achieving their originally intended goals of reducing drug crime by attacking the economic viability of the drug trade (i.e., drug trafficking), and provides preliminary evidence that drug asset forfeiture programs incentivize police agencies to target low level drug users, and minority drug users more specifically.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER ONE

INTRODUCTION

The United States has some of the most punitive drug policies of all Western developed countries. There are 100,000 more people incarcerated for nonviolent drug offenses in the United States than there are people incarcerated for all offenses combined in the European Union, despite there being 100 million more citizen members of the European Union (Schiraldi, Holman, and Beatty 2000; Mosher and Akins 2013). While these numbers alone are staggering, that there are clear racial differences among those who are officially processed is even more noteworthy.

Previous research demonstrates that people of color, most notably African American men, are arrested at disproportionately high rates for violating drug laws. In the years spanning 1980 – 2007, blacks were arrested for drug offenses at rates relative to their population size 2.8 to 5.5 times higher than whites (Mauer and King 2007), and a recent ACLU report finds that African Americans are 3.7 times more likely to be arrested for marijuana possession than whites, despite similar rates of use (Edwards, Bunting, and Garcia 2013). While approximately 12% of the total US population and 13% of illegal drug users are African American, they make up 38%, 59%, and 75% of those who are arrested, prosecuted, and incarcerated, respectively (Bass 2001; Alexander 2012; Mosher and Akins 2013). This has largely contributed to the disproportionate representation of African Americans locked in United States' prisons, as approximately 900,000 of 2.2 million total incarcerated persons in the United States are African American (Mauer and King 2007). Additionally, racial disparities in drug arrests have resulted in an extraordinary number of black men being labeled felons, and subsequently being barred from America's mainstream society and economy (Alexander 2012). No doubt remains that drug laws have

disproportionately impacted minority communities. In fact, a defining characteristic of U.S. drug laws is that they are applied unequally across racial and ethnic groups (Mosher and Akins 2013; Alexander 2012).

The War on Drugs: A Brief History

In the early 1970s, President Nixon announced a War on Drugs, strategically linking issues of drug use with violence in order to gain public support for using legislative power to control drug use and crime through harsh penal policies (Alexander 2012). By the early 1980s the drug war had gained considerable momentum, and in 1982 President Reagan officially announced his administration's War on Drugs, despite the fact that illegal drug use had been declining substantially for 6-7 years prior to his announcement (Jensen, Gerber, and Mosher 2004; Alexander 2012).

In order to secure public support for a War on Drugs, Reagan formed a team to publicize the drug problem in America (at a time when drug use had been declining), placing an emphasis on crack cocaine (Alexander 2012). The Drug Enforcement Agency assigned special agent Robert Stutman to serve as the director of the New York Field Division (the largest in the world), tasking him to garner public support for the War on Drugs. Stutmen set his sights on bringing media attention to America's drug problem, and the media sold the narrative. The response government sought came to fruition, and by 1986, *Newsweek* called crack cocaine the biggest issue since Vietnam/Watergate while *Time* magazine declared crack cocaine the issue of the year. By 1989, 60% of Americans viewed drugs as the most serious problem in America, compared to only 3% who felt this way just three years prior (Alexander 2012).

In declaring a War on Drugs, and garnering media attention and public support for the drug war, President Reagan made it clear he would take a punitive approach to dealing with drug

use and abuse, rather than a preventative or rehabilitative approach. In the years after declaring a War on Drugs, massive increases in anti-drug law enforcement were coupled with large cuts in drug treatment budgets. The Federal Bureau of Investigation's (FBI) antidrug funding increased from $8 million in 1980 to $95 million in 1984, while the Department of Defense's (DOD) antidrug allocations increased from $33 million in 1981 to $1,042 million in 1991, and the Drug Enforcement Agency's (DEA) spending increased from $86 million to $1,026 million over the same time period (1981 - 1991). Concurrently, funding for the National Institute on Drug Abuse (NIDA) was cut from $274 million in 1981 to $57 million in 1984, and the Department of Education's antidrug fund was cut from $14 million to $3 million (Alexander 2012). The writing was on the wall - the government would use funds allocated for the War on Drugs to fill prisons rather than to educate youth and provide preventative and rehabilitative services for the public. It was only a matter of time before the prison population would explode (Tonry 1995; Alexander 2012).

As expected, from 1970 -1999, arrests for drug law violations increased persistently. Adult drug arrests quadrupled (from 322,300 to 1,337,600) and juvenile drug arrests doubled (from 93,300 to 194,600), while racial disparities in the prison population increased as well (Goode 2002). In 1970 African Americans made up one third of the United States' prison population, but by the year 2000 they made up nearly half of the 1,349,000 state and federal prison inmates, a number that had increased over 500% from the 300,000 inmates housed in 1981 (Goode 2002). Today, there are approximately 2.2 million people in United States' prisons and 7 million people under correctional supervision (federal prison, state or local jail, probation, and parole), a grossly disproportionate number of which are black men convicted of drug offenses (Justice Center University of Alaska Anchorage 2012-2013; Alexander 2012).

In his seminal piece, *Malign Neglect*, Michael Tonry (1995) argues that the results of the War on Drugs were predictable. Any legislator with even the least amount of knowledge and understanding of social and criminal processes during this time period would have known the War on Drugs would produce racial inequalities. By accelerating the War on Drugs, the American government foreseeably devastated the lives of hundreds of thousands of young black Americans (Goode 2002).

Michelle Alexander (2012) builds on this argument in *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*, as she convincingly demonstrates how punitive drug policy targeting poor people of color, and particularly black men (and women), provides the infrastructure for a "stunningly comprehensive and well-disguised system of racialized social control that functions in a manner strikingly similar to Jim Crow," (Alexander 2012: 4) laws that segregated, disenfranchised and discriminated against African Americans in virtually every sphere of life. The War on Drugs has resulted in an extraordinary number of black men in the United States branded as felons. Once branded felons, they are deprived the right to vote in America's democracy, and subjected to legalized discrimination in housing, employment, education, public benefits, and jury service - just as black men and women have been deprived equality and shut out from mainstream society for centuries (Jensen et al. 2004; Alexander 2012).

The War on Drugs has had an enormous impact on American society, acting as the impetus for an unprecedented increase in the prison population, and a mechanism to exacerbate race-based inequalities in incarceration rates over time. As such, it is surprising that criminologists paid relatively little attention to identifying the determinants of drug arrests prior to the 21st century (Mosher 2001). Researchers have identified structural conditions characterized

by social disorganization and racial threat that are associated with higher black and white drug arrest rates (Mosher 2001; Parker and Maggard 2005) but studies of the effects of police agencies on drug arrests have remained largely neglected. This is a crucial omission, because law enforcement agencies act as an intermediary between legislative policy and frontline officers who implement policy and make arrests (Bailey and Shearing 2001; Brooks 2001), and therefore serve a unique position managing social control. Additionally, characteristics of police agencies, such as their organizational arrangements and practices, are not homogenous, and it is plausible that organizational differences between police agencies contribute to variations in drug arrest rates across space and by race.

In order to produce change, we must build on research that explains why access to societal rewards, and in the case of drug arrests, societal penalties, vary across ascriptively-defined groups, and seek to explain how this variation is produced (Reskin 2003). To this end, the objective of the following study is to identify police organizational arrangements and practices that have disparate effects on black versus white drug arrests, net structural influences, and contribute to producing racially disproportionate drug arrest rates across the United States.

I propose the following research questions:

1. To what extent does the presence of specialized drug unit personnel within police agencies affect race-specific drug arrest rates, net the effects of structural characteristics of communities?
2. To what extent do drug asset forfeiture programs affect race-specific drug arrest rates, net the effects of structural characteristics of communities?

3. How do bureaucratic conditions within police agencies, namely structural control and structural complexity, affect race-specific drug arrest rates, net the effects of structural characteristics of communities?
4. Does officer diversity have an effect on race-specific drug arrest rates, net the effects of structural characteristics of communities?
5. How, if at all, do the effects of police organizational arrangements and practices vary across race-specific drug possession versus race-specific drug trafficking arrest rates, net the effects of structural characteristics of communities?

To address these research questions, in chapter two I explore prior research identifying determinants of drug arrests across space and by race. Chapter three follows with a discussion of the data compiled from the Uniform Crime Reporting Program Data: Arrests by Age, Sex, and Race, for the years 1999, 2000, and 2001, the Law Enforcement Management and Administrative Statistics: 2000 Sample Survey of Law Enforcement Agencies, and the year 2000 decennial Census, to conduct seemingly unrelated regression analyses examining the effects of police organizational arrangements and practices on black versus white drug arrest rates, net the effects of structural determinants.

Chapters four, five, and six report the findings from these analyses. Chapter four addresses research questions one and two by examining the effects of specialized drug unit personnel and drug asset forfeiture programs on race-specific drug arrests; chapter five addresses research questions three and four by examining the effects of structural conditions within police agencies and officer diversity on race-specific drug arrests; and chapter six addresses research question five by assessing the effects of the same police organizational arrangements and practices on race specific drug possession and drug trafficking arrests rates. Finally, chapter

seven summarizes the main findings and conclusions that come from this work, situating the findings within the larger body of research focusing on identifying the determinants of drug arrest rates across space and by race.

CHAPTER TWO

LITERATURE REVIEW

This chapter explores research identifying determinants of drug arrests across time, space, and race, and situates the current study within this literature. I begin with a review of research focusing on structural explanations of crime and social control that help explain variation in drug arrest rates across space and by race. This is followed by a review of research focusing on how race-specific drug purchasing and use patterns combined with police organizational structures, arrangements, and practices influence race-specific drug arrests and contribute to producing unequal drug arrest rates across space and by race.

Explaining Drug Arrests with Structural Theories of Crime: Social Disorganization and Conflict Theory

The tenets of social disorganization theory, conflict theory, and more specifically racial threat theory, help explain how structural conditions influence drug arrest rates across space and by race (Mosher 2001; Parker and Maggard 2005; Eitle and Monahan 2009). These theories both provide unique approaches to understanding ecological variations in drug arrest rates, with social disorganization theory relying on behavior based explanations and racial threat theory relying on response based explanations.

Social Disorganization Theory

Many sociological theories focus on "types of places" to explain variations in crime rates across spatial boundaries. The obvious connection between crime and arrests indicates that places with higher crime rates will also have higher arrest rates. One of the most prominent of the "types of places" theories is social disorganization theory. Consistent with the Chicago

school tradition, social disorganization theory posits that communities with large and dense populations, high rates of poverty, ethnic heterogeneity, and high population turnover have higher crime rates. The higher rates of crime are largely attributed to fewer and weaker social ties in the community that are necessary to foster informal social control (Shaw and Mckay 1942; Kornhauser 1978; Sampson and Groves 1989).

Although the Chicago tradition does not explicitly address the issue of drug use and trafficking, a lack of social control within communities is also likely to impact drug use and trafficking rates in these areas (Mosher 2001). Early studies from the Chicago tradition support this notion, as they found that drug addiction was concentrated in centrally located, deteriorated, and socially disorganized areas (as noted in Mosher 2001). More recently, studies evaluating this connection have found support for many indicators of social disorganization (including economic deprivation, high school dropout rates, homeless shelter rates, the size of male marriage pools) that predict drug possession and trafficking arrest rates (Mosher 2001; Parker and Maggard 2005). In line with the tenets of social disorganization theory, communities characterized by social disorganization are likely to have higher drug arrest rates, in part because actual rates of drug use (and trafficking) are likely to be higher in areas lacking informal social control (Winstanley, Steinwachs, Ensminger, Latkin, Stitzer, and Olsen 2008). Thus, indicators of social disorganization serve as a proxy for drug use and trafficking within neighborhoods.

Conflict Theory and Racial Threat

A conflict perspective posits that status groups within societies compete for access to scarce resources, and that social institutions serve the interests of the powerful. Thus, when subordinate groups pose a threat to those in power, legal authorities are used to maintain social order (Turk 1969). Within the conflict tradition, a racial threat perspective posits that dominant

racial groups use the criminal justice system to control racial minorities. More specifically, racial threat theory suggests that increases in the relative size of minority populations compared to the majority is perceived as threatening to the majorities' positions of power, both politically and economically (Blalock 1967). According to racial threat theory, the majority group will take steps to reduce competition with minority populations by enforcing laws more rigorously in areas with larger concentrations of minority communities (Black 2010), and by disproportionately arresting and incarcerating minority group members (Turk 1969).

Much research that assesses racial threat has done so with a sole indicator of the size of the black population. Recent research indicates the need for more multidimensional measures that account for economic and political threats that minorities pose to the majority group (Jacobs and Wood 1999; Parker and Maggard 2005; Eitle and Monahan 2009). According to racial threat hypotheses, in addition to the importance of the relative size of the minority population, the gaps between white and black income and unemployment are also important. As this gap shrinks, the assumption of the dominant majority is that blacks are taking jobs from whites, and thus increased deployment of social control occurs and arrests of the threatening group are higher. Because drug arrests involve proactive policing requiring the use of police discretion, it is reasonable to expect that areas characterized by higher levels of racial threat may have a higher police presence and thus higher overall drug arrest rates generally, as well as higher black drug arrest rates compared to white drug arrest rates more specifically.

Consistent with racial threat hypotheses, Mosher (2001) found that cities with larger black populations have higher drug arrest rates, indicating a greater use of social control mechanisms in these areas. Parker and Maggard (2005) found partial support for racial threat explanations of drug arrests using multiple indicators. In particular, although rising black

populations over two points in time (1990 and 2000) led to increased drug arrests for both black and white populations, increases in racial inequality over this period led to increases, not decreases, in black drug arrest rates. Using similar (but cross-sectional) measures of economic inequality, Eitle and Monahan (2009) found support for racial threat theory predicting race-specific drug arrest rates.

Identifying Mechanisms that Produce Uneven Drug Arrest Rates across Space and By Race

Race, Drugs, and Policing

While African Americans and whites use drugs at similar rates (Mosher and Akins 2013; Alexander 2012), there is some evidence indicating that the drug purchasing and use patterns of African Americans differ in ways that make them more likely to make contact with police than whites, putting them at greater risk of being arrested for drug law violations (Ramchand, Pacula, and Iguchi 2006; Ream, Johnson, Dunlap, and Benoit 2010). For instance, Ramchand, Pacula, and Iguchi (2006) find that African Americans are significantly more likely than the white population to purchase marijuana away from their homes and from a stranger, and that African Americans are also significantly more likely to use marijuana outside. Research that has assessed race-specific drug use and purchasing patterns and their effects on race-specific drug arrests has centered on marijuana (Johnson, Golub, Dunlap, Sifaneck, and McCabe 2006; Ramchand et al. 2006; Ream et al. 2010) because the primary focus of the War on Drugs has shifted from crack cocaine and heroin to low level marijuana offenses over the past twenty-five years, as evidenced by the fact that from 1990 – 2002, 82% of the increase in drug arrests was attributed to low level marijuana offenses, and in 2002, 88% of all drug arrests were for marijuana possession (Maurer and King 2006). Thus, race-specific marijuana purchasing and use patterns that affect the

likelihood of making contact with the police will affect race-specific drug arrest rates overall, because the large majority of drug arrests are for marijuana.

Building on Ramchand et al.'s (2006) findings, Ream, Johnson, Dunlap, and Benoit (2010) discover that among a sample of marijuana users in New York, public use of marijuana and a lack of marijuana use etiquette (including distancing oneself from non-smokers and sharing blunts to moderate one's own level of intoxication) is associated with a dramatically higher likelihood of police stops and searches and/or arrests. Notably, these findings were only significant for marijuana users who were black, male, and/or from Harlem or the South Bronx (as opposed to non-poverty areas such as Manhattan, the East Village, or the Lower East Side). This indicates that publicly using drugs or not following marijuana use etiquette may not increase the likelihood of police stop, search, and/or arrest for all users alike, but rather only for young black males from lower income areas. This suggests patterns of differential enforcement across race and social class, and highlights the fact that police organizational arrangements and practices contribute to disparate drug arrest rates across space and by race

The above research indicates that police agencies generally focus their drug law enforcement practices in public and quasi-public settings, and that African Americans are more likely to participate in risky drug purchasing and use behaviors within these settings. Furthermore, when African Americans use or sell drugs in public they are significantly more likely to be stopped and/or arrested by police than whites. This indicates that a racialized perception of drug use may impact law enforcement efforts such that people of color are disproportionately stopped for potential drug law violations.

Beckett, Nyrop, Pfignst (2006), and Bowen (2005) provide evidence of this in their studies of Seattle's drug market, where they highlight police perceptions and organizational

practices that contribute to disparate drug arrest rates across space and by race. As opposed to the notion that the most harmful drugs are disproportionately concentrated in poor communities of color, or that individual officers with racist intent result in disproportionately high black and Latino drug arrest rates, Beckett et al. (2005 and 2006) provide evidence indicating that a racialized perception of who and what constitutes the drug problem in America largely accounts for the disproportionate drug arrest rates of Latinos and blacks compared to whites in Seattle.

Specifically, Beckett et al. (2005) demonstrate that a racialized imagery of drugs in general, and crack cocaine in particular, has had a long lasting institutional and cultural effect that shapes police perceptions and practices, resulting in unequal policing of drug laws across space and by race. Racial disparities in drug arrests cannot be explained by differences in drug activity (as indicated by measures of needle exchange and ethnographic observations of two outdoor drug markets), overall neighborhood crime rates, or community complaints about drug activity (Beckett et al. 2006). Rather, several police organizational practices explain why blacks were significantly overrepresented among Seattle's drug delivery arrests. Seattle PDs' focus on crack offenders, the priority placed on outdoor drug venues, and the geographic concentration of police resources in racially heterogeneous areas has resulted in the racial disparity in Seattle's drug delivery arrests. These organizational practices cannot be explained in race-neutral terms, such as differences in the geographic concentration of crime or community complaints, and are best understood as shaped by racialized perceptions of who and what constitutes Seattle's drug problem (Beckett et al. 2006).

Recently, Beckett et al.'s (2005 and 2006) findings have been challenged by Engel, Smith, and Cullen (2012) who also assess drug arrests in Seattle. Rather than using narcotics activity reports to measure community complaints as Beckett et al. (2005 and 2006) do, Engel et

al.(2012) use citizens' calls for service (CFS), which they cite as a more accurate measure of community complaints. Engel et al. (2012) find a robust association between citizens' call for service regarding drug activity and drug arrests, as well as reported violent crime and incivilities and drug arrests at the census tract level (the same level used by Beckett et al.). The differences in findings could be due to the disparate measures used to capture community complaints, as well as the different time periods assessed (2004 – 2007 as opposed to 1999-2001 by Beckett et al.).

Ultimately, the race neutral factors identified by Engel et al. (2012) may help explain police deployment patterns and the disproportionate number of blacks arrested for drug law violations in Seattle; or, as Beckett et al. (2005, 2006) suggest, a racialized imagery of drugs in general, and crack cocaine in particular, may have had long lasting institutional and cultural impacts that have shaped police perceptions and practices, and resulted in unequal policing of drug laws across space and by race. While the exact reasons why African Americans are arrested at disproportionately high rates for drug law violations in Seattle are not completely understood, the above research highlights the fact that police organizational arrangements and practices contribute to disparate drug arrest rates across space and by race.

Police Organizations and Race-Specific Drug Arrests

Police agencies are bureaucratic organizations that act as an intermediary between legislative drug policy and frontline officers who enforce drug policy. Therefore it is important to study how differences in police organizational arrangements and practices may affect race-specific drug arrests (Bailey and Shearing 2001; Brooks 2001). To date, I am aware of one study that systematically assesses the effects of police organizational characteristics on race-specific drug arrests (Eitle and Monahan 2009). Eitle and Monohan (2009) focus exclusively on the

effects of a few bureaucratic conditions of police agencies on race-specific drug arrests across space and by race. Their findings, discussed in more detail later, shed additional light on the importance of studying the influences that police agencies have on reducing or exacerbating racial disparities in drug arrest rates, net structural determinants. The following sections review research highlighting some of the ways police organizational arrangements and practices contribute to existing disparities in drug arrest rates across space and by race.

Specialized Drug Unit Personnel and Race-Specific Drug Arrests

Depending on enforcement priorities, most police departments have specialized units such as gang units, drunk driving units, and drug enforcement units, and/or full or part-time specialized personnel dedicated to enforcing certain laws, such as drunk driving laws or drug laws, among others. Law enforcement agencies that focus on vigorously enforcing drug policies having specialized drug units and/or personnel dedicated to drug law enforcement. These police agencies are likely to have higher drug arrest rates than police agencies without specialized drug units and/or personnel dedicated to drug law enforcement, because members of these units are tasked to proactively enforce drug laws.

As noted above, prior research demonstrates that drug laws tend to be enforced most often in public settings, and disproportionately against African American citizens. With a traditional police culture suspicious of minority communities, and a drug imagery laden with implicit biases about who is associated with drug use, I expect police agencies with specialized drug unit personnel to vigorously enforce drug laws, and to disparately target people of color more so than agencies without specialized drug unit personnel.

Thus, I propose the following hypotheses:

Hypothesis 1: Police agencies with specialized drug unit personnel have higher drug arrest rates than police agencies without specialized drug unit personnel, all else equal.

Hypothesis 2: The positive association between specialized drug unit personnel and the drug arrest rate is stronger for the black population than the white population.

Drug Asset Forfeitures and Incentives to Enforce Drug Laws

Asset forfeiture laws in the United States have a long history, dating back to the ratification of the Constitution when Congress enacted forfeitures statutes to assist with the collections of customs duties and taxes. More directly related to current asset forfeitures laws as applied to drug cases, there were several instances of forfeitures of automobiles used to transport liquor during the 1920s prohibition era (Mosher and Akins 2013). Asset forfeiture laws directly related to civil drug asset forfeitures date back to 1970 when Congress passed the Comprehensive Drug Abuse Prevention and Control Act, which included a civil forfeiture provision authorizing the government to seize and forfeit drugs, drug manufacturing and storage equipment, and conveyances used to transport drugs (Blumenson and Nilson 1998; Mosher and Akins 2013). Today, cash, bank accounts, cars, boats, and houses, etc., can all be seized under forfeiture laws, and these laws remain a crucial tactic in the War on Drugs (Blumenson and Nilson 1998).

Drug asset forfeiture laws were designed to combat drug crime by attacking the economic viability of the drug trafficking enterprise. Over time though, as state and local government budgets shrunk, Congress opened the door for drug asset forfeitures to become a new source of revenue for law enforcement agencies (state and local). Through forfeiture provisions, law enforcement agencies were authorized to seize "drug related" assets and use the proceeds from these forfeitures to supplement their budgets (Blumenson and Nilson 1998). It is noteworthy that

the legal hurdles for drug asset forfeitures are lower than what is necessary for a criminal conviction; in fact, under civil asset forfeiture provisions, the burden of proof falls on the individuals whose property is seized to demonstrate that their property is not connected with illegal drug activity. As a result, asset forfeitures have become a major revenue source for law enforcement agencies (Baicker and Jacobson 2007). Because this revenue source is mostly limited by the time and energy police agencies and the officers that comprise them commit to seizing assets, drug-related forfeiture provisions have created significant incentives to allocate a greater number of police resources towards policing drug laws and seizing assets (Benson, Rasmusen, and Sollars 1995). Indeed, research demonstrates that legislation allowing police to keep seized assets raises drug arrests as a portion of total arrests by approximately 20% and drug arrest rates overall by about 18%, indicating that these provisions indeed act as an incentive to vigorously enforce drug laws (Mast, Benson, and Rasmussen 2000).

While federal drug asset forfeiture programs provide incentives to enforce drug laws because they allow revenue from drug-related asset forfeitures to supplement law enforcement budgets, state laws vary with regards to whether the revenue produced from civil drug asset forfeitures can be returned to the law enforcement agencies that initiated the seizures (Blumenson and Nilsen 1998). Presumably, statutes that do not allow proceeds to go directly back to the law enforcement agencies that initiated the seizures should reduce incentives to vigorously enforce drug laws. In these jurisdictions though, law enforcement agencies can enter into "equitable sharing" agreements with the federal government in order to circumvent state laws and utilize federal law for processing forfeitures (Worrall 2001). This effectively allows police agencies in these states to receive money, goods, and property that otherwise could not have gone to law enforcement purposes. Thus, despite that fact that not all police agencies can

supplement their budgets with revenue from drug asset forfeitures under state laws, they are able to do so by using "equitable sharing" agreements to circumvent these laws.

Over the course of the 1980s and 1990s, as asset seizures became a more popular way to supplement law enforcement budgets, the targets of drug seizures shifted from big time traffickers, to lower level users and purchasers. A relatively commonly police tactic today is a "reverse sting." A reverse sting consists of police officers posing as drug dealers and arresting drug purchasers. This allows police officers to seize a purchaser's cash rather than a seller's drugs. While this practice indeed proves profitable for police, it also greatly undermines the original intent of asset forfeitures laws, because arresting drug purchasers rather than traffickers does very little to reduce the supply of drugs in a community, or to reduce drug crime (Blumenson and Nilson 1998).

Because revenue produced by police agencies via drug asset forfeitures provides direct incentives for police officers to vigorously enforce drug laws, it is reasonable to expect that police agencies that supplement their budgets with revenue from asset forfeitures have higher drug arrest rates. Additionally, if asset forfeitures are being used as they were originally intended, to combat drug crime by attacking the economic viability of the drug trafficking enterprise, it would also be reasonable to expect that agencies that supplement their budgets with asset forfeitures have higher drug trafficking arrest rates compared to agencies that do not. On the other hand, if asset forfeitures are being used primarily as a source for profit as suggested above, it is more likely that police agencies supplementing their budgets with asset forfeitures have higher drug possession arrest rates, and not necessarily higher drug trafficking arrest rates.

Finally, as noted previously, because the drug imagery in America is laden with implicit biases about who is associated with drug use, it is also likely that police agencies with incentives

in place to vigorously enforce drug laws disproportionately target people of color, leading to higher drug arrest rates for blacks versus whites.

I propose the following hypotheses:

Hypothesis 3: Police agencies that supplement their budget with revenue produced from drug asset forfeitures have higher drug arrest rates than police agencies that do not, all else equal.

Hypothesis 4: The positive association between police agencies supplementing their budget with revenue produced from drug asset forfeitures and drug arrests is stronger for the black population than the white population.

Hypothesis 5: The positive association between police agencies supplementing their budget with revenue produced from drug asset forfeitures and drug arrests is stronger for drug possession arrests than drug trafficking arrests.

Organizational Theory, the Police, and Drug Arrests

To date, sparse research assesses the systematic effects bureaucratic conditions within police agencies have on drug arrest rates. Weber (1947) defined bureaucracies as organizational forms characterized by a power structure and decision-making hierarchy, division of labor/specialization, formal rules and procedures, and actors who seek to enhance efficiency. Three interrelated functions of bureaucracies are to produce outputs and achieve organizational goals, to regulate the influences of individual variation on the organization, and to exercise power, authority, and decision-making (Tolbert and Hall 2009). Maguire (2003) identifies two distinct clusters of organizational structures that burgeon from bureaucratic structures and can affect drug arrests: structural control and structural complexity.

Police organizations with higher levels of structural control are characterized by high levels of formalization, standardization, and civilianization (Maguire 2003). Formalization refers

to codes, rules, and other written documents organizations use while standardization refers to the extent of training requirements and screening processes of potential employees. Civilianization is a measure of administrators to rank and file workers. Each of these elements is theorized to increase organizational control over police officers (Maguire 2003; Eitle and Monohan 2009). Wilson (1968) suggested that agencies with higher levels of structural control have more arrests because under these conditions police officers have less discretion and more organizational pressures to produce arrests.

While police agencies with greater levels of structural control should have higher overall drug arrest rates, the potential effects of structural control on racial disparities in drug arrests is less clear. Research indicates that policies and practices that reduce personal discretion and increase levels of formalization (an indicator of structural control) in hiring and evaluating employees (in the form of increased objective criteria) result in reduced workplace discrimination. Under these conditions employers are less able to use personal discretion and subjective assessments for making employment decisions (Pfeffer 1977; Bielby 2000; Reskin 2000). By using formalized processes that hold employers accountable for their decision making, workplaces limit the extent of race and sex biases and encourage fair practices (Tetlock 1983; Haberfeld 1992; Konrad and Linnehan 1995; Kalev et al. 2006). Because officer discretion plays a significant role in the policing of minor crimes such as drug use and possession (Becket, Nyrop, and Pfingst 2006; Barkan 2012), some of the same factors that reduce employer discrimination through forces of organizational control could also reduce discrimination that occurs while making arrests for drug law violations.

On the other hand, because a racialized imagery of who and what constitutes the drug problem in America persists (Tonry 1995; Beckett et al. 2005; Becket et al. 2006; Alexander

2012), it seems likely that increased enforcement (due to greater levels of organizational control) would actually reproduce or exacerbate disparities in black versus white drug arrests. While there are varying levels of structural control within police agencies, there are no formalized practices that aim to generate equal race-specific drug arrest rates. Thus, officers who are encouraged to generate a higher number of drug arrests are likely to continue to disproportionately police people of color, making it unlikely to reduce inequalities between black versus white drug arrest rates, and more likely to reproduce or exacerbate these differences.

Thus, I propose the following two hypotheses:

Hypothesis 6: Police agencies with greater levels of structural control have higher drug arrest rates, all else equal.

Hypothesis 7: The positive association between structural control and drug arrests is stronger for the black population than the white population.

Organizations characterized by structural complexity have more vertical differentiation/hierarchical layers within them, as well as greater divisions of labor (Maguire 2003), and less organizational control. Under conditions of structural complexity direct supervision from above managers is less feasible, and officer discretion tends to increase. Wilson (1968) suggested that higher levels of officer discretion will reduce arrests within agencies, as there is less pressure to produce arrests from higher ranked officers. While this is likely, higher levels of officer discretion adds potential for arrest activity based on implicit biases and discrimination, as police officers are less likely to be held accountable for their arrest practices. Thus, while structural complexity within police agencies may be associated with lower drug arrest rates overall, the effect may be greater for whites compared to blacks, leading to greater disparities between black versus white drug arrest rates.

I hypothesize that:

Hypothesis 8: Police agencies with greater levels of structural complexity have lower drug arrest rates, all else equal.

Hypothesis 9: The negative association between structural complexity and drug arrests is stronger for the white population than the black population.

Police Culture and Organizational Demography

Accounts of police culture typically note the role of coping mechanisms used to deal with the strains of the job that help shape police culture (Paoline 2003). Two coping mechanisms that stem from the danger of police work typically pervade police culture. Due to the dangerous nature of their work, police officers are suspicious of the public (West1970; Skolnick 1994) and "maintain an edge" at all times (Rubenstein 1973; Brown 1988). The implications of these coping mechanisms provide fruitful explanations for how police cultures may influence levels of black drug arrests versus white drug arrests.

Traditionally, police officers' suspiciousness towards the general public has been regarded as a major component of police culture. This attitude forms as a response to the dangerous line of police work. Police officers "maintain an edge" over the public by being one up on citizens at all times. This involves reading people and situations and sorting citizens as potential offenders (Muir 1977; Van Maanen 1974). Research suggests racial biases are likely to influence these processes. For instance, simulations focusing on an officer's dilemma to shoot demonstrate that research participants are more likely to shoot unarmed black men than unarmed white men. Moreover, participants decide not to shoot unarmed white men more quickly than they decide not to shoot unarmed black men (Correll, Park, Judd, and Wittenbrink 2002). This demonstrates how a racialized perception of what constitutes a potential offender (Alexander

2012; Barkan 2012) can make the practice of sorting citizens as potential offenders discriminatory, and representative of a police culture that displays values characterized by racial biases (Haarr 1997), implicitly promoting the violation of citizens' rights and the abuse of authority (Brown 1981; Kappeler, Sluder, & Alpert 1998).

Enforcement of drug policy involves proactive rather than reactive policing (Eitle and Monahan 2009). A police culture that stereotypes people of color as potential drug offenders while proactively policing drug law inherently targets people of color for drug arrests. Beckett et al. (2006) provide evidence that the racialized perception of who and what constitutes the drug problem in America largely accounts for the disproportionate drug arrest rates of Hispanic and blacks compared to whites in Seattle. The authors find that racial disparities in drug arrests cannot be explained by differences in drug activity (as indicated by measures of needle exchange and ethnographic observations of two outdoor drug markets), overall neighborhood crime rates, community complaints about drug activity, or the volume of productivity of outdoor versus indoor drug arrests.

While police cultures, as noted above, have been described as suspicious and mistrustful of the general population (Westley 1970), as implicitly promoting the violation of citizens' rights and the abuse of authority (Brown 1988; Kappeler, Sluder, & Alpert 1998), and as displaying values characterized as racist (Haarr 1997), recent research suggests that police cultures are not homogenous. Paoline (2003) suggests that police cultures change as the selection and recruitment of officers diversify, and more previously excluded populations are hired (Manning 1994; Paoline, Myers, and Worden 2000). Larger representations of racial minorities, females and more highly educated officers bring to the police force different outlooks and representations of the public. The cultures of these police agencies are apt to change as a result of socialization

processes that occur as people from diverse backgrounds come into the organization and as officers begin to collectively challenge interpretations of the world around them (Haarr 1997; Paoline et al. 2000). Thus, the presence of more previously excluded police populations, including racial minorities and women, and more highly educated personnel, should contribute to eroding a culture suspect of minorities.

In line with the notion that police culture will likely change as previously excluded populations join the police force is Kanter's (1977) seminal work on the effects of proportions of populations in group settings. Kanter postulates four groups with varying social types that are qualitatively different than one another. These include uniform groups, skewed groups, tilted groups, and balanced groups. Uniform groups consist of only one type of person and skewed groups remain highly imbalanced with a large preponderance of one person type over others. Kanter refers to members of minority populations in these groups as "tokens" who are likely to have negative work experiences as a result of their low numerical representation and lack of cultural influence. As groups move toward a tilted composition, which Kanter suggests have a ratio close to 65:35, minority members of the group begin to affect group culture. Ultimately a group with a ratio between 60:40 and 50:50 is considered balanced, and characterized by a culture reflective of this balance.

Kanter's work on the effects of organizational demography suggests there are likely "tipping points" that influence changing social dynamics that occur within organizations. Previously excluded populations within organizations must reach a point where they make up a large enough proportion of the organization in order to infiltrate the persisting organizational culture. Allmendinger and Hackman's (2005) study of symphony orchestras exemplifies this. Orchestras are an occupation that, like police agencies, have been historically dominated by

white males. Allmendinger and Hackman's (2005) research suggests shifting dynamics that occur at three succeeding stages of female representation within orchestras: 1% – 10%, 11% - 39%, and 40% and greater. When the proportion of women is still very small, women remain as "tokens" within the organization. At this stage, the social system within the organization remains unchanged. As the number of women increase and they comprise around 10 – 40% of the orchestras, the organization moves through a transition phase characterized by conflict rather than mutuality. This indicates that before previously excluded members can impact the pervading culture of an organization, a period exists where the majority seeks to maintain the existing culture. It is only once women achieved greater than 40% representation within the orchestras that intergroup relations became characterized by mutual support, and that the pervading cultures saw a shift.

The implications of prior research on police culture, coupled with Kanter's work on the dynamics of group types, indicates that police cultures are likely to change such that they are less suspicious of minorities, as the percentage of previously excluded members of police agencies reach higher proportions.

Thus, I forward my final two hypotheses:

Hypothesis 10: Police agencies with greater officer diversity (higher percentages of police officers who are not white males) have lower black drug arrest rates, all else equal.

Hypothesis 11: All else equal, police agencies that have at least forty percent of their officers who are not white males have lower black drug arrest rates than police agencies that have less than forty percent of officers who are not white males.

This chapter provided a review of research identifying the determinants of drug arrests across race, and laid out the hypotheses that are examined in the subsequent analyses,

highlighting the role that police agencies play in producing drug arrests. The following chapter describes data compiled from the FBI's Uniform Crime Reports, the Law Enforcement Management and Administrative Statistics survey, and the decennial Census, and explains the methods that are used to examine the effects of police organizational arrangements and practices on black versus white drug arrest rates.

CHAPTER THREE

DATA AND METHODS

The following research examines how police organizational arrangements and practices influence black and white drug arrest rates. The objective of this study is to identify police agency-level characteristics that are associated with black and white drug arrest rates, and have disparate influences on black versus white drug arrest rates, net structural influences. By identifying police organizational arrangements and practices that disparately affect black and white drug arrest rates, this research seeks to highlight mechanisms that may contribute to reproducing and/or exacerbating racially disproportionate drug arrest rates across space and by race within the United States.

Data

Data for the current study are drawn from the following three data sources: the (1) Law Enforcement Management and Administration Statistics: 2000 Sample Survey of Law Enforcement Agencies; (2) Uniform Crime Reporting Program Data: Arrests by Age, Sex, and Race, 2000; and (3) 2000 decennial Census for city-level demographic information. The year 2000 was chosen for the analyses because detailed census place level data are available for this year, as are data from the Law Enforcement Management and Administrative Statistics: 2000 Sample Survey of Law Enforcement Agencies. I utilize data at the census place level in order to control for structural determinants of drug arrests because this geographic measure roughly approximates to the jurisdictional boundaries of single, municipal police agencies (Eitle and Monohan 2009). Thus, I am able to control for structural determinants of black and white drug

arrests while identifying organizational arrangements and practices within police agencies that influence drug arrest rates across space and by race.

Unit of Analysis

The unit of analysis is municipal police agencies located in census places with at least 500 black residents and 500 white residents in the year 2000. Drawn from a national sample of 1,693 municipal police agencies (among county, state, township, and tribal law enforcement agency types, among others) surveyed in the Law Enforcement Management and Administrative Statistics: 2000 Sample Survey of Law Enforcement Agencies, a total of 704 municipal police agencies were located in census places with at least 500 black residents and 500 white residents in the year 2000, and had complete drug arrest data, police organizational data, and census place level data (approximately equivalent to US city) available in the year 2000.

Only municipal police agencies are included in the analyses because there are systematic differences between agency types (e.g., county and state law enforcement agencies versus local, municipal law enforcement agencies) that are likely to influence race-specific drug arrest rates. Municipal police agencies make up the bulk of law enforcement agencies in the United States; their primary focus is to uphold the laws of their jurisdiction. County law enforcement agencies focus on law enforcement countywide, and also maintain county jails and provide county court services, while state law enforcement agencies have limited authority to perform general law enforcement duties while maintaining focus on traffic law enforcement (Discover Policing 2015). Perhaps as important, because the jurisdictional boundaries of municipal police agencies roughly align with census place level data, I am able to control for structural determinants of black and white drug arrest rates, while identifying police organizational arrangements and practices that influence drug arrest rates across space and by race. Municipal police agencies

located in census places with fewer than 500 black and white residents are excluded from the analyses because it is imperative to have a large enough population in the arrest pool for predicting black versus white drug arrests[1].

Dependent Variables

Logged black and white drug arrest rates for 704 municipal police agencies located in census places with black and white populations of at least 500 residents during the year 2000 constitute the dependent variables for the analyses.[2] I use data gathered from the FBI's Uniform Crime Reports to generate race-specific drug arrests rates for each law enforcement agency for the years 1999, 2000, and 2001 because there are considerable yearly fluctuations in drug arrests. Next I calculate average race-specific drug arrest rates across agencies in order to generate more accurate measures of drug arrests for this time period. I also calculate race-specific drug arrest rates disaggregated by possession versus trafficking arrests, so that I can examine potential differences in the effects of police organizational arrangement and practices on enforcing drug laws upon individuals in possession of drugs versus on individuals intending to either illegally sell or transport illegal drugs.

Race-specific drug arrests rates (arrests per 10,000 race-specific populations) are log transformed to provide a better model fit, normalizing the distribution of the dependent variable that is left skewed in its raw form. In cases for which the black or white drug arrest rates are 0 (black model = 11 cases, white model = 3), a value of 0 is imputed for log transformed rates as well, so that these observations are not dropped from the analyses (the log of 0 is undefined).

[1] As a result, the sample of police agencies included in the analyses are located in census places that, on average, have larger total populations and have larger police forces than average municipal police agencies.
[2] Nine cases were dropped from analyses using drug arrest rates disaggregated by possession versus trafficking due to unreliable/missing data.

Arrest rates are valid measures of official responses to crime (Quinney 1979; Mosher 2001). Thus, race-specific drug arrest rates are an appropriate outcome measure for studying organizational arrangements and practices within police agencies that disparately effect black versus white drug arrest rates, and contribute to the overrepresentation of African Americans arrested for drug law violations.

Independent Variables

Specialized Drug Unit Personnel

Previous studies note that due to a racialized imagery surrounding drugs in America (Beckett et al. 2005; Beckett et al. 2006; Alexander 2012) selective law enforcement leads to higher drug arrest rates for blacks compared to whites (Mosher and Akins 2013; Alexander 2012). Police agencies that vigorously enforce drug policies are likely to have specialized personnel dedicated to drug law enforcement. To capture the potential disparate effects specialized drug unit personnel have on black versus white drug arrest rates, I include a dummy variable indicating the presence of full or part-time specialized drug unit personnel within police agencies,

Each police agency was asked to report the number of officers assigned full-time and part-time to a specific unit for drug law enforcement. Agencies that reported having at least one officer dedicated full or part-time to a special unit for drug enforcement are coded 1. Agencies without officers dedicated full or part-time to a special unit for drug enforcement are coded 0.

Drug Asset Forfeiture Programs

Because revenue generated from drug asset forfeitures is mostly limited by the time and energy police agencies and the officers that comprise them commit to seizing assets, drug-related

forfeiture provisions have created significant incentives to allocate a greater number of police resources towards policing drug laws and seizing assets (Benson, Rasmusen, and Sollars 1995). I include a dummy variable to indicate whether police agencies supplemented their operational budget with revenue from drug asset forfeitures in the year prior to 2000. This indicator serves as a proxy for added incentive to produce drug arrests, because the revenue produced form drug asset forfeitures incentivizes vigorous drug law enforcement.

Each police agency was asked to report the estimated value of money, goods, and property received by the agency from drug asset forfeiture programs during the ear 1999. Agencies that reported receiving no money, goods, or property from drug asset forfeiture programs are coded 0, and agencies that reported receiving greater than zero dollars' worth of money, goods, and property from drug asset forfeiture programs are coded 1.

Police Culture – Officer Diversity

Police agencies with larger numbers of previously excluded members are likely to have cultures less suspicious of minorities (Paoline 2003). Thus, to capture the effects that officer diversity may have on pervading traditional police cultures, I calculate the percentage of sworn police officers within each agency who are not white males (the percentage of sworn officers are males of color, or females). This value is calculated based on the reported number of sworn officers, reported by race and gender, within each agency. In line with previous work suggesting a "tipping point," I also generate dummy variables to test for non-linear relationships between officer diversity and race-specific drug arrests. [3]

[3] These are not included in final analyses. I tested models for a "tipping point," to assess whether officer diversity contributed to changing police culture in a non-linear fashion, as suggested by Kanter (1977) and Allmendinger and Hackman's (2005) work, but did not find evidence of this.

Bureaucratization – Structural Control and Structural Complexity

Following a strategy similar to that employed by Eitle and Monoahan (2009), I use data from the Law Enforcement Management and Administration Statistics: 2000 Sample Survey of Law Enforcement Agencies to construct measures that capture distinct dimensions of bureaucracy, structural control and structural complexity (see also Wells and Fancone 2005).

Structural control within police agencies is characterized by formalization (i.e., higher numbers of formalized practices), standardization (greater use of standardized recruitment procedures), and civilianization (greater numbers of non-sworn personnel relative to sworn police personnel). The *formalization index* is a count variable summing the number of different topics covered by formal written policy directives. These include written policies for the use of deadly force/firearm discharge, the use of less-than-lethal-force, code of conduct on appearance, off-duty employment of officers, and maximum work hours allowed for officers. Two measures capture *standardization* within police agencies: a count of screening techniques used in selecting new officer recruits (including a background investigation, credit history check, criminal record check, driving record check, drug test, medical exam, personal interview, personality inventory, physical agility test, polygraph exam, psychological evaluation, second language ability test, voice stress analyzer, volunteer/community service history check, and a written aptitude test) and a count of the number of required training hours for prospective recruits (academy training, field training, and in-service training hours). Finally, a measure of *civilianization* is calculated as the ratio of the non-sworn to sworn personnel within police agencies. Sworn officers are typically police officers with arrest powers who have completed an academy, and carry and badge and ID that identifies them as sworn officers. Non-sworn officers are generally support personnel such as administrative and technical assistants (Public Safety Career Information Center 2012). Thus

the civilianization measure captures the strength of the administrative component of police agencies. Greater levels of structural control indicate greater levels of organizational oversight.

Police agencies characterized by *structural complexity* have greater divisions of labor, more vertical differentiation/hierarchical layers, and greater spatial dispersion. Each agency was asked to report which of the following functions their agency performs routinely: providing court security, serving the civil process, operating one or more jails, executing arrest warrants, participating in a multi-agency drug task force, operating a training academy, dispatching calls for service, search and rescue operations, and tactical operations (SWAT). The *task cope index* captures the division of labor within police agencies, and is a raw count of the number of different functions each agency reported performing routinely. I use a common measure of *vertical differentiation* within police agencies, namely the salary differential between the chief of police and entry level officers (Eitle and Monahan 2009). Finally, a dummy variable indicating whether police agencies *operate additional district agencies* is included as an indicator of spatial dispersion. Greater levels of structural control indicate lower levels of organizational oversight.

Control Variables

I use data gathered from the 2000 decennial Census to control for structural determinants of drug arrests. I utilize data at the census place level because this geographic measure roughly approximates the jurisdictional boundaries of single, metropolitan police agencies (Eitle and Monohan 2009: 537). It is important to use measures disaggregated by race to control for socioeconomic and structural variables because their levels and effects are quite different for blacks versus whites (Lafree and Drass 1996; Shihadeh and Ousey 1996; Mosher 2001). Thus, race-specific measures of median family income, the percentage of families living in poverty, the percentage of families headed by females with children under the age of 18, the percentage of the

population age 16 or older who are unemployed, the percentage of the population age 16 or older who are in the labor force, and the number of employed males per 100 females were collected for all 704 census places from the 2000 decennial census in order to generate race specific social disorganization indices and measures of racial threat.

Social disorganization theory and racial threat theory predict a relationship between these variables and drug arrest rates, and previous analyses demonstrate they are related to drug arrest rates (Mosher 2001; Parker and Maggard 2005; Eitle and Monohan 2009). The *social disorganization index* is comprised of five distinct race-specific components: the percentage of families living in poverty, the percentage of female headed households, the number of employed males per 100 females[4], the percentage of individuals who are unemployed, and the percentage of individuals in the labor force.[5] To deal with issues of collinearity, these five variables are analyzed using principal components factor analysis to produce one factor referred to in the analysis as *Race Specific Social Disorganization.* Loadings for each of the variables are greater than +/- .63 on each of the five variables, and eigenvalues are greater or equal to 3.00 (see Table 1 below).

The *% in Labor Force* and *Marriage Pool* variables are reverse coded so that higher values of each component indicate greater levels of a component of social disorganization. Next, each component of the index is standardized (so that each variable has a mean of 0 and a standard deviation of 1) and then summed to generate measures the *social disorganization index*. Values greater than zero represent greater than average levels of social disorganization and

[4] In line with Sampson (1987), Parker and Maggard (2005), and Eitle and Monahan (2009), the number of females are used as the denominator in order to reflect differences across cities in the situation of women in the "marriage market."

[5] After running tests for multiple measures theoretically appropriate for inclusion in the social disorganization index, these measures were chosen because principal components factors analyses indicate these indicators hang together more than others.

values below zero represent lower than average levels of social disorganization.

Table 1. Factor Loadings for Social Disorganization Variables

Variable	*Black*	*White*
% Families Living in Poverty	.84	.85
% Female Headed Households	.81	.63
% Unemployed	.73	.78
% in Labor Force	-.74	-82
Marriage Pool	-76	-.82
Eigenvalue	3.00	3.07

A similar process is used to generate a *racial threat index.* The *racial threat index* is comprised of three ratios that serve as a proxy for racial threat: *black to white educational attainment*[6], *black to white median family income*, and the *black to white unemployment rate*. These measures are consistent with prior studies that assess the effect of racial threat on drug *arrest rates* (Parker and Maggard 2005; Eitle and Monohan). To deal with issues of collinearity that arise from including all three ratios in analyses, these variables are also analyzed using principal components factors analysis to produce one factor referred to in the analysis as "racial threat." Loadings for each of the variables were greater than +/- .72, and the eigenvalue equals 1.87 (see Table 2 below).

Table 2. Factor Loadings for Racial Threat Variables

Variable	
Black to White Educational Attainment	.79
Black to White Median Family Income	.85
Black to White Unemployment Rate	-.72
Eigenvalue	1.87

The *Black to White Unemployment Rate* is reverse coded so that greater values indicate

[6] Race-specific rate of individuals with a bachelor's degree or greater.

Greater levels of racial threat. Each component of the index is standardized (so that each variable has a mean of 0 and a standard deviation of 1) and then summed to generate the *racial threat index.* In addition to the *racial threat index,* I include a measure of the percentage of the black population living in each census place police agencies are located. Higher percentages indicate a greater perceived racial threat.

Population Size

A variable accounting for the population size of each census place law enforcement agencies are located is included to control for the size of the population, and to see if race-specific drug arrests rates are higher in more highly populated areas.

Officer Presence

To account for the number of police relative to the census place population, a variable measuring the number of police officers per 10,000 residents is included in the analyses. Presumably, a greater police presence is associated with a higher rate of arrests, because there are more officers available to detect illegal behavior.

Region

In order to account for potential regional differences in drug law enforcement and arrests, dummy variables for Northeastern, Western, and Southern regions of the United States are included in the analyses. The Midwest is treated as the reference category.

Analysis Strategy

I use seemingly unrelated regression (SUR) models to estimate log transformed black and white drug arrest rates and examine the effects that police organizational arrangements and

practices have on race-specific drug arrest rates. Seemingly unrelated regression models allow for simultaneous estimation of two or more models, as they provide an appropriate estimation method when there is mathematical or conceptual interdependence between dependent variables (Zellner 1962; Eitle and Monahan 2012). In this case, black and white drug arrest rates within police agencies are correlated. Some unmeasured variables not included in the analyses affect both black and white drug arrest rates similarly, resulting in correlated error structures between black and white drug arrest rates. Using seemingly unrelated regression models is ideal because they account for correlated error structures across black versus white models (Zellner 1962). Post estimation t-tests identify whether significant differences between the coefficients in the black and white models exist, indicating a significantly stronger (or disparate) effect on one race than the other. To ease interpretation, exponentiating reported coefficients results in the percentage change in drug arrest rates per one-unit change in a given predictor.

Descriptive Statistics

Table 3 below presents data on the dependent and independent variables included in the final analyses, as well as the structural controls included in the final analyses. Not surprisingly, data indicate that mean drug arrest rates are almost three times higher for the black population than the white population. Within the 704 police agencies included for analyses, the mean African American drug arrest rate is 170 per 10,000 African Americans. The standard deviation is 136, indicating substantial variation in black drug arrest rates across agencies. The mean white drug arrest rate of 62 per 10,000 white Americans, and the standard deviation is 53. This demonstrates that black drug arrest rates, on average, are much higher than white drug arrest rates, and that both rates vary considerably across jurisdiction (rates ranging from 0 to 1,160

Table 3. Descriptive Statistics of Study Measures

	Mean	SD	Min	Max	Mean	SD	Min	Max
Variable	**Black (N=704)**				**White (N=704)**			
Panel A. Race-Specific Study Measures								
Drug Arrests								
Drug Arrest Rate per 10,000	170^	136	0	1160	62^	53	0	528
Logged Drug Arrest Rate	4.82^	.85	0	7.06	3.82^	.82	0	6.27
Drug Possession Arrest Rate per 10,000	131^	110	0	1034	52^	44	0	432
Logged Drug Possession Arrest Rate	4.53^	.92	0	6.94	3.63^	.86	0	6.07
Drug Trafficking Arrest Rate per 10,000	37^	48	0	399	9^	11	0	86
Logged Drug Trafficking Arrest Rate	2.85^	1.42	0	5.99	1.58^	1.10	0	4.45
Structural Characteristics of Communities								
Social Disorganization Index	.00	2.86	-11.9	8.08	.00	2.99	-9.23	14.39
% Families Living in Poverty	21.09^	11.33	0	63.96	7.4^	4.22	0.63	31.95
% Female Headed Households	52.60^	10.87	20.59	77.63	27.51^	4.97	14.18	51.29
% Unemployed	10.94^	4.78	0	28.11	5.35^	2.51	1.07	25.45
% in Labor Force	63.48	10.56	11.06	89.37	63.11	7.25	31.61	83.58
* Marriage Pool	53.84^	24.24	11.69	355.68	60.13^	9.20	31.56	93.40

Panel B. All Other Study Measures	**Mean**	**SD**	**Min**	**Max**
Racial Threat Index	-.01	2.38	-9.28	13.58
Black to White BA	.66	.45	0	5.72
Black to White Family Income	.67	.20	.24	1.77
Black to White Unemployment	2.31	1.33	0	12.25

Panel B. All Other Study Measures	**Mean**	**SD**	**Min**	**Max**
% Black Population	18.78	18.87	.37	93.44
Total Population	118492	382576	1419	8,008,278
Officers per 10,000 Total Population	22.83	10.03	9.26	100.95
Region				
% West	22.30	41.66	0	1
% South	42.05	49.40	0	1
% Northeast	17.90	38.36	0	1
% Midwest	17.75	38.24	0	1
Police Organizational Characteristics				
% Police Agencies with Drug Unit Personnel	68.61	46.44	0	1
% Police Agencies Supplement Budget w/ Drug Asset Forfeitures	83.10	37.50	0	1
% of Officers who are not White Males	23.64	15.89	0	100
% Agencies Operating Other District Agencies	28.69	45.27	0	1
Officer Recruitment Screening Practices	10.06	1.97	0	14

^ indicates a statistically significant difference in black versus white measures at $p \leq .05$
* Employed Males age 16+ per 100 Females age 16+

drug arrests per 10,000 African Americans and 0 to 528 drug arrests per 10,000 white Americans). These race differences are statistically significant.

Four of the five components comprising race-specific social disorganization indices have differences in means that are statistically significant, indicating that levels of social disorganization are significantly higher, on average, among the African American population. Similarly, racial threat indicators demonstrate the relative deprivation of the black populations compared to white populations. On average, for every two African Americans with a bachelor's degree (or higher) there are three white Americans with a bachelor's degree (or higher), and the median family income of the black population is two-thirds that of the white population. In addition, average African American unemployment rates are more than twice the average of white unemployment rates. Among law enforcement agencies included in the final analyses, approximately 67% have specialized drug unit personnel and 83% supplemented their operating budget with revenue produced from drug asset forfeitures. On average, approximately 24% of each police agency's sworn personnel are either female or people of color. There is significant variation in this measure, with agencies comprised of 100% white-male police officers and agencies comprised of 0% white-male police officers.

Finally, only one indicator of structural control and one indicator of structural complexity affect race-specific drug arrests, and are included in the final analyses. These are the officer recruitment screening index (*standardization*), and the dummy variable indicating whether police agencies operate additional district agencies *(spatial dispersion*), respectively. Data indicate that on average, police agencies have approximately ten standardized recruitment screening practices, and that approximately 29% of police agencies operate additional district agencies.

CHAPTER FOUR

THE EFFECTS OF SPECIALIZED DRUG UNIT PERSONNEL AND DRUG ASSET FORFEITURES ON RACE-SPECIFIC DRUG ARRESTS

In this chapter I analyze the effects of two police organizational arrangements and practices that are expected to impact drug arrest rates. Specifically, this chapter seeks to answer the following two research questions: (1) How do specialized drug unit personnel dedicated to drug law enforcement affect race-specific drug arrests, net the effects of structural determinants of drug arrests; and (2) how do drug asset forfeiture programs affect race-specific drug arrests, net the effects of structural determinants of drug arrests?

It is reasonable to expect that police agencies with specialized drug unit personnel have higher drug arrest rates than agencies without specialized drug unit personnel, because these officers are expected to vigorously enforce drug laws. It is also reasonable to expect that police agencies that supplement their budget with revenue produced from drug asset forfeitures have higher drug arrest rates than agencies that do not, because the additional revenue stream provides a direct incentive for police officers to vigorously enforce drug laws. Perhaps more importantly, because drug imagery is laden with implicit biases about who is associated with drug use, I expect that police agencies with specialized drug unit personnel and incentives to vigorously enforce drug laws disparately target people of color, leading to higher drug arrest rates for the black population versus white population. Thus, I propose the following hypotheses:

Hypothesis 1: Police agencies with specialized drug unit personnel have higher drug arrest rates than police agencies without specialized drug unit personnel, all else equal.

Hypothesis 2: The positive association between specialized drug unit personnel and the drug arrest rate is stronger for the black population than the white population.

Hypothesis 3: Police agencies that supplement their budget with revenue produced from drug asset forfeitures have higher drug arrest rates than police agencies that do not, all else equal.

Hypothesis 4: The positive association between police agencies supplementing their budget with revenue produced from drug asset forfeitures and drug arrest rates is stronger for the black population than the white population.

Results

In order to isolate the effects that specialized drug unit personnel and incentives to enforce drug laws have on race-specific drug arrests across a sample of municipal police agencies in the United States, I control for a number of other factors likely to influence drug arrest rates. Specifically, within the census places police agencies are located, I control for the effects of race-specific social disorganization and indicators of racial threat on race-specific drug arrests, as well as the region, the total size of the population, and the police presence within each census place, as indicated by the number of police officers per 10,000 residents.

Model 1, in Table 4 below, assesses the effects of the control variables on race-specific drug arrest rates. Results indicate that, as expected, cities with higher levels of race-specific social disorganization also have higher race-specific drug arrest rates. The effects of race-specific social disorganization are significant and approximately equal across black and white models. For each one-unit increase in the *race-specific social disorganization index* drug arrests rates are approximately 5% higher, all else equal. This is not surprising, because cities with greater levels of social disorganization are likely to have lower levels of informal social control

(Sampson and Groves 1989) and higher levels of actual drug use (Winstanley et al. 2008), especially in public spaces, due to these lower levels of informal social control.

Measures of racial threat are significantly associated with black and white drug arrest rates, but the associations are contrary to racial threat hypotheses. According to racial threat hypotheses, as the percentage of the black population grows, and as the gaps between black and white levels of education, employment, and income are reduced, the dominant majority assumes the black population is taking resources from the white population, resulting in increased deployment of social control and increased arrests of the threatening group. Contrary to these hypotheses, the above findings indicate that census places with smaller black-to-white gaps in education, employment, and income have significantly lower, not higher, black drug arrest rates, and significantly higher white drug arrest rates (although the percentage of the black population is significantly and negatively associated with black and white drug arrest rates). Specifically, a one unit increase in the racial threat index is associated with a 5% lower black drug arrest rate and a 3% higher white drug arrest rate.

A likely explanation is that measures of racial threat are capturing the effects of race-specific economic deprivation, as racial threat values are greater in areas where black deprivation is lower and/or white deprivation is higher. Census places with lower levels of black deprivation are associated with lower black drug arrest rates, and census places with higher levels of white economic deprivation are associated with higher white drug arrest rates,[7] therefore these results are not too surprising, and indicate the racial threat index is likely capturing the effects of economic deprivation on drug arrest rates.

[7] Preliminary models that included measures of economic deprivation that were not included in final models due to collinearity with social disorganization indices support this notion, as they demonstrated positive associations between race-specific economic deprivation and black and white drug arrest rates.

Table 4. Seeming Unrelated Regression – Specialized Drug Unit Personnel and Drug Asset Forfeiture Programs: Predictors of Change in Logged Black and White Drug Arrest Rates

	Model 1 (n=704)		Model 2 (n=704)		Model 3 (n=704)		Model 4 (n=704)	
	Black	**White**	**Black**	**White**	**Black**	**White**	**Black**	**White**
Variable	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**
Race Specific Social Disorganization	.05 (.01)***	.05 (.01)***	.04 (.01)***	.05 (.01)***	.05 (.01)***	.05 (.01)***	.04 (.01)***	.05 (.01)***
Racial Threat	-.05 (.01)***^	.03 (.01)*^	-.05 (.01)***^	.03 (.01)*^	-.05 (.01)***^	.03 (.01)*^	-.05 (.01)***^	.03 (.01)*^
Black Population Percentage	-.01 (.00)***	-.00 (.00)	-.01 (.00)***^	-.00 (.00)*^	-.01 (.00)***^	-.00 (.00)^	-.01 (.00)***^	-.00(.00)*^
Total Population	.00 (.00)**	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)*	.00 (.00)	.00 (.00)	.00 (.00)
Officers per 10,000 Population	.02 (.00)***	.02 (.00)***	.02 (.00)***	.02 (.00)***	.02 (.00)***	.02 (.00)***	.02 (.00)***	.02 (.00)***
West	.16 (.10)^	.89 (.09)***^	.13 (.10)^	.87 (.09)***^	.12 (.10)^	.87 (.09)***^	.10 (.10)^	.86 (.09)**^
South	-.35 (.09)***^	.14 (.08)^	-.37 (.09)***^	.13 (.08)^	-.35 (.09)***^	.14 (.08)^	-.37 (.09)***^	.13 (.08)^
Northeast	-.02 (.10)	.02 (.09)	-.10 (.10)	-.02 (.10)	-.01 (.10)	.02 (.09)	-.07 (.10)	-.01(.09)
Drug Unit			.33 (.06)***^	.16 (.06)**^			.27 (.06) ***^	.14 (.06)* ^
Drug Asset Forfeitures					.42 (.08)***^	.20 (.07)**^	.35 (.08)***^	.16 (.07)*^
R-Square	.16	.25	.19	.26	.20	.26	.21	.26

* indicates coefficient statistically significant at $p \leq .05$
** indicates coefficient statistically significant at $p \leq .01$
*** indicates coefficient statistically significant at $p \leq .001$
^ indicates significant difference between coefficient in black versus white model at $p \leq .05$

Results from model 1 (Table 4 below) also show that there are significant and positive associations between the total size of the census place populations and black and white drug arrest rates (i.e., total population is significantly associated with white drug arrest rates at $p < .06$). The strength of the police force within census places is also significantly and positively associated with black and white drug arrests. For each additional officer per 10,000 residents, black and white drug arrest rates are 2% higher. Finally, regional differences also emerge. Black drug arrest rates are significantly lower in the South (South region also significantly and positively associated with white drug arrest rates at $p < .08$), and white drug arrest rates are significantly higher in the West (Western region also significantly and positively associated with black drug arrest rate at $p < .10$). The effect sizes are large, indicating wide regional variation in drug arrest patterns among the sample of municipal police agencies.

In order to identify the effects of specialized drug unit personnel and drug asset forfeiture programs on black and white drug arrest rates, above and beyond the effects of the factors controlled for, subsequent models (models 2-3 in Table 4) include one independent variable added to the baseline model. The full model (Model 4) includes both independent variables in the model. Findings indicate that the presence of specialized drug unit personnel, and incentives to enforce drug laws via drug asset forfeitures, are significantly associated with higher black and white drug arrest rates, net the effects of structural determinants of drug arrests.

The seemingly unrelated regression analyses predicting black and white drug arrest rates indicate that police agencies with specialized drug unit personnel have significantly higher black and white drug arrest rates, net structural determinants of arrests (model 2, Table 4). Black drug arrest rates are 38% higher in agencies with specialized drug unit personnel, while white drug arrest rates are 17% higher as well. The difference in the strength of the association across the

black and white models is significant, indicating that the presence of specialized drug unit personnel within police agencies has more than twice the effect on black drug arrests than white drug arrests, and that these differences in effect are statistically significant. This indicates that the presence of specialized drug unit personnel within police agencies may exacerbate disproportionalities in drug arrest rates across race.

To demonstrate, police agencies (included in the analyses) without specialized drug unit personnel have a mean black drug arrest rate of 135 drug arrests per 10,000 African Americans. All else equal, the results above indicate that if these same agencies had specialized drug unit personnel the black drug arrest rate would be approximately 186 drug arrests per 10,000 African Americans. On the other hand, because white drug arrest rates are less strongly associated with the presence of specialized drug unit personnel, the change in arrest rates would not be as drastic. For instance, police agencies without specialized drug unit personnel have a mean white drug arrest rate of 55 drug arrests per 10,000 white persons. All else equal, according to the above findings, if these agencies had specialized drug unit personnel, the white drug arrest rate would be approximately 64 drug arrests per 10,000 white persons. While this arrest rate is significantly higher, if the association between the presence of specialized drug unit personnel and white drug arrest rates was as strong as the association between the presence of specialized drug unit personnel and black drug arrest rates, the white drug arrest rate would be even higher, approximately 76 drug arrests per 10,000 white persons. This demonstrates how the presence of specialized drug unit personnel within police agencies may perpetuate disproportionalities in drug arrests across race.

Similarly, results from model 3 (Table 4) indicate that police agencies that supplemented their budget with drug assets forfeitures in 1999 had much higher drug arrest rates than agencies

that did not. This is not too surprising, because these police agencies provide an incentive to vigorously enforce drug laws. That there is almost a two and half times greater effect on black drug arrest rates than white drug arrests is more remarkable. All else equal, black drug arrest rates are 52% higher in police agencies that supplemented their budgets with drug asset forfeitures whereas white drug arrest rates are 22% higher in these police agencies. The difference in the strength of the association across models is significant, indicating disparate effects on the black population versus the white population.

Police agencies (included in the analyses) that did not supplement their budget with drug asset forfeitures have a mean black drug arrest rate of 126 drug arrests per 10,000 African Americans. The above finding indicates that, all else equal, the black drug arrest rate in these agencies would be approximately 192 drug arrests per 10,000 African Americans if they did supplement their budgets with drug asset forfeitures. The direction of the influence is the same for white drug arrest rates, but the effect is not as strong. Police agencies that did not supplement their budgets with drug asset forfeitures have, on average, a white drug arrest rate of 51 drug arrests per 10,000 white persons. According to the results above, all else equal, the white drug arrest rate in these agencies would be approximately 62 drug arrests per 10,000 white persons if there were specialized drug unit personnel present. While this is a significantly higher arrest rate, if the strength of the association between drug asset forfeiture programs and white drug arrests was equal to the strength of the association between drug asset forfeiture programs and black drug arrests, the white drug arrest rates would be even higher, approximately 78 drug arrests per 10,000 white persons. This demonstrates that drug asset forfeiture programs may influence drug arrests in a way that exacerbates disproportionate black versus white drug arrest rates, because

the influence of these programs is stronger on the black population comparted to the white population.

Summary of Findings

The findings above confirmed hypotheses 1 and 2; the presence of specialized drug unit personnel within police agencies is associated with higher drug arrest rates in these agencies. However, the effect on black drug arrest rates is over twice the effect on white drug arrest rates. Thus preliminary evidence demonstrates that the presence of specialized drug unit personnel may contribute to perpetuating and exacerbating disproportionalities between black and white drug arrest rates. A plausible explanation is that because specialized drug unit personnel are meant to vigorously enforce drug laws, predictably, police agencies with specialized drug unit personnel have higher drug arrest rates than those without specialized drug unit personnel. Furthermore, because police agencies tend to target drug use and purchasing patterns more typical of African Americans, and because a racialized imagery of who and what constitutes a drug offender exists, the black population is targeted more so than the white population.

Findings also confirmed hypotheses 3 and 4. Police agencies that supplement their budget with revenue from drug asset forfeitures have much higher black and white drug arrest rates than agencies that do not supplement their budget with drug asset forfeitures. The effect is two and half times as strong on the black population as the white population. This demonstrates that incentives within law enforcement agencies to vigorously enforce drug laws may perpetuate and exacerbate disproportionate black versus white drug arrest rates. A plausible explanation is that officers in these police agencies view drug arrests as a legitimate way to receive additional revenue streams because this has become a typical practice in law enforcement. This results in higher drug arrest rates for the black and white population in these areas; but, as noted above,

because law enforcement agencies tend to target drug use and purchasing patterns more typical of African Americans, and a racialized imagery of drug offenders exists, the black population is effected to a greater extent by incentives to vigorously enforce drug laws than the white population.

This chapter demonstrated the effects of two police organizational characteristics on race-specific drug arrests, namely, the presence of specialized drug unit personnel within police agencies and incentives to vigorously enforce drug laws within police agencies. Chapter five focuses on the effects of structural characteristics with police agencies, specifically assessing the effects of bureaucratic conditions of structural control and structural complexity on race-specific drug arrest, as well as the effect of officer diversity on race-specific drug arrest rates.

CHAPTER FIVE

THE EFFECTS OF POLICE ORGANIZATIONAL CHARACTERISTICS OF STRUCTURAL CONTROL, STRUCTURAL COMPLEXITY, AND OFFICER DIVERSITY ON RACE-SPECIFIC DRUG ARRESTS

In this chapter I shift focus from police organizational arrangements and practices expected to directly affect drug arrests, and assess the effects bureaucratic conditions of structural control and complexity, and officer diversity have on race-specific drug arrests. Specifically, this chapter seeks to answer the following two research questions: (1) How does greater officer diversity affect race-specific drug arrests, net the effects of structural determinants; and (2) how do bureaucratic conditions of police agencies, namely conditions of structural control and structural complexity, affect race-specific drug arrest rates, net the effects of structural determinants?

As noted in chapter two, considerable research on policing focuses on a police culture that is traditionally suspicious of the general public, with police officers maintaining an edge by reading people and sorting citizens into potential offenders (Muir 1977; Van Maanen 1974). Because a racialized perception of who constitutes potential offenders exists (Alexander 2012; Barkan 2012), in this case potential drug offenders (Beckett el al. 2005; Beckett et al. 2006), this practice is often discriminatory (Brown 1981; Kappeler, Sluder, & Alpert 1998). Because enforcement of drug policy involves proactive rather than reactive policing (Eitle and Monahan 2009), a police culture that stereotypes people of color as potential drug offenders while proactively policing drug law will inevitably target people of color for drug arrests.

Recent research though suggests that police cultures are not homogenous and are apt to change (Paoline 2003) as the selection and recruitment of police officers diversify, and more previously excluded populations are hired (Manning 1994; Paoline, Myers, and Worden 2000).

Larger representations of females and racial minorities bring to the police force different outlooks and representations of the public, and may contribute to eroding a culture suspect of minorities. Thus I propose the following hypothesis:

Hypothesis 10: Police agencies with greater officer diversity have lower black drug arrest rates, all else equal.

Beyond the potential effect of officer diversity, Maguire (2003) identifies two distinct clusters of organizational structures that burgeon from bureaucratic conditions and may affect drug arrests: structural control and structural complexity. In organizations characterized by structural control, managers have more direct supervision over workers, and therefore employee discretion decreases. Wilson (1968) suggests that police agencies with higher levels of structural control will have higher arrest rates because increased organizational oversight leads to greater organizational pressures to produce arrests. On the other hand, under conditions of structural complexity, the opposite is true. Because supervision from above managers is less feasible, officer discretion tends to increase and organizational pressures to produce arrests decreases. Because police agencies tend to disproportionately target their drug law enforcement on drug use and purchasing patterns perpetrated by people of color, the effects of structural control and structural complexity are likely to have disparate effects on the black versus white population. Therefore, I propose the following hypotheses:

Hypothesis 6: Police agencies with greater levels of structural control have higher drug arrest rates, all else equal.

Hypothesis 7: The positive association between structural control and drug arrests is stronger for the black population than the white population.

Hypothesis 8: Police agencies with greater levels of structural complexity have lower drug arrest rates, all else equal.

Hypothesis 9: The negative association between structural complexity and drug arrests is stronger for the white population than the black population.

Results

As in the previous chapter, in order to isolate the effects of the independent variables I control for additional factors likely to influence drug arrest rates. Specifically, within the census places police agencies are located, I control for the effects of race-specific social disorganization and indicators of racial threat on race-specific drug arrests, as well as the region, the total size of the population, and the police presence within each census place, as indicated by the number of police officers per 10,000 residents. In addition, I also control for the effects of specialized drug unit personnel and incentives to enforce drug laws within police agencies, two variables demonstrated in the previous chapter to affect race-specific drug arrest rates.

Model 1, in Table 5 below, is the base model. The baseline model here is identical to the full model in the previous chapter. Model 2 in Table 5 includes a measure of *officer diversity,* the percentage of officers within police agencies who are not white males. Results do not support hypothesis 1, that police agencies with greater officer diversity have lower black drug arrest rates. However, the association between officer diversity and white drug arrests verges on statistical significance in the opposite direction (significant at $p<.06$). Police agencies with higher percentages of officers who are not white males have higher white drug arrest rates (but do not have higher black drug arrest rates). Specifically, each 1% higher the proportion of police officers who are not white males is significantly associated with a .4% higher white drug arrest

Table 5. Seeming Unrelated Regression – Structural Control, Structural Complexity and Officer Diversity: Predictors of Change in Logged Black and White Drug Arrest Rates

	Model 1 (n=704)		Model 2 (n=704)		Model 3 (n=704)		Model 4 (n=704)	
	Black	White	Black	White	Black	White	Black	White
Variable	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef(SE)**
Race Specific Social Disorganization	.04 (.01)***	.05 (.01)***	.04 (.01)***	.05 (.01)***	.05 (.01)***	.05 (.01)***	.05 (.01)***	05 (.01)***
Racial Threat	-.05 (.01)***^	.03 (.01)*^	-.05 (.01)***^	.03 (.01)*^	-.05 (.01)***^	.03 (.01)*^	-.05 (.01)***^	02 (.01)^
Black Population Percentage	-.01 (.00)***^	-.00 (.00)*^	-.01 (.00)***^	-.01 (.00)**^	-.01 (.00)***^	-.00 (.00)^	-.01 (.00)***^	.01 (.00)**^
Total Population	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	00 (.00)
Officers per 10,000 Population	.02 (.00)***	.02 (.00)***	.02 (.00)***	.02 (.00)***	.02 (.00)***	.03 (.00)***	.02 (.00)	03 (.00)***
West	.10 (.10)^	.86 (.09)***^	. 07 (.10)^	.80 (.09)***^	.09 (.09)^	.85 (.09)***^	.06 (.09)^	79 (.09)**^
South	-.37 (.09)***^	.13 (.08)^	-.37 (.09)***^	.12 (.08)^	-.35 (.08)***^	.12 (.08)^	-.36 (.08)***^	12 (.08)^
Northeast	-.07 (.10)	-.01 (.09)	-.07 (.10)	.00 (.09)	-.06 (.10)	-.02 (.09)	-.06 (.10)	.01 (.09)
Drug Unit	.27 (.06) ***^	.14 (.06)* ^	.27 (.06) ***^	.12 (.06)* ^	.27 (.06) ***^	.16 (.06)** ^	.27 (.06)**^	14 (.06)*^
Drug Asset Forfeitures	.35 (.08)***^	.16 (.07)*^	.35 (.08)***^	.16 (.07)*^	.32 (.08)***^	.17 (.07)*^	.31 (.08)***^	.16 (.07)*^
Police Culture Officer Diversity			.002 (.00)	.004 (.00)			.002 (.00)	.005(.00)*
Structural Control Standardization					.04 (.02)**^	.01 (.02)^	.04 (.02)**^	.01 (.02)^
Structural Complexity Operates other District Station					-.13 (.07)*^	-.18 (.06)**^	-.14 (.07)*^	.20 (.06)**^
R-Square	.16	.25	.21	.26	.23	.27	.23	.28

* indicates coefficient statistically significant at $p \leq .05$
** indicates coefficient statistically significant at $p \leq .01$
*** indicates coefficient statistically significant at $p \leq .001$
^ indicates significant difference between coefficient in black versus white model at $p \leq .05$

rate. Despite not necessarily providing evidence that greater officer diversity contributes to eroding a police culture suspicious of minorities, this finding is very interesting as it may be explained by the relative standing of women and people of color in the labor market.

Research indicates that women and people of color are highly scrutinized and experience increased performance pressures working in organizations traditionally comprised of white men (especially when they comprise a numeric minority within the organization) (Kanter 1977). Police agencies are organizations traditionally dominated by white males. Because arrests generally, and drug arrests more specifically, are viewed as measures of police productivity, it is possible that white drug arrest rates are higher in agencies comprised of more diverse officers due to the performance pressures they face at work. Although the data does not capture the demographic composition of the arresting officers, it is possible that in order to demonstrate they are productive police officers, minority and women officers make larger numbers of drug arrests, but perhaps focus their attention more equally on both races, and therefore, white drug arrest rates which are typically much lower than black drug arrest rates, are higher in agencies with a more diverse population of police officers.

Moving forward to assess the effects of structural control and structural complexity, results from model 3 in Table 5 indicate that some measures of structural control and structural complexity are significantly associated with drug arrests rates. [8] The *standardization* index, comprised of the number of standardized recruitment procedures for incoming officers, is an indicator of structural control and serves as a proxy for increased organizational oversight. *Standardization* is significantly associated with higher black drug arrests rates (but not white

[8] Some indicators of structural control and structural complexity discussed in the data section were not included in these analyses because they did not have significant associations with race-specific drug arrest rates. The "vertical differentiation" measure was significantly associated to drug arrests in the direction opposite to what was expected, and was highly correlated with other measures included in the analyses.

drug arrests rates). Each additional standardized recruitment procedure is associated with a 6% higher black drug arrest rate. This indicates that, as hypothesized, this measure of structural control and proxy for increased organizational oversight is associated with higher drug arrest rates, and perpetuates racial disproportionalities in drug arrests. Results from model 3 (Table 5) also demonstrate that police agencies that *oversee other district agencies* (an indicator of structural complexity) have significantly lower black and white drug arrest rates. All else equal, police agencies that oversee other district agencies have 11% lower black drug arrest rates and 16% lower white drug arrest rates. As hypothesized, this indicator of structural complexity, and proxy for reduced organizational oversight, is associated with lower drug arrest rates overall, and the effect is stronger on the white population than the black population. This demonstrates that while police agencies characterized by structural complexity may produce lower drug arrest rates overall, they may also contribute to disproportionate drug arrest rates across race because the effect is greater on the white population than the black population.

The full model, model 4 in Table 5 above, demonstrates that the effects of the variables of interest (from chapters four and five) remain statistically significant when they are included in a model together, and their effect sizes on race-specific drug arrest rates remain mostly unchanged. This indicates that each variable is independently associated with race-specific drug arrests, as demonstrated above. Police agencies with higher percentages of officers who are not white males have significantly higher white drug arrest rates but not significantly higher black drug arrest rates. In addition, police agencies characterized by greater levels of structural control and greater organizational oversight are associated with higher black drug arrest rates while agencies characterized by greater structural complexity and lower levels of organizational

oversight are associated with lower black and white drug arrest rates. The negative and significant association is stronger with the white population than the black population.

Summary of Findings

The above findings do not provide support for hypothesis 1, and provide some support for hypotheses 2-5. Officer diversity is not associated with lower black drug arrest rates, but is associated with higher white drug arrest rates. As previously noted, women and people of color who work in positions traditionally comprised of white men are highly scrutinized and experience increased performance pressures in the workplace. In the case of police officers, this would translate to diverse officers making a larger number of arrests to demonstrate that they are productive police officers. Although the demographic composition of the arresting officers is unknown, results suggest looking further into this, as greater officer diversity is associated with higher white drug arrest rates. Perhaps minority and female officers focus their attention more equally on both races, and therefore, white drug arrest rates which are much lower than black drug arrest rates overall, are higher in agencies with a more diverse population of police officers.

Indicators of structural control (*standardization)* and structural complexity (*operating other district agencies)* are significantly associated with race-specific drug arrest rates. Greater levels of *Standardization* serve as a proxy for greater organizational oversight, and are associated with higher drug arrest rates within police agencies, but only for the black population. This indicates that bureaucratic conditions of structural control within police agencies may contribute to producing disproportionate drug arrest rates across space and by race, because greater organizational oversight limits officers' discretion and encourages officers to make more arrests, in this case drug arrests disproportionately targeting the black population. Finally, police agencies that o*perate other district agencies* are associated with lower drug arrest rates, but the

association is stronger for the white population than the black population. Therefore, while bureaucratic condition of structural complexity may decrease organizational oversight and lower drug arrests overall, these conditions are not likely to decrease disproportionalities in drug arrest rates across race.

Chapters four and five focused on how organizational arrangements and practices within police agencies, namely specialized drug unit personnel, incentives to enforce drug laws, officer diversity, and structural control and complexity affect race-specific drug arrest rates. Results demonstrated that police agencies are a fruitful place to identify mechanisms that influence drug arrest rates generally, and influence disproportionate drug arrest rates across race and by space more specifically. The following chapter assesses the effects of the same police organizational arrangements and practices on race-specific drug arrests disaggregated by possession versus trafficking arrests. I pay special attention to examining the potential disparate influences of specialized drug unit personnel, and especially drug asset forfeiture programs on race-specific drug arrests disaggregated by possession versus trafficking arrests in order to examine whether forfeiture programs are being used as they were originally intended, to combat drug crime by attacking the economic viability of the drug trafficking enterprise, or if instead they are being used primarily as a source for profit.

CHAPTER SIX

THE EFFECTS OF POLICE ORGANIZATIONAL ARRANGEMENTS AND PRACTICES ON RACE-SPECIFIC DRUG POSESSION VERSUS DRUG TRAFFICKING ARRESTS

This chapter assesses the effects of the same police organizational arrangements and practices focused on in the previous two chapters, but assesses their effects on race-specific drug arrest rates disaggregated by possession versus trafficking arrests. The nature of the analyses are mostly exploratory, and seek to answer the following research question: (1) How, if at all, do the effects of police organizational arrangements and practices vary across race-specific drug possession versus drug trafficking arrest rates? Special attention is paid to the influence drug asset forfeiture programs have on race-specific drug possession versus drug trafficking arrest rates in order to examine whether forfeiture programs have the originally intended influence of combating drug crime by attacking the economic viability of the drug trafficking enterprise, or if instead, they are primarily used as a source for profit, and influence law enforcement agencies to produce greater numbers of low level drug possession arrests.

As discussed earlier, drug asset forfeiture laws were originally intended to combat drug crime by attacking the supply side of the illegal drug market. Essentially law enforcement sought to reduce drug crime, as well as crimes committed while under the influence of drugs, by attacking the economic viability of the drug trafficking enterprise. Over time though, as law enforcement budgets began to shrink, drug related asset forfeitures became a more and more popular way for law enforcement agencies to supplement their budgets and the targets of drug seizures shifted from big time traffickers to lower level drug users (Blumenson and Nilson 1998). Therefore, I pose the following hypotheses (in what otherwise are exploratory analyses):

Hypothesis 3: Police agencies that supplement their budget with revenue produced from drug asset forfeitures have higher drug arrest rates (possession and trafficking) than police agencies that do not, all else equal.

Hypothesis 5: The positive association between police agencies supplementing their budget with revenue produced from drug asset forfeitures and drug arrest rates is stronger for drug possession arrests than drug trafficking arrests.

Results

Table 6 below shows the relationships between key variables of interest and race-specific drug possession arrest rates.[9] Findings indicate that associations between the control variables and race-specific drug possession arrest rates are similar to the associations found between the control variables and race-specific aggregated drug arrest rates. This is not too surprising, because the majority of drug arrests are for drug possession violations, not drug trafficking violations.

The full model below (model 3, Table 6) includes all police organizational arrangements and practices associated with black and white drug arrest rates, as indicated in chapters four and five. Similar to the control variables, the significant associations identified in the previous chapters are mostly consistent with the associations identified between police organizational arrangements and practices and black and white drug possession arrest rates (with minor variations). For instance, officer diversity is positively associated with white drug possession arrest rates but not black drug possession arrest rates, and the strength of the relationship is similar to the strength of the relationship found for aggregated drug arrest rates. Across police

[9] Nine observations were dropped from analyses using drug arrest rates disaggregated by possession versus trafficking due to unreliable/missing arrest data.

Table 6. Seeming Unrelated Regression – Predictors of Change in Logged Black and White Drug Possession Arrest Rates

	Model 1 (n=695)		Model 2 (n=695)		Model 3 (n=695)	
	Black	**White**	**Black**	**White**	**Black**	**White**
Variable	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**
Race Specific Social Disorganization	.03 (.01)**	.05 (.01)***	.03 (.01)**	.05 (.01)***	.03 (.01)**	.04 (.01)***
Racial Threat	-.04 (.02)**^	.03 (.01)*^	-.05 (.02)**^	.02 (.01)*^	-.05 (.02)**^	.03 (.01)^
Black Population Percentage	-.01 (.00)*** ^	-.00 (.00)*^	-.01 (.00)***^	-.01 (.00)*^	-.01 (.00)***^	-.01 (.00)*^
Total Population	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)
Officers per 10,000 Population	.02 (.00)***	.03 (.00)***	.02 (.00)***	.03 (.00)***	.03 (.00)***	.03 (.00)***
West	.14 (.11)^	.94 (.09)***^	.08 (.11)^	.85 (.19)***^	.04 (.11)^	.84 (.09)***^
South	-.31 (.10)***^	.22 (.09)**^	-.30 (.10)***^	.21 (.09)^	-.32 (.10)***^	.14 (.08)^
Northeast	-.20 (.11)	-.08 (.10)	-.18 (.11)	-.07 (.10)	-.23 (.11)	-.10 (.10)
Police Culture Officer Diversity			.003 (.00)	.01 (.00)*	.002 (.00)	.005(.00)*
Structural Control Recruitment Screening			.08 (.02)***^	.02 (.02)^	.07 (.00)***^	.01 (.02)^
Structural Complexity Operates other District Station			-.09(.08)^	-.18 (.07)**^	-.13 (.08)^	-.20 (.06)**^
Drug Unit					.23 (.07)***	.11 (.06)
Drug Asset Forfeitures					.39 (.09)***^	.22 (.07)**^
R-Square	.12	.24	.14	.25	.20	.26

* indicates coefficient statistically significant at $p \leq .05$
** indicates coefficient statistically significant at $p \leq .01$
*** indicates coefficient statistically significant at $p \leq .001$
^ indicates significant difference between coefficient in black versus white model at $p \leq .05$

agencies, each 1% higher the proportion of police officers who are not white males is significantly associated with a .5% higher white drug possession arrest rate (compared to a .4% higher white aggregated drug arrest rate).

In addition, associations between indicators of structural control and structural complexity and race-specific drug possession arrest rates are similar to the associations identified earlier. A measure of structural control, as indicated by the number of standardized methods agencies use for officer recruitment (*standardization),* is significantly associated with higher black drug possession arrest rates, but not white drug possession arrest rates. Structural complexity (*operating other district agencies*) is significantly associated with lower white drug possession arrest rates, but it is not significantly associated with lower black drug possession arrests rates (structural complexity was significantly associated with lower black aggregated drug arrest rates and is nearly significant here, at $p < .09$). It is noteworthy that none of the structural characteristics of police agencies, namely officer diversity, structural control, or structural complexity are significantly associated with black or white drug trafficking arrest rates (see Table 7 below). This indicates that some of the same organizational level factors that influence drug possession arrests do not influence drug trafficking arrests. This is presumably because drug trafficking arrests are influenced to a greater extent by police organizational arrangements and practices directed more specifically at vigorously enforcing drug laws, such as having specialized drug unit personnel and participating in drug asset forfeiture programs to supplement your budget.

As expected, Table 6 above indicates that the presence of specialized drug unit personnel is significantly associated with black drug possession arrest rates and verges on significance with white drug possession arrest rates (significant at $p \leq .07$). The associations are not quite as strong

as are the associations between specialized drug unit personnel and race-specific aggregated drug arrests rates, but patterns remain the same as those found earlier, so that the effect on the black population is more than twice the effect on the white population. Specifically, all else equal, police agencies with specialized drug unit personnel have, on average, 26% higher black drug possession arrest rates, whereas they have only 12% higher white drug possession arrest rates on average.

Similar to findings for black and white drug possession arrest rates, the presence of specialized drug unit personnel is significantly associated with black and white drug trafficking arrest rates as well (see Table 7 below), but the strengths of the associations are substantially greater. All else equal, police agencies with specialized drug unit personnel are associated with black drug trafficking arrest rates that are, on average, 73% higher than police agencies without specialized drug unit personnel, and white drug trafficking arrest rates that are on average 40% higher. These findings demonstrate that the presence of specialized drug unit personnel within police agencies is significantly associated with higher drug possession and trafficking arrest rates, and the effects are apparently greater on black drug arrest rates than white drug arrest rates. This points to the presence of specialized drug unit personnel contributing to reproducing and perhaps exacerbating disproportionalities between black and white drug possession arrest rates as well as between black and white drug trafficking arrest rates.

Finally, looking further I find that police agencies that supplemented their budgets with drug asset forfeitures have significantly higher black and white drug possession arrest rates. This finding is in line with prior research suggesting that since the 1980s and 1990s the targets of drug seizures have largely been low level drug users. The associations are stronger than the associations found with race-specific aggregated drug arrest rates; police agencies that

Table 7. Seeming Unrelated Regression – Predictors of Change in Logged Black and White Drug Trafficking Arrest Rates

	Model 1 (n=695)		Model 2 (n=695)		Model 3 (n=695)	
	Black	**White**	**Black**	**White**	**Black**	**White**
Variable	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**	**Coef (SE)**
Race Specific Social Disorganization	.08 (.02)***^	.05 (.01)***^	.09 (.02)***^	.05 (.01)***^	.09 (.02)***^	.05 (.01)***^
Racial Threat	-.10 (.02)***^	.01 (.02)*^	-.10 (.02)***^	.01 (.01)^	-.10 (.02)***^	.01 (.01)^
Black Population Percentage	-.01 (.00) ^	.00 (.00)^	-.01 (.00) ^	.00 (.00)^	-.01 (.00) ^	.00 (.00)^
Total Population	.00 (.00)*	.00 (.00)**	.00 (.00)*	.00 (.00)**	.00 (.00)	.00 (.00)*
Officers per 10,000 Population	.02 (.01)**^	.01 (.01)*^	.02 (.01)***^	.01 (.01)**^	.02 (.01)***^	.01 (.01)**^
West	.22 (.16)^	.84 (.13)***^	.19 (.17)^	.80 (.13)***^	.14 (.17)^	.78 (.13)***^
South	-.69 (.10)***^	-.24 (.11)*^	-.68 (.15)***^	-.26 (.11)*^	-.73 (.15)***^	-.29 (.11)**^
Northeast	.36 (.17)*	.30 (.13)***	.37 (.17)*	.29 (.13)*	.23 (.17)	.21 (.13)
Police Culture Officer Diversity			.002 (.00)	.004 (.00)	.000 (.00)	.003(.00)
Structural Control Recruitment Screening			.04 (.03)^	-.04 (.02)^	.02 (.03)^	-.04 (.02)^
Structural Complexity Operates other District Station			-.05 (.12)	-.06 (.09)	-.13 (.12)^	-.11 (.09)
Drug Unit					.55 (.11)***^	.34 (.09)***^
Drug Asset Forfeitures					.21 (.13)	.04 (.10)
R-Square	.17	.18	.17	.18	.20	.20

* indicates coefficient statistically significant at $p \leq .05$
** indicates coefficient statistically significant at $p \leq .01$
*** indicates coefficient statistically significant at $p \leq .001$
^ indicates significant difference between coefficient in black versus white model at $p \leq .05$

forfeitures are expected to have approximately 49% higher black drug possession arrest rates on average, and 25% higher white drug possession arrest rates on average, all else equal. This suggests that the targets of drug seizures are indeed drug user and purchasers.

Looking back at Table 7, this becomes clearer, as results indicate that there is not a significant association between police agencies that supplemented their budgets with drug asset forfeitures and black or white drug trafficking arrest rates. This provides some evidence that asset forfeiture laws that were originally intended to combat drug crime by attacking the economic viability of the drug trafficking enterprise may not be achieving this goal. Rather, the above findings indicate that drug asset forfeiture programs may be incentivizing vigorous enforcement of low level drug offenses more so than drug trafficking offenses, and serving as a mechanism to increase drug possession arrests overall, and exacerbate disproportionate drug arrests across space and by race.

Summary of Findings

I find mixed support for hypothesis 1 and strong support for hypothesis 2. All else equal, police agencies that supplemented their budgets with revenue from drug asset forfeitures have significantly higher drug possession arrest rates than police agencies that did not, but they did not have significantly higher drug trafficking arrest rates. If asset forfeitures were being used as they were originally intended, to combat drug crime by attacking the economic viability of the drug trafficking enterprise, police agencies supplementing their budgets with revenue from drug asset forfeitures should have significantly higher drug trafficking arrest rates, as well as drug possession arrest rates. The fact that there is no significant association is quite eye opening, and provides preliminary evidence indicating that drug asset forfeiture programs may not be achieving their originally intended goals. Instead, it seems drug asset forfeiture programs are

likely incentivizing police agencies and the officers that comprise them to target low level drug users, and minorities drug users more particularly, in order to generate additional revenue streams for their respective agencies (as indicated by significant associations with drug possession arrest rates).

Overall, findings from this chapter demonstrate that some of the same organizational level factors that influence drug possession arrests do not influence drug trafficking arrests. Indicators of structural control and complexity, as well as officer diversity and the use of drug asset forfeitures are associated with (black and/or white) drug possession arrest rates, but not drug trafficking arrest rates. The only independent variable of interest significantly associated with drug trafficking arrest rates is the presence of specialized drug unit personnel, which is also associated with possession arrest rates. This is not too surprising, and suggests that drug trafficking arrests are influenced to a greater extent by organizational arrangements and practices directed specifically at vigorously enforcing drug laws.

CHAPTER SEVEN

DISCUSSION AND CONCLUSION

As Barbara Reskin urged in her 2002 ASA presidential address, we must build on research that explains why access to societal rewards – and in the case of drug arrests, societal penalties - vary across ascriptively-defined groups, and seek to explain how this variation is produced. That is the purpose of this research, to shed light on mechanisms that contribute to producing disparate drug arrest rates across space and by race. A relatively large body of research helps explain why drug arrests vary across space and race, but only relatively recent and sparse research focuses on how these variations are produced. This study sheds light on the crucial role police agencies play in this process, highlighting organizational arrangements and practices within police agencies that influence race-specific drug arrest rates, above and beyond structural determinants of drug arrests.

In order to identify police organizational arrangements and practices that influence drug arrest rates, and perpetuate disproportionalities in drug arrest rates across space and by race, I used police organizational data from the Law Enforcement Management and Administrative Statistics and race-specific drug arrest data from the Uniform Crime Reports to identify significant associations between police organizational arrangements and practices and race-specific drug arrest rates, net the effects of structural determinants of drug arrests. The analyses focused on the effects of five key independent variables: the presence of specialized drug unit personnel, incentives to enforce drug laws via drug asset forfeitures, organizational conditions of structural control and structural complexity, and officer diversity within police agencies.

Key findings are summarized below:

- The presence of specialized drug unit personnel within police agencies is significantly associated with higher black and white drug arrest rates. The positive association is significantly stronger for black drug arrest rates than white drug arrest rates, so that on average, the influence of specialized drug unit personnel is twice as strong on the black population as the white population.
- The practice of police agencies supplementing their budgets with drug asset forfeitures is significantly associated with higher black and white drug arrest rates. This positive association is significantly stronger for black drug arrest rates than white drug arrest rates, so that on average, the influence of drug asset forfeiture programs is twice as strong on the black population as the white population.
- Greater officer diversity within police agencies is significantly associated with higher white drug arrest rates, but is not significantly associated (positively or negatively) with black drug arrest rates.
- Greater levels of organizational oversight, as indicated by the number of standardized practices police agencies have for hiring new recruits (a measure of structural control), are significantly associated with higher black drug arrest rates, but are not significantly associated with white drug arrest rates.
- Lower levels of organizational oversight, as indicated by whether police agencies operate additional district agencies (a measure of structural complexity), are significantly and negatively associated with black and white drug arrest rates. The negative association is significantly stronger on white drug arrest rates than black drug arrest rates, so that on average, the reduction in drug arrests is greater for the white population then the black population.

- The influence of police organizational arrangements and practices on race-specific drug possession arrest rates mirror the influences of police organizational arrangements and practices on race-specific total drug arrest rates (noted above).
- Only one independent variables of interest, the presence of specialized drug unit personnel within police agencies, is significantly associated with black and white drug trafficking arrest rates. The influence of specialized drug unit personnel on drug trafficking arrest rates is almost twice as strong on the black population as the white population.
- Participating in drug asset forfeiture programs is not significantly associated with black or white drug trafficking arrest rates, but is significantly and positively associated with black and white drug possession arrest rates. This finding indicates that drug asset forfeiture programs may not be achieving their originally intended goals of reducing drug crime by attacking the economic viability of the drug trade (i.e., drug trafficking), and provides preliminary evidence that drug asset forfeiture programs incentivize police agencies to target low level drug users, and minority drug users more specifically, in order to generate additional revenue streams for their respective agencies.

Looking deeper into the key findings noted above, results from chapter four provide support for hypotheses 1 – 4 (from Chapter 2), as they demonstrate significant and positive associations between the presence of specialized drug unit personnel and race-specific drug arrest rates, as well as police agencies participating in drug asset forfeiture programs (to supplement their budgets) and race-specific drug arrest rates. The associations are twice as strong on black drug arrest rates as white drug arrest rates, and the differences are statistically and substantively significant. These findings support the notion that the presence of specialized drug

unit personnel and drug asset forfeiture programs influence drug arrest rates so that they are higher than they might be without specialized drug unit personnel or drug asset forfeiture programs. Perhaps more importantly, findings demonstrate that these police organizational arrangements and practices contribute to producing disproportionate black versus white drug arrest rates.

An alternative explanation to these findings are that specialized drug units are more likely to be formed within police agencies located in communities where drug use and trafficking is a larger problem; in other words, drug arrest rates may greater in these areas because there is actually more drug use and drug trafficking that occurs, and drug units may be formed as a result. While this could be the case, approximately two thirds of police agencies included in the analyses have specialized drug unit personnel. It is not likely that such a large number of communities can be systematically characterized as having drug related crime problems that are more substantial than the average community. Furthermore, race-specific social disorganization indices serve as a proxy for public drug use and trafficking and are controlled for in the analyses. Therefore at least some of the differences in public drug use and trafficking should be accounted for. As such, a more fruitful explanation to explore further is that police agencies employ specialized drug unit personnel in order to vigorously enforce drug laws, and as a result, drug arrest rates in these areas are higher.

While it makes sense that the presence of specialized drug unit personnel may result in higher drug arrest rates, it is less clear why the presence of specialized drug unit personnel has a stronger influence on black drug arrest rates than white drug arrest rates. Despite some research identifying differences in drug purchasing and use patterns between African Americans and the white population that lead to a greater chance for African Americans to make contact with the

police, research also demonstrates that individuals with similar drug use patterns have disparate likelihoods of being stopped by police (Ramchand et al. 2006; Ream et al. 2010). In particular, younger black males in low income neighborhoods are more likely to be stopped by police when they violate drug use etiquette, whereas according to Ream et al. (2010), white individuals who violate the same drug use etiquette are not statistically more likely to be stopped by the police. Findings from the current research provide evidence that corroborates this notion, as they demonstrate that police agencies with organizational arrangements and practices in place to vigorously enforce drug laws apparently enforce drug laws in a manner that disproportionately effects the African American population. These findings also align with those from Beckett, Nyrop, Pfignst (2006), and Bowen (2005), who provides evidence that a racialized perception of who and what constitutes the drug problem in America largely accounts for the disproportionate drug arrest rates of Latinos and blacks compared to whites in Seattle.

Moving forward, in order to test hypotheses 6 – 10 from chapter 2, I assessed the effects of bureaucratic conditions of structural control and structural complexity, as well as officer diversity, on race-specific drug arrest rates. I find partial support for hypotheses 6 – 9. One measure of structural control (a recruitment screening index) and one measure of structural complexity (and dummy variable indicating whether agencies operate another district agency) are significantly associated with black and white drug arrest rates in their hypothesized directions. More standardized recruitment procedures in police agencies are significantly associated with higher black drug arrest rates, but not white drug arrest rates. These agencies are believed to have greater levels of oversight which produces pressures for police officers to make a higher number of arrests (Wilson 1968; Maguire 2003). It is possible that because a racialized perception of who and what constitutes a drug offender exists (Beckett et al. 2005; Beckett et al.

2006), and because police officers target drug purchasing and use patterns that are more typical among African Americans (Johnson et al. 2006; Ramchand et al., 2006), that increased drug law enforcement is aimed disproportionately at people of color, therefore perpetuating disproportionalities in drug arrest rates across race.

Findings from chapter five also reveal that operating additional district agencies (a measure of structural complexity) is negatively associated with black and white drug arrest rates. Theoretically, structural complexity results in less oversight and less pressure to make arrests among police officers (Wilson 1968; Maguire 2003). Our findings demonstrate this may be the case. In addition, the strength of the association is greater on white drug arrest rates than black drug arrest rates, indicating that despite lower drug arrests overall, structural complexity may perpetuate racial disproportionalities in drug arrest rates as well. Another way to interpret this finding is that police agencies operating other district agencies may be less responsible for direct law enforcement and making arrests. If this is the case, drug arrests would be lower in these agencies, but these lower arrest rates would not be the result of less organizational oversight, but rather would be the result of functional differences of the agencies themselves.

These findings build on sparse prior research examining how police organizational structures influence drug arrest patterns. To date, I am aware of one study that does so; Eitle and Monohan (2009) focus on differences in levels of structural control and structural complexity as well, and their study produced mixed findings regarding hypotheses postulating that greater levels of structural control are associated with higher drug arrest rates and that greater levels of structural complexity are associated with lower drug arrest rates. Using police organizational data compiled from the 1997 and 1999 Law Enforcement Management and Administration Surveys and arrest data from the year 2000 Uniform Crime Reports, they find a number of

measures of structural control and structural complexity significantly associated with black and white drug arrests, but they are mostly associated opposite to the hypothesized directions. More specifically, Eitle and Monahan (2009) finds that measures of structural complexity, including spatial differentiation (capturing measures of vertical and horizontal differentiation) and functional differentiation, are positively, not negatively, associated with black and white drug arrest rates. In addition, a measure of the number of formalized written policies, a measure of structural control, was significantly and positively associated with black drug arrests, as hypothesized, but negatively associated with white drug arrest rates.

Inconsistencies between the findings from the current study and Eitle and Monahan's (2009) study may be a result of structural control and structural complexity being operationalized somewhat differently across studies, because the measures included in the 1997/99 LEMAS do not perfectly align with the measures included in the year 2000. Additionally, Eitle and Monahan included only 260 agencies located in census places with at least 1,500 black and 1,500 white residents in their analyses, while the current study includes 704 agencies with at least 500 black and 500 white residents in the year 2000. Not only does this mean that the current study examines a larger number of police agencies, but it also examines a systematically different sample of municipal police agencies located in some areas with smaller black and white population. Finally, Eitle and Monahan (2009) generate black and white arrest rates using single year arrest data from the year 2000. Because drug arrest rates typically have wide yearly fluctuations, a more reliable measure averaging arrest rates from 1999 – 2001 is used in the current study. In order to gain a better understanding of how bureaucratic conditions of structural control and structural complexity influence drug arrest rates, future research should continue to

examine the effects of these characteristic over time, maintaining focus on examining changes within police agencies to see how they affect race-specific drug arrest rates over time.

In addition to examining characteristics of structural control and structural complexity, I also examine the effect of officer diversity on race specific-drug arrests. I do not find support for hypotheses 10 and 11 from chapter two, as officer diversity is associated with higher white drug arrest rates, and is not associated with black drug arrest rates. Nevertheless, these findings are quite interesting. It is noteworthy that prior research indicates that women and people of color are highly scrutinized and experience increased performance pressures working in organizations traditionally comprised of white men (especially when they comprise a numeric minority within the organization) (Kanter 1977). Because police agencies are organizations traditionally dominated by white men, and arrests are viewed as measures of police productivity, it is possible that white drug arrest rates are higher in agencies comprised of more diverse officers due to performance pressures that non-traditional police officers face at work. While I do not collect data on the compositions of the arresting officers, it could be the case that in order to demonstrate that they are productive police officers, minorities and female officers produce larger numbers of drug arrests. Furthermore, these officers may focus their attention more equally on both black and white populations, and therefore in agencies with greater officer diversity, white drug arrest rates that are typically much lower than black drug arrest rates, are higher in agencies with a more diverse population of police officers.

It is important to note that police agencies with greater officer diversity are typically located in cities that are more diverse; therefore, it could be the case that differences between cities that are more and less racially diverse influence drug arrest rates, above and beyond the influence of officer diversity. For instance, it is possible that cultural differences between more

and less racially diverse cities impact drug law enforcement patterns, and that people of color, and specifically African Americans, are targeted by law enforcement less in racially heterogeneous communities. If this is the case, city level cultural influences that effect drug arrests may be captured, in part, by the measure of officer diversity.

Finally, chapter six explores the effects of police organizational arrangements and practices on race-specific drug arrests disaggregated by possession versus trafficking arrests. These analyses were mostly exploratory and demonstrate that most of the factors that influence total drug arrest rates also affect drug possession arrests rates. This makes sense because the majority of drug arrests are for drug possession violations, not drug trafficking violations. Analyses assessing the effects of police organizational arrangement and practices on race-specific drug trafficking arrest rates reveal that structural characteristics of police agencies, such as officer diversity, structural control, or structural complexity, are not significantly associated with black or white drug trafficking arrest rates. This indicates that some of the same organizational level factors that influence drug possession arrests do not influence drug trafficking arrests. Rather, drug trafficking arrests may be influenced more by organizational arrangements and practices directed specifically at vigorously enforcing drug laws. This is demonstrated by the fact that the presence of specialized drug unit personnel is significantly associated with higher drug trafficking arrest rates.

Although the analyses in chapter six are mostly exploratory, I pay special attention to examining the influence of drug asset forfeiture programs on race-specific drug possession and drug trafficking arrest rates, because drug asset forfeitures programs are meant to reduce drug crime by attacking the economic viability of the drug market. Yet, findings from the current study demonstrate that drug asset forfeiture programs that supplement police agencies' budgets

are significantly and positively associated with black and white drug possession arrest rates, but not drug trafficking arrest rates. These finding are quite provocative, as they provides prima facie evidence that forfeiture laws incentivize police agencies to make greater numbers of drug arrests in order to produce revenue for their police agencies, but that increased enforcement is directed at low level drug offenders rather than drug traffickers who were the original target of forfeiture laws. Future research should investigate this relationship further, as there is no research to date that I am aware of that has empirically assessed the effect that drug asset forfeiture laws and practices have on race-specific drug arrest rates disaggregated by possession versus trafficking arrests.

Taken together, the findings from this study have important policy implications; they shed light on the roles that police organizational arrangements and practices have on producing drug arrest rates across space and by race, and highlight the roles of police agencies as bureaucratic organizations that act as intermediaries between legislative drug policy and frontline officers who enforce drug policy. According to this research, the presence of specialized drug unit personnel in municipal police agencies seems to raise overall drug arrest rates, and increase disproportionalities in drug arrests between black and white populations. In a political climate that is beginning to acknowledge that draconian drug laws, and the vigorous enforcement of them, have had dire consequences on communities of color, removing specialized drug unit personnel from municipal police agencies could be an effective strategy for lowering drug arrest rates overall, and especially in communities of color. Additionally, by removing specialized drug law enforcement from local agencies, this would signify a shift away from punitive drug policy and drug law enforcement, and open the door for communities to deal with drug related issues in new, less punitive ways.

Findings from this research also point to dismantling drug asset forfeiture programs to reduce drug arrest rates across communities, especially in communities of color. It is clear that drug asset forfeiture programs incentivize increased drug law enforcement by allowing cash, bank accounts, cars, boats, and houses, etc., to be seized under forfeiture laws, and to be used to supplement local law enforcement budgets. Indeed, findings demonstrate that all else equal, drug asset forfeiture programs are associated with higher black and white drug possession arrest rates. There is no relationship found between drug asset forfeiture programs and black or white drug trafficking arrest rates. This provides preliminary evidence that drug asset forfeitures programs are not having their intended effect of combatting drug crime by attacking the economic viability of the drug trafficking enterprise. Instead they seem to be incentivizing police agencies to target low level drug offenders, and minority drug offenders more particularly, in order to generate additional revenue streams for their respective agencies. By dismantling drug asset forfeiture programs as we know them, police agencies would no longer have additional financial incentives to vigorously enforce drug laws, and as a result, total drug arrest rates would become lower, and disproportionate black versus white drug arrest rates would likely be reduced.

Despite numerous provocative findings from the current study, there are a number of limitations to consider. First, the cross-sectional nature of this study does not allow for determining causality between the police agency characteristics investigated and race-specific drug arrest rates, because the time-ordering of the variables is unaccounted for. Second, of 1,925 municipal police agencies sampled in the Law Enforcement Management and Administrative Survey, only 704 agencies had matching drug arrest data and were located in census places with at least 500 black and 500 white residents. Because there may be systematic differences between those agencies included in the analyses and those omitted, we cannot generalize the results to all

municipal police agencies within the United States. For instance, because there are no cities with fewer than 500 black or white residents included in the analyses, findings from the current study cannot be generalized to police agencies located in communities with these population characteristics. Third, because this study assesses a national sample of municipal police agencies, it does not account for the local contexts within which police agencies are located, above and beyond the control variables included in the analyses. This means that differences in local policies and pressures (or lack thereof) surrounding drug law enforcement remain unmeasured. For instance, some cities and/or counties have passed legislation that makes marijuana drug law enforcement the lowest law enforcement priority. In these areas drug arrest rates will be systematically lower. This type of local nuance is lost in such a large scale analysis of municipal police agencies. Finally, the data for this study comes from the year 2000, which is now fifteen years old. The year 2000 was chosen for the analyses because detailed census place level data was available for this year, as was data from the Law Enforcement Management and Administrative Statistics: 2000 Sample Survey of Law Enforcement Agencies, but rhetoric around drug law enforcement and state level drug laws have changed since the year 2000. We cannot know without further research how these changes might influence the findings from this study.

Future research should further assess the effects of police organizational arrangements and practices on race-specific drug arrests, and conduct longitudinal analyses that are able to determine causality by examining how changes within police agencies affect race-specific drug arrest rates over time. Additionally, research examining race-specific drug arrests in fewer cities within one or two states would provide further insight into the effects of police organizational arrangement and practices on race-specific drug arrest rates by accounting for differences within

local contexts that may influence drug arrest rates, and remain unaccounted for in the current analyses. As noted above, some local cities and/or counties have passed legislation making marijuana drug law enforcement the police's lowest priority. This will influence drug arrests downward, but the lower drug arrest rates may not be related to police organizational characteristics. On the flipside, a newly elected public official may run on a platform of reducing drug use, and drug related crime. Once elected, this official may push local law enforcement to focus resources on drug law enforcement without there being measurable shifts in police organizational arrangements and practices. By assessing fewer police agencies, across fewer cities in greater depth, some of the nuance that is lost in a larger scale analysis can be accounted for, and the effects of the police organizational arrangements and practices can be better isolated, above and beyond additional determinants of drug arrests. Finally, only very sparse research examines the effects of drug asset forfeitures programs on drug arrest rates. Future research should empirically assesses the effects of drug asset forfeiture programs on race-specific drug possession and drug trafficking arrest rates in order to evaluate if drug asset forfeiture programs are achieving their originally intended goals by attacking the economic viability of drug markets, or if they are functioning as a revenue producing mechanism that mostly impacts drug possession arrest rates.

The purpose of this study was to build on research that explains *why* differences in drug arrest rates exist across space and by race, and shed light on *how* these differences are produced. By identifying police organizational arrangements and practices associated with race-specific drug arrest rates, this research highlighted the influence law enforcement agencies have on producing drug arrests, and identified potential mechanisms that help to explain how disproportionate drug arrest rates across space and by race are produced. Using data gathered

from the Law Enforcement Management and Administration Statistics: 2000 Sample Survey of Law Enforcement Agencies, the Uniform Crime Reporting Program Data: Arrests by Age, Sex, and Race, 1999, 2000, and 2001, and the 2000 decennial Census for city-level demographic information, findings demonstrated that police organizational arrangements and practices such as the presence of specialized drug unit personnel, drug asset forfeiture programs, officer diversity, and bureaucratic conditions of structural control and structural complexity all influence drug arrest rates. These findings highlight the crucial role of police agencies in determining drug arrests, and point to local law enforcement agencies as a fruitful place for identifying mechanisms to influence future change.

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