POT AS PRETEXT: MARIJUANA, RACE AND THE NEW DISORDER IN NEW YORK CITY STREET POLICING

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ABSTRACT

The twin engines of New York City's "Order Maintenance Policing" strategy are "stop, question, and frisk" tactics in street enforcement, and the aggressive targeting of low-level misdemeanors such as marijuana possession and trespass. Although possession of small quantities of marijuana has been decriminalized in New York State since the late 1970s, arrests for marijuana possession increased more than tenfold since the mid-1990s, and remain high more ten years later. Street stops have increased by a factor of six in the same period. In analyses of data on 2.2 million stops and arrests, we identify significant racial disparities in the implementation of marijuana enforcement,, including both stops and arrests, that are robust to controls for social structure, local crime conditions, and general stop levels. The racial imbalance in marijuana enforcement in black neighborhoods suggest a "doubling down" of street-level policing in places already subject to heightened scrutiny in the search for weapons. The links between marijuana and weapons enforcement in these areas suggest that the policing of marijuana may be a pretext in the search for guns. Despite these ties, however, we show that marijuana enforcement has diminishing returns: each additional street stop for marijuana reduces the likelihood of seizing firearms or other weapons. We also show that a large proportion of marijuana enforcement lacks constitutional justification under either federal or New York law. Marijuana stops are more prevalent in precincts where "other" and "high-crime area" justifications are more likely to be reported, two factors that are constitutionally insufficient to justify a street stop.

The racial skew and limited efficiency of both the "stop, question, and frisk" tactics and marijuana enforcement in detecting serious crimes suggest that non-white New Yorkers bear a racial tax from contemporary policing strategy. The social costs of race-based implementation of these twin tactics and their questionable constitutionality are not offset by any substantial and observed benefits to public safety.

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I. INTRODUCTION

Police enforcement of marijuana offenses in New York City has grown dramatically over the past half century (see, e.g., Brecher, 1972; Trebach, 1987; Kleiman, 1989, 1992; Zimring and Hawkins, 1992; Golub and Johnson, 2006, 2007; Levine and Small, 2008). Despite the decriminalization of marijuana possession (in small quantities) in 1977 by the New York State Legislature, the police focus on order maintenance and "quality of life" crimes has led to the systematic and forceful pursuit of marijuana possession as part of the City's aggressive arrests and "stop, question, and frisk" (SQF) tactics (Livingston, 1997; Spitzer, 1999; Harcourt, 2001; Golub, Johnson, and Dunlap 2007).

In this way, the enforcement of marijuana possession laws became one of the twin engines of Order Maintenance Policing (OMP) in New York City since its inception in 1994. Police began targeting individuals "possessing, selling, or smoking even small amounts of marijuana" in accordance with then-Mayor Giuliani's stated goals of order maintenance (Flynn 1998). Figure 1 shows that shortly after "quality of life" enforcement was introduced in 1994, marijuana possession arrests skyrocketed. By 2000, marijuana possession arrests accounted for

fifteen percent of all adult arrests in the city, more than any nondrug misdemeanor charge (Levine and Small 2008, Golub et al 2007). By 2006, rates were nearly 500% greater than a decade earlier. In fact, New York City's four largest boroughs rank in the top five U.S. counties in *per capita* marijuana arrest rates (King and Mauer, 2006; Levine and Small, 2008).

[Figure 1 about here]

The intersection of marijuana enforcement and order maintenance policing tactics more generally has raised concerns about its potential for racial and economic profiling that may undermine police legitimacy and distract from broader quality of life or public safety policing goals (cf., Dwyer, 2009). Levine and Small (2008) link the racial disparity in marijuana arrests in New York to higher rates of street stops in black and Hispanic neighborhoods. Racial disparities in street stops are evident in poor neighborhoods with high concentrations of black and Hispanic residents even after controlling for differences in local disorder and crime conditions (Spitzer, 1999; Fagan and Davies, 2000; Gelman, Fagan and Kiss, 2007; Fagan, et al., 2010), and the same disparities exist for marijuana arrests. Saxe et al. (2001) surveyed more than 42,000 youths from 41 cities and suburbs and shows that neighborhood disparities in drug enforcement are largely explained by socioeconomic disadvantage and population demography rather than crime, leaving only a small marginal relationship between the prevalence of drug use (whether marijuana or other drugs) and racial composition itself). Golub et al (2007) show that the large racial and ethnic disparities in marijuana arrests in New York date back to 1980.

Availability of marijuana smokers and sellers may explain the disparity in marijuana arrests. Saxe et al. (2001) also notes that since visible drug sales are more prevalent in minority neighborhoods, police can simply choosing efficiency over distributive concerns by focusing on the "low hanging fruit" of visible marijuana use. But that choice has produced large racial

disparities in misdemeanor marijuana arrest rates relative to race-specific rates of marijuana possession or use. Also, the satisficing argument only tells part of the story of the racial disparities in marijuana arrests in New York City. Rather, the focus on nonwhite misdemeanor marijuana crimes is a policy choice that is based not in racial differentials in marijuana use but on a crime control rationale.[1] One of the goals of order maintenance policing in New York was to signal to residents and visitors alike in both commercial areas as well as residential areas that routine economic and social activities would not be depressed by visible signs of social disorder (Kelling and Cole, 1996; Livingston, 1997; for a review, see Garnett, 2005). However, the implementation of OMP has not reflected these objectives. Golub et al (2006) show that the increase in marijuana arrest activity shift enforcement away from business and cultural centers, areas that should be important given the policy goals of quality of life policing, and into residential areas. And marijuana use in public spaces generally draws little attention from the police (Johnson et al., 2006, 2008), especially for white marijuana smokers.[2]

The similarity in the patterns of street stops and marijuana arrests under OMP have led to characterizations of marijuana as the new *Broken Windows*, a manifestation of underlying crime and disorder problems that justifies aggressive policing in minority neighborhoods (King and

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[1] The racial skew in marijuana enforcement both in New York City and nationally is at odds with the racial and ethnic patterns of marijuana use in national survey data. The Monitoring the Future Survey, an annual survey of substance use among high school seniors and eighth graders, shows that teenage marijuana use since 1990 is higher among whites than other racial or ethic groups (Johnston et al. 2005). Saxe et al (2001) shows that blacks and Hispanics reported lower rates of drug use than their white counterparts. The National Survey of Drug Use and Health (NSDUH) showed very small differences in marijuana use rates between black and white teenagers, and lower rates among Hispanics.[1] Yet marijuana arrest rates across the U.S. have been far higher for non-Hispanic Blacks and Hispanics (King and Mauer, 2006). In New York City, ground zero for marijuana enforcement nationally (King and Maurer, 2006; Levine and Small, 2008), youth are less like to report having used marijuana than their counterparts nationwide, and white youth are more likely to have tried illegal substances (including marijuana as well as other drugs) than blacks or Hispanics (NYC Department of Health and Mental Hygiene, 2007).

[2] When police do respond, whites are usually given a summons while Black and Hispanic smokers are arrested, booked, and usually spend a night or two in jail (Levine and Small, 2008; Dwyer, 2009). While whites in both public spaces and residential areas are treated with procedural lenience, marijuana arrests have increased sharply in low income neighborhoods in the boroughs outside Manhattan, well beyond the city's most public and densely trafficked areas, and with little measurable impact on crime or safety (see, e.g., Harcourt and Ludwig, 2007). The fact that many of these marijuana arrests are either adjourned or dismissed suggests a form of unregulated procedural punishment (Feeley, 1992) for marijuana offenses that is skewed toward non-whites.

Mauer, 2006; Harcourt and Ludwig, 2007; Levine and Small, 2008). Despite these logical connections, the link between marijuana enforcement and the underlying engine of OMP has been speculative: claims of racial disparities in marijuana enforcement have been based on patterns and trends in marijuana arrests, but not on the necessary predicate for arrests: broad-based police stops and citizen interdictions, or SQF, at relatively low levels of reasonable and individualized suspicion (*see, e.g.,* Spitzer, 1999; Bratton and Knobler, 1998; Garnett, 2005; Harcourt and Meares, 2010).

Just as in OMP, which was based on theories of social and physical disorder (Livingston, 1997; Harcourt, 1998; Waldeck, 1999; Fagan and Davies, 2000),[3] gave rise to equal protection concerns because of its racial and spatial concentration, the totality of marijuana enforcement runs similar risks based on its shared policy and tactical foundations. And since stops under OMP have raised Fourth Amendment concerns (Spitzer, 1999; Gould and Mastrofski, 2004; Harcourt and Meares, 2010), it is reasonable to extend those concerns to the legal justifications of street stops for marijuana. The potential for legally ambiguous stops is greatest in "high discretion – low suspicion" stops for low-level crimes such as marijuana possession, or quality of life violations. Marijuana arrests are clustered in many of the same neighborhoods where OMP is carried out with the highest intensity (Harcourt and Ludwig, 2007; Levine and Small, 2008). Again, to the extent that stops provide the supply for a large share of marijuana arrests, their constitutional liabilities come with them.

These questions are the focus of this article. They take on both normative and constitutional importance in light of the limited efficacy of OMP in preventing more serious

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[3] At its implementation in 1994, OMP also was based on concerted efforts to reduce violence and specifically, to detect and remove illegal weapons. See, Spitzer (1999), and Fagan et al. (2010). See, also, Bratton and Knobler (1998) and Silverman (1999).

crime (Harcourt, 2000; Ludwig and Harcourt, 2006; Rosenfeld et al., 2005), the racial disparities seen in its implementation (Fagan and Davies, 2000; Fagan et al. 2010), and the history of constitutional concerns that have enveloped the policy (*Daniels*, 2003).

II. CONSTITUTIONAL AND CRIMINOLOGICAL BACKGROUND

A. Doubling Down on Pot

1. A Brief History of OMP

Following the election of Rudolph Giuliani as Mayor in 1993, newly appointed NYPD Commissioner William Bratton implemented a regime of "order-maintenance policing" which – together with other management reforms and innovations such as CompStat crime mapping and accounting – dramatically and suddenly changed both the strategy and tactics of policing across the City (Bratton and Knobler, 1998; Silverman, 1999). The new strategy was grounded in *Broken Windows* theory (Wilson and Kelling, 1982; Kelling and Coles, 1996) and focused on the connection between physical and social disorder and violent crime (Greene, 1999; Livingston, 1997; Spitzer, 1999; Sampson and Raudenbush, 1999; Duneier and Molotch, 1999; Waldeck, 2000; Fagan and Davies, 2000; Taylor, 2001; Harcourt, 2001; Garnett, 2005; Fagan et al., 2010).

In the new policing model, police tactics, resources and attention were redirected toward removal of visible signs of social disorder – the human equivalent of "broken windows" – by using police resources both for vigorous enforcement of laws on minor "quality of life" offenses and aggressively interdicting citizens in an intensive and widespread search for weapons (Kelling and Coles, 1996; Bratton and Knobler, 1998; Silverman, 1999; Maple and Mitchell, 2000). Using aggressive "stop, question, and frisk" tactics, this brand of order-maintenance policing (OMP)

was designed to reduce violence and weapons (especially firearms) possession (Spitzer, 1999; Waldeck, 2000; Fagan and Davies, 2000; Harcourt, 2001).

This tactical design required some re-engineering of the original *Broken Windows* theory. In its pristine form, *Broken Windows* required that police "take care of little things" such as social or physical disorder, in order to prevent the onset of more serious crimes (Wilson and Kelling, 1982). Wilson and Kelling saw disorder as a signal that local guardianship was weak and that crime would be tolerated, inviting a criminal invasion (see, for example, Skogan, 1990). The link between these "little things" and serious crime was mystical, in the eyes of the chief architect of the OMP strategy, Jack Maple. In his memoir, *The Crime Fighter* (Maple and Mitchell, 2000), Maple dismisses the idea that the big things would somehow take care of themselves, claiming that murderers and other serious offenders were unaffected by neighborhood conditions such as graffiti, abandoned cars, or trash strewn vacant lots.

In reality, Maple interpreted the "little things" as people: not the much publicized "squeegee men" who harassed motorists at the entrances to bridges and tunnels entering Manhattan, but serious offenders who, when not actively involved in violent crimes, were engaged in disorderly behavior such as public drinking or smoking marijuana. These "little things" also included would-be offenders whose behaviors signaled to patrolling officers that, to use the words of Chief Justice Warren in *Terry v Ohio* (392 U.S. 1 (1968)), "crime was afoot." This meant that, in Maple's eyes, the disorderly were likely to be carrying weapons or other contraband, or to be on their way to or from robberies or other violent crimes. And to stop them, police had to pre-emptively and aggressively engage them, question them, and if necessary, frisk and search them for weapons or contraband.

2. Theorizing the War on Marijuana

The origins of the tactical shift from quality of life enforcement to aggressive interdiction of citizens – and then marijuana enforcement – are revealed in strategy documents issued by the NYPD in 1994. Specifically, Police Strategy No. 5, *Reclaiming the Public Spaces of New York,* articulated a reconstructed version of *Broken Windows* theory as the driving force in the development of policing policy. It stated that the NYPD would apply its enforcement efforts to "reclaim the streets" by systematically and aggressively enforcing laws against low-level <u>social</u> disorder: graffiti, aggressive panhandling, fare beating, public drunkenness, unlicensed vending, public drinking, public urination, and other low-level misdemeanor offenses. Applying Maple's ideas, the strategy of targeting low-level offenders was thought to leverage the prevention of more serious crime as well, because individuals stopped for minor offenses might also be carrying weapons, or have outstanding warrants for more serious crimes (Kelling and Coles 1996).

The shift to marijuana was not explicitly stated in any of the policy memoranda or public pronouncements that launched OMP. Yet the special emphasis on marijuana generally, was not well grounded in criminological theory. There was little reason to expect that marijuana enforcement would lower rates of more serious drug use or crime. First, given the tenuous links between physical and social disorder and more serious crime (Sampson and Raudenbush, 1999; Harcourt, 1998, 2001; Taylor, 2001), there is little reason to expect that the disruption of marijuana possession and use will reduce violent crime or any other crime. Second, contrary to "gateway" hypotheses, few users of marijuana progress to using harder drugs, and the causal paths are complex and mediated by both observed and unobserved personal characteristics. For example, Golub and Johnson (2001) dismiss dire predictions of future hard drug abuse by youths who came of age in the 1990s. They examined several waves of the National Household Survey on Drug Abuse from 1979-97, and concluded that any increase in youthful marijuana use in the

1990s has been offset by lower rates of progression to hard drug use among youths born in the 1970s. And connections between marijuana use and progression to other drugs is more likely to be produced through a correlation with (unobserved) personal characteristics rather than a causal path (van Ours, 2003). Nor is there a connection through marijuana markets: several studies show that marijuana markets are segmented from cocaine and heroin markets, reducing the likelihood that disrupting marijuana buys will have any effects on the more violence-prone heroin and cocaine markets (see Caulkins and Reuter, 1998, for a review).

The same is true for the linkage between marijuana and crime, especially violent crime. In the 1930's, while lurid headlines across the country proclaimed that marijuana was a dangerous drug that caused crime, a prestigious group of scientists at the New York Academy of Medicine conducted a six-year study that dismissed those claims (Mayor's Committee on Marihuana, 1944). They found that marijuana is neither addictive, nor that it was a "determining factor" in major crimes. Research beginning in the 1970s concluded much the same. The linkage of marijuana to crime is both contingent on contextual factors, and spurious to underlying personal characteristics (for reviews, see: Watters et al., 1985; Fagan, 1990, 1993; MacCoun et al., 2003).

3. Paying for Pot Enforcement

The pursuit of marijuana crimes was not cost-free, and required extra resources beyond the redeployment of patrol officers and special units to the new tactics of OMP. The connection between OMP and marijuana enforcement can be found in part in Operation Condor, one of the core crime control initiatives that drove the increase in marijuana arrests in the 1990s. Condor was a Giuliani administration initiative that began in 1999 as an aggressive narcotics enforcement program, targeting low-level drug transactions. Condor flooded high-crime areas

with additional officers and, at its peak, cost more than $100 million a year in overtime costs by

bringing in as many as 1,000 officers each day to work additional shifts on their days off to

pursue drug crimes, especially marijuana (Rashbaum, 2002, 2003).   Condor officers were

involved in the killing of Patrick Dorismond, who struggled with police officers after refusing

their efforts to entice him to buy marijuana in a reverse sting (Flynn, 2000).

Condor was criticized by detectives and police union officials for its aggressive tactics,

which included suspicionless searches and the targeting of minority youths (Flynn, 2000). After

2004, Condor was replaced by Operation Impact. While Condor deployment had been quite

broad, Impact targeted specific neighborhoods that were identified through analyses of both

Compstat data and local intelligence. One precinct commander referred to Impact as "pinpoint

precision bombing" (Dawan, 2003), in contrast to the more widespread coverage of OMP tactics

generally. Impact also saved money; while Condor deployment had used experienced officers,

Impact officers often were rookies on foot patrols. These officers were deployed in high crime

areas for six months before being assigned to precincts or other commands.

4. The Social and Legal Epidemiology of Order Maintenance Policing

The role of race in OMP has been highly contested. Yet proponents and critics agree that

the higher stop rates in black and Latino neighborhoods are a racial tax that citizens in those

neighborhoods pay for living in high crime communities that are predominantly non-white (c.f.,

Kennedy, 1997).

Critics of OMP point out not only the disproportionate stop levels faced by minority

citizens and neighborhoods, but significant racial differences in post-stop outcomes (cf., Dwyer,

2009). Although the OMP strategy was designed as a place-based intervention, targeting areas

characterized by disorder and high crime levels, the burden of its implementation has fallen

predominantly on the City's minority residents and communities (Spitzer, 1999; Kocieniewski, 1999; Roane, 1999; Jackson, 2000; Fagan and Davies, 2000). In a 15 month period from January 1998 through March 1999, Non-Hispanic Black, Hispanic Black, and Hispanic White New Yorkers were three times more likely than their white counterparts to be stopped and frisked on suspicion of weapons or violent crimes relative to each group's participation in each of those two types of crimes (Gelman, et al., 2007). Moreover, OMP was concentrated in predominantly minority neighborhoods at rates that far exceeded what local levels of crime and disorder would predict (id,; Fagan et al., 2010).

Nor does OMP appear to be an efficient method of interdicting crimes or criminals. The yield of firearms and other weapons seized, perhaps the primary rationale for aggressive stops under OMP (Bratton and Knobler, 1998; Spitzer, 1999; Maple and Mitchell, 2000), is similarly low. In 2003, a total of 633 firearms were seized pursuant to stops, a rate of 3.9 firearms per 1,000 stops. By 2006, following a 300% increase in the number of stops, the seizure rate fell to 1.4 firearms seized per 1,000 stops (Fagan et al., 2010). These inefficiencies intersect with racial disparities: while blacks were stopped at a per capita rate nearly 10 times that of whites in 2006, their stops were no more likely to yield a weapon.

The rate of arrests pursuant to street stops declined from 15.4% in approximately 125,000 street stops in1998 (Spitzer, 1999; Gelman et. al., 2007) to less than five percent in about 500,000 stops in 2006 (Fagan et al., 2010). "Hit" rates are racially disparate: stops of black citizens, and stops in black neighborhoods, have hit rates significantly lower than those of whites, or for stops in neighborhoods where blacks are a minority. The lower hit rate for blacks suggests that blacks are subject to a lower threshold of suspicion than their white counterparts (id.). Post-stop outcomes differ by race in other ways as well: blacks and Hispanics are more

likely to be searched or frisked than whites, and more likely to be subjected to physical force (Ridgeway, 2007).

Proponents of SQF practices point out that ethnic minorities are more likely to be victims of crime than their white counterparts, and that crime rates are higher in minority neighborhoods (Bratton and Knobler, 1998; Smith and Purtell, 2008). They justify excess stops of black citizens by claiming that the racial distribution of stops reflects the racial distribution of crime suspects (Ridgeway, 2007; MacDonald, 2009). However, only about 20 percent of all stops are justified based on a suspect description, leaving this justification irrelevant to the remaining 80 percent (Spitzer, 1999; Fagan et al., 2010). Proponents also claim that racial disparities in stop practices are grounded in the targeting of high-crime areas, rather than resulting from explicit racial targeting. In this account, the fact that those areas are populated by black New Yorkers is incidental to the pattern of stops. Perhaps most important to proponents, crime rates fell dramatically throughout the 1990s, and lending empirical support to claims that credit the OMP and SQF practices for the reduction in crime (Smith and Purtell 2008; MacDonald, 2009). Also, the low "hit rate" may also reflect the success of OMP in mounting a deterrent threat, leading to the withdrawal of would-be offenders from crime. However, significant crime declines in many other large cities suggest that larger secular processes may be equally influential in the ongoing crime decline, rather than city-specific processes (cf., Ludwig and Harcourt, 2006; Rosenfeld et al., 2005).

B. Constitutional Regulation

The legal standard to regulate the constitutionality of police conduct in citizen stops derives from *Terry v. Ohio* (1968)[4] at the national level, and *People v. DeBour* (1976)[5] in New

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[4] 392 U.S. 1 (1968)
[5] 40 N.Y. 2d 210 (1976)

York State case law. In *Terry*, the Supreme Court of the United States analyzed how the Fourth Amendment of the Federal Constitution applies to a pedestrian stop, and established the parameters of the "reasonable suspicion" standard for police conduct in detaining citizens for purposes of search or arrest. Under *Terry*, reasonable suspicion must be based on "specific and articulable facts" and not merely an officer's hunch. In *DeBour,* the New York Court of Appeals, the state's highest court, interpreted the New York State Constitution more strictly than the Supreme Court interpretation of the Fourth Amendment. While the *Terry* decision assumes that police-civilian encounters, even suspicionless ones, are consensual and could be terminated by the suspect, *DeBour* forbids inquiries "based on mere whim, caprice, or idle curiosity" (Carlis, 2009). Accordingly, the Court of Appeals set forth a four-tiered scheme in which invasive police actions, ranging from accusatory questions to frisks and searches, must be justified by progressively elevated levels of suspicion (See Appendix A).

Both State and Federal courts have expanded the concept of "reasonable suspicion" to include location as well as individual behavior. This opens the door to stops where suspicion is conditioned on the place where it is observed. The Supreme Court has articulated and refined this "high crime area" doctrine, in cases from *Adams v Williams* (1972) to *Illinois v. Wardlow* (2000) (Ferguson and Bernache, 2008). This line of cases allows police to consider the character of a neighborhood as a factor that may elevate the suspicion generated by a given action, reducing the individualized factors required to justify a stop. In *Wardlow*, the Supreme Court noted that although an individual's presence in a "high crime area" does not meet the standard for a particularized suspicion of criminal activity, a location's characteristics are relevant to determining whether a behavior is sufficiently suspicious to warrant further investigation. Though *Wardlow* has not been fully embraced by the New York Court of Appeals, presence in a high crime area is one factor that has been shown to elevate suspicion and justify police

intervention (Kamins, 2009). The resulting expansion of police authority to justify stop and search activities conflates "high crime areas" with neighborhood racial makeup, placing minority neighborhoods and citizens at increased risk of more frequent police contact.

The elasticity of the rules established by *Terry* and *DeBour* and the soft boundaries set forth in subsequent cases created a wide space of discretion in which police craft could be justified to stop and frisk citizens at low levels of suspicion. The 1999 investigation of the NYPD's stop and frisk tactics by the New York State Attorney General's office demonstrated the limited constitutionality of police stops under OMP tactics (Spitzer 1999). Based on a review by a team of lawyers and social scientists of a sample of 5,000 textual narratives stating the rationale for police stops and frisks over a 15-month period beginning in January 1998, the Spitzer report estimated that approximately 15% of all street stops were unjustified under Fourth Amendment law in effect at that time,[6] and the constitutionality of more than one in three other stops (35.5%) was inconclusive. Civilians have also registered constitutional concerns about street stop activities; complaints to the Civilian Complaint Review Board increased 66% between 2002 and 2006, an increase concurrent with the rise in street stop activity (Clarke, 2009). The substantiation rate of complaints related to frisks and searches more than doubled between 2002 and 2004, a period in which complaints related to other forms of improper police behavior saw little change in their substantiation rate (ibid.)

The intersection of racial disparities and constitutional irregularities in police stops were the basis for litigation (*Daniels et al v City of New York*) that led to a 2003 Consent Decree

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[6] After the publication of that report, the U.S. Supreme Court decided *Illinois v. Wardlow* (528 U.S. 119 (2000)) (holding that an individual who suddenly and without provocation flees from identifiable police officers patrolling a high crime area creates reasonable suspicion under the Fourth Amendment for the police to stop him). In practice, the "high crime area" doctrine permits police officers to take location into account when determining whether they have sufficient justification to stop and question a suspect. Although being present in a high crime area alone is not sufficient to justify a stop, this factor in combination with other similarly insufficient factors to justify reasonable suspicion can combine to form reasonable suspicion. *See*, Ferguson and Bernache (2008). One impact of *Wardlow* would be the likely reduction in the estimate in Spitzer (1999) of the number of constitutionally unjustified stops.

regulating the conduct of street stops and prohibiting the use of race as a factor in the selection of citizens for stops and subsequent intrusions.[7] Following the Spitzer (1999) report, street stop documentation procedures ("UF-250 forms", described in greater detail in the following section) were revised in 2003 to more explicitly and consistently detail officers' justifications for each stop.

The potential for similar irregularities in marijuana stops is a natural consequence and risk of the tactical regime of OMP. The extent to which these concerns apply to the totality of marijuana enforcement – stops plus arrests – is unknown. If overall stops are both racially disparate and unlikely to justify a law enforcement interest, we might expect the same of marijuana stops. After all, marijuana arrests, some portion of which are produced by street stops, are racially skewed, so we might expect that marijuana stops would follow similar patterns. And these stop patterns also raise questions of their legality – that is, whether they are the result of reasonable and individualized suspicion required by federal and state law – or if legality is incidental and perhaps even pretextual to marijuana enforcement. So, to fully observe the reach and constitutionality of OMP, we examine the totality of marijuana enforcement, including stops and arrests, their rationales and their outcomes.

C. This Study

In this paper, we examine the role that marijuana enforcement plays in the broader tactical landscape of OMP, with several tests of the links between street stop activity and marijuana enforcement. First, if marijuana enforcement indeed is the new *Broken Windows*, the prevalence of OMP stops for marijuana, and marijuana enforcement more broadly, should be

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[7] Stipulation of Settlement, 99 Civ 1695 (SAS)

greatest in the City's minority neighborhoods, the places where OMP activity is most heavily concentrated, and where crime rates are higher. But if these stops represent excess enforcement, then their prevalence should not be predicted not only by overall stop activity or by various indicia of crime, but also by neighborhood demographic and socioeconomic characteristics, especially race.

Second, if the police focus on marijuana is an attempt to link marijuana enforcement to "quality of life" crimes, based on the *Broken Windows* theory that serious crime will fall as a result, then we would expect marijuana stops to be most prevalent in areas with an immediate history of violent crime and high levels of disorder complaints. If, on the other hand, marijuana enforcement is being used as a pretext to pursue a search for weapons, then we would expect to see more intense marijuana enforcement in areas where weapons are also heavily pursued.

Third, given the fourth-amendment concerns raised about OMP more broadly, we examine the legal justifications provided for marijuana street stops, and test whether the stated rationales comply with the "reasonable suspicion" required for *Terry* (street) stops. We estimate the extent to which these justifications explain observed patterns of stop activity, anticipating, for example, that precincts where a large percentage of stop activity is justified by suspicion of a drug transaction would also have high levels of marijuana stops, and that the narratives of suspicion would explain a large portion of the variation in stop activity.

Finally, we examine whether marijuana stops contribute to broader public safety goals. If, as internal police strategy memoranda state, the strict enforcement of minor offenses such as misdemeanor marijuana possession has positive spillover effects and prevents more serious

crime, then stopping individuals on suspicion of marijuana possession might lead to the detection of weapons and other illegal activity as well. [8] We test the extent to which this is the case.

To address these questions, we use a unique and detailed dataset obtained via FOIA from the NYPD to identify the prevalence of street stops. From the universe of street stops, we identify those where the suspected crime was suspicion of marijuana possession. One can see, with a simple unpacking of the New York State statute governing marijuana possession, why this particular category of suspected crime would be considered "high discretion-low suspicion." New York Penal Law § 221, detailed in part in Appendix B, distinguishes between "unlawful possession of marijuana", which is a violation not punishable by arrest, from "plain view" marijuana offenses, and each of these from higher grades of simple possession, which typically require observation or an act of purchase as the justifying suspicion.

We identify racial disparities in marijuana stop patterns at both the individual and precinct levels. We also test whether any observed concentration of marijuana stops in minority precincts is driven by crime patterns or enforcement patterns more broadly, and how the police pursuit of marijuana ties into the other stated goal of OMP, the pursuit of weapons. Next, we use the stated rationales recorded for each stop to examine the documented circumstances of these marijuana stops, in order to assess the constitutional legality of this police behavior. Finally, we assess the efficiency of marijuana stops in detecting both marijuana possession and other illegal activities.

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[8] For example, Kelling and Coles (1996) suggest that the NYPD focus on subway turnstile jumpers identified a large number of individuals with outstanding criminal court warrants for other, often more serious, crimes.

III. METHODS

A. Data

1. Stop Activity

The NYPD records information on a form known as the UF-250 each time a citizen is stopped by the police, according to procedures set forth in the NYPD Patrol Guide (2009), and updated following the Daniels litigation (*Daniels v City of New York*, 2003). A copy of the UF-250 is in Appendix C. These records have been maintained in a digital database since 1998, when the state Attorney General began his investigation of the department's Stop and Frisk tactics (Spitzer, 1999). Records of stops from 2003-8 were made publicly available by the New York City Police Department following a Freedom of Information Law (FOIL) request and subsequent court order (NYCLU, 2008).[9] In this analysis, we use data from 2004-8.

The UF-250 form requires officers to record information regarding the suspect's demographic and physical characteristics, the location and time of day of the stop, the suspect's address, and information about the officer who made the stop and the supervisor who reviewed it. The form contains a free-response section where officers indicate the suspected offense that generated the stop. While officers may use any number of phrases to describe stops based on suspicion of marijuana possession, we use a few key and recurring terms to identify these "marijuana stops".[10] We use similar procedures to identify stops for suspicion of carrying a concealed weapon ("CPW"), a primary focus of OMP policing (Spitzer, 1999; Fagan et al.,

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[9] New York Civil Liberties Union v. New York City Police Department, 2008 WL 2522233 (N.Y. Sup. Ct., May 7, 2008).

[10] Stops are identified as marijuana stops from the "crimsusp" (i.e., "crime suspected") field. A 30-character string, crimsusp is entered by the officers at the time of a stop, and can take on virtually any value, including typographical errors. The most common designation identifying the criminal possession of marijuana, "CPM", identifies 30,759 of the marijuana stops identified. At the other end of the spectrum, 1,328 marijuana stops are identified from "crime suspected" values that appear only once, such as "CPM MISD PSA#0243" or "POSSESSION OF MARJUINA". A complete list of the 1,738 crimsusp values used to identify marijuana stops is available from the authors upon request.

2010), and other suspected crimes, including "index crimes", other felonies and misdemeanors and non-fingerprintable offenses.

The UF-250 data matches each stop to its police precinct location, even if the stop was made by an officer in a command with cross-precinct patrol assignments.[1112] We aggregate the records of stops conducted from 2004-8 into a precinct-year panel, separately identifying total stops, stops for marijuana, and stops for possession of a weapon, and disaggregating stops by suspect race or ethnicity. The total sample was approximately 2.2 million stops.

2. Stop Legality

The NYPD responded to the Attorney General's investigation and the subsequent *Daniels* litigation by modifying the UF-250 to limit the information that officers could use to justify a street stop (Flynn, 2001). Whereas officers previously recorded their stop in a narrative form, beginning in 2001 they were required to check one or more of 10 boxes that indicate the legal basis for the suspicion that led to the stop. The indicia of suspicion listed on the form reflect the legal framework established by both *Terry v. Ohio (1968)* and *People v. DeBour (1976).*

The UF-250 also includes 10 categories of "additional circumstances" that may condition the initial basis for the stop in instances where the separate indicia of suspicion are constitutionally insufficient to comply with constitutional standards. For example, while person's "furtive movements" or "turning at the sight of an officer" may be insufficient alone to justify a stop, *Illinois v Wardlow* (2000) grants that if these factors are present in a "high crime area," the stop may pass constitutional scrutiny under Federal law. Appendix D lists the factors that are available to officers to justify a stop, and the "additional circumstances" that they also

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[11] For example, enforcement in public housing is assigned a housing bureau, which in turn in organized into eight Police Service Areas (PSA's). Officers in each PSA areas may work in a catchment area including several public housing developments span precinct boundaries. Special anti-crime units similarly work across precinct boundaries.
[12] We drop 1,276 stops from the analysis because they were not reported with a valid precinct.

can record to modify the stop factors. For both the stop factors and additional circumstances, officers can check a box marked "Other" if the basis for the stop does not fit into the available categories. Should a stop proceed to a frisk or a search, the revised UF-250 form also includes checkboxes for the rationales to justify these post-stop actions.[13] The UF-250 database can thus be used to link officers' assessments of the indicia of suspicion to the characteristics of a suspect, the suspected crime, the location of the stop, and its outcome.

The UF-250s also allow a distinction between stops made in response to a previously reported crime or emergency (commonly referred to as "radio runs"), and stops initiated based on observed suspicious conduct, not previously reported. For example, an officer may, based on a radio run, stop a suspect because they fit the description provided by a witness during a 911 call. However the data show that radio runs account for only 20 percent of the stops made between 2004 and 2008, and an even smaller portion (13%) of marijuana stops. Most stops were, instead, initiated by police officers, and require "reasonable and articulable" suspicion under *Terry* and *DeBour*.

3. Post-Stop Outcomes

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[13] Should an officer proceed from a stop to a frisk or a search, there are further specific categories or indicia of suspicion to justify these actions. As envisioned by *DeBour*, stops, frisks and searches are governed by N.Y. Crim. Proc. Law § 140.50(1) (2007). However, "stops" and "frisks" are considered separately under New York statutes. A police officer may stop a suspect but not to frisk the suspect given the circumstances. Frisks and searches are governed by N.Y. Crim. Proc. Law § 140.50(3), which requires a legitimate "stop" as a predicate to any frisk. In many cases, reasonable suspicion that a person is engaging in violent or dangerous crime (such as murder, burglary, assault, etc.) will justify both a stop *and* a frisk. A reasonable belief that the suspect has a weapon or that the officer is in danger of physical injury can also justify a frisk. A search is permissible as a Level 4 *DeBour* stop, where there is probable cause that a crime has occurred and a search can be conducted either separately from or incident to an arrest.

As with the initial stop, these factors alone may or may not justify the further intervention, but when combined with these additional circumstances, the actions may pass constitutional scrutiny as Level 3 and Level 4 *DeBour* stops. In each of these levels of police intrusion, the presence of one of the "additional circumstances" can create constitutionally valid justification for a frisk or search if other marginal factors are present that alone would be insufficient to justify the further action.

In addition providing officers an opportunity to mark whether a frisk or search was done, the UF-250 also includes boxes where officers can mark whether an arrest was made, contraband was seized, and if a firearm was confiscated, the type of firearm. The UF-250 includes places to mark down whether force was used, and if so, the type of force. Force categories range from the use of hands to drawing a weapon.

4. Precinct Socioeconomic Conditions

Precinct-level demographic data are drawn from 2006 projections of U.S. Census data, (see ESRI, 2006 for details.) Projections of total population, race, ethnic, and age breakdowns, and unemployment, are made at the tract level, and aggregated from tracts to police precincts. Because precincts do not, as a rule, share boundaries with census tracts, we allocate tract populations to precincts based on the percent of each tract's area that falls into each precinct.[14]

Data on poverty and the concentration of foreign-born population are observed at the Public Use Microdata Area (PUMA) level from the 2005-2007 American Community Survey. This survey is conducted annually by the Census Bureau to develop mid-decade demographic and economic indicators for cities and counties. Data on physical disorder are observed at the sub-borough level in the 2005 New York City Housing and Vacancy Survey. These data are then allocated to the precincts that most closely fall within the boundaries of these larger administrative units.

5. Precinct Crime Conditions

Data on reported crimes by suspect race and precinct were obtained by one of the authors

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[14] For example, if precinct A shares area with three census tracts (A1, A2, and A3), the precinct population is estimated as:

    % of A1 falling into precinct A*population of A1
    + % of A2 falling into precinct A*population of A2
    + % of A3 falling into precinct A*population of A3

from the NYPD pursuant to litigation in *Floyd et al. v. City of New York*,[15], and data on arrests were obtained from the New York State Division of Criminal Justice Services. Both the NYPD and DCJS data identify the suspect race (where known) and alleged offense, though the categories used to classify offenses vary by reporting agency. Because the NYPD data do not include details on marijuana possession (instead classifying all controlled substance offenses as "dangerous drugs"), we base our estimates of marijuana possession arrests on DCJS data.

B. Model Specification

1. Descriptive Analysis

We begin by examining the extent to which the racial disparities observed by Golub et al (2007) in marijuana possession arrests are also present in marijuana street stops. We compare the citywide demographic breakdown of stops for marijuana possession to the breakdown of arrests for marijuana offenses, all arrests, and the city more broadly. We also use the (X,Y) coordinates provided by the NYPD to geocode more than 75% of documented stops to the intersections at which they took place (or a greater level of detail), and examine the extent to which, as posited by Levine and Small (2008), marijuana street stops are concentrated in areas with high concentrations of black residents.

2. Modeling Approach: Marijuana Stop Prevalence

We next estimate a set of models to test whether any observed racial disparities in marijuana stop activity can be explained by precinct socioeconomic factors or citywide trends in

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[15] *David Floyd, et al. v. City of New York, et al.*, U.S. District Court, Southern District of New York, No. 08 Civ. 1034 (S.D.N.Y.)

policing[16]. We use Generalized Estimating Equations (GEEs) with a negative binomial functional form to reflect the discrete nature of stop counts, and a population exposure to reflect the expectation of higher stop counts in more populated areas. GEE's are beneficial for nested data (such as years nested within precincts), as they allow the specification of within-subject correlations of observations (Hardin and Hilbe, 2003; Ballinger, 2004). We assume an AR(1) covariance of years within precincts to account for autocorrelation in rates of both the dependent variables and predictors in each precinct.

We begin by examining the extent to which stop counts vary by precinct racial composition, controlling for year fixed effects to account for citywide changes over time, and borough fixed effects to reflect organizational and social structural commonalities. Subsequent models use a similar form, with progressively more precinct controls. The second model adds controls for precinct socioeconomic conditions using the percent of the population that is foreign-born, and a principal components factor to summarize the level of socioeconomic disadvantage.[17] The third model examines the extent to which marijuana stops, and their geographic distribution, vary with precinct crime conditions. Specifically, this model controls for violent crime complaints in the previous year[18], anticipating that police resources might be allocated more heavily to high-crime areas. The fourth model also includes a control for past-year marijuana arrests, to test whether marijuana enforcement practices are stable over time[19]. Finally, our fifth model adds a control for the total number of stops recorded in the precinct in

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[16] The 22nd Precinct (Central Park) is omitted from these models, as it has no relevant demographic or socioeconomic data.

[17] Principal components factor analysis is commonly used to extract common thematic elements from several highly correlated variables (See, e.g. Sampson and Raudenbush 1999). The socioeconomic disadvantage factor loads heavily on precinct poverty levels, unemployment rate, and levels of physical disorder, as computed in Fagan et al. (2010).

[18] Crime complaints are measured by thousands, but substantive results are also robust to a control for logged crime complaints. "Violent crime" complaints refer to homicide, rape, robbery, assault, arson, and kidnapping.

[19] Marijuana arrests are measured by thousands, but substantive results are also robust to a control for logged arrests.

the year, to account for the fact that marijuana stops are likely to be more prevalent in areas subject to more stops overall.

Following our models of marijuana stop prevalence, we again examine how stop and frisk activity fits into the NYPD's broader strategy of marijuana enforcement. Levine and Small (2008) posit that the majority of marijuana possession arrests begin as street stops, and our descriptive analysis examines whether this is the case, and whether the race disparities seen in arrests are mirrored in stop activity. We also define a measure of overall marijuana enforcement equal to the total of stops and arrests for marijuana[20], and replicate the stop models to test whether overall enforcement patterns follow the same patterns as marijuana stops. In this series, Models 1 through 3 examine levels of enforcement in each precinct and year, and Models 4 and 5, by controlling for past-year arrests, examine changes in enforcement patterns. Given that marijuana enforcement rose citywide from 2004-2008, coefficients in these models identify precincts in which enforcement increased more rapidly. The next series of models examines how marijuana enforcement fits into the overall stop and frisk strategy, and the stated goals of order maintenance policing. While OMP cited the *Broken Windows* theory that the enforcement of minor crime would reduce more serious crime as well, SQF emphasized gun-detection, and about one stop in five is based on suspicion of weapons possession. We test the links between marijuana stops and arrests and each of these goals by building on our marijuana enforcement models, beginning with an additional control for past-year disorder complaints[21]. To the extent that marijuana stop activity ties into a broader policy of order maintenance, we anticipate that measures of prior disorder would significantly predict precinct stop levels. Next, we add an

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[20] Marijuana arrests recorded in the street stop database are subtracted from this total to avoid double-counting.
[21] Disorder complaints include those for: Offenses against public order and sensibility (comprises 99% of disorder complaints), alcoholic beverage control law, disorderly conduct, disruption of a religious service, fortune telling, gambling, loitering, loitering for drug purposes, loitering for deviate sex, and loitering for gambling.

additional control for weapons focus, or the percent of stops in each precinct and year on suspicion of weapons possession. The extent to which marijuana stops are concentrated in precincts that prioritize weapons possession may raise concerns that marijuana enforcement is used as a pretext for a street stop in what is a *de facto* search for weapons.

3. Legality Analysis

We next we analyze the legality of marijuana stops, and their compliance with the *Terry* standard of "reasonable suspicion". The checkoff recording system on the UF-250 is grounded in case law, though it also gives officers an option to select two types of "other" factors or circumstances that motivated the stop. This checkoff method can generate more than 300 unique combinations of the constitutionalizing stop factors or justifications alone. When the *additional circumstances* options are considered, more than 9,000 unique combinations of stop factors and additional circumstances are available, plus more combinations when officers include "other" as a justification[22]. For the 2.2 million stops, no single combination appears in more than 15% of stops, making a complete analysis of all factors listed nearly impossible

To identify a set of cohesive and interpretable legal dimensions that reflect recurring patterns among the 9,000 combinations of stop factors and additional circumstances, we performed a principal components factor analysis with varimax rotation to extract the sets of individual factors that best capture the distinct and recurring legal narratives that officers use to justify their stops. The principal components analysis yields a score that reflects the weight of each individual item. We apply those weights to each record to compute a score for each of the dimensions based on the combination of stop factor and additional circumstances that are checked off for that record. We then aggregate these legality scores for each precinct and year.

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[22]Narrative or text explanations of the meaning of "other" were extremely rare.

These legality scores then are entered as predictors in the models predicting marijuana enforcement patterns.

We use two different metrics to assess the extent to which these factors indicate reasonable suspicion. First, we assess the extent to which including them in models estimating enforcement patterns improves our model fit[23]. A consistent narrative of suspicion for marijuana possession would suggest that the documented justifications would explain a nontrivial proportion of the variation in enforcement patterns. On the other hand, arbitrary stop behaviors, or randomness in which stop justifications are invoked, would do little to improve model fit. Next, we examine whether any of the separate legality dimensions are statistically significant predictors of enforcement patterns. For example, we examine whether a legality dimension that includes behaviors indicative of "casing" a location for a crime is a significant predictor of enforcement patterns. We anticipate, for example, that marijuana enforcement would be more prevalent in precincts where drug suspicion justifies a greater portion of stop patterns.

4. Stop Efficiency and Public Safety

Finally, we examine the public safety payoffs associated with street-level marijuana enforcement, particularly the extent to which marijuana stops are associated with the success of OMP objectives. In particular, the objectives of SQF center on crime detection and weapons seizures. Whatever the economic or social costs associated with marijuana stop tactics, to the extent that marijuana stops are linked to weapons detection (measured both by the rate at which weapons stops lead to arrests, and the rate that stops lead to weapons seizures), this relationship might reflect a positive spillover, and a public safety benefit, of marijuana policing. But the converse would indicate a public safety tradeoff or compromise: if marijuana stops are

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[23] Model fit is measured using the marginal R-squared measure described in Ballinger (2004).

negatively associated with weapons seizures or overall arrests, then the search for marijuana offenders comes at the cost of public safety.

IV. RESULTS

A. Data Description

1. Average Precinct Characteristics

Table 1 presents descriptive statistics for the 375 precinct-year observations in our analysis, and underscores the diversity of New York City, in terms of not only race and socioeconomic conditions, but crime and policing conditions as well. For example, while NYPD officers make an average of 137 stops per year on suspicion of marijuana possession in each precinct, there are some precincts where no marijuana possession stops are made in a given year, and others in which more than 1,000 such stops are made. Similar patterns are seen in stop activity more broadly: the highest-stop precinct-year had more than 70 times as many street stops made as in the lowest-stop observation.

Table 1 also suggests that in while New York City is quite diverse, the City's police precincts are extremely segregated. On average, police precincts are 30% white and 26% black; however, there are both precincts where virtually no whites live, and virtually no blacks live, and precincts where more than 80% of residents are a single race. Similar patterns emerge for Hispanics and for several aspects of socioeconomic disadvantage, as well as violent crime levels.

[Table 1 about here]

2. Marijuana, Order Maintenance Policing, and Race-Ethnic Disparities

Both SQF activity and marijuana possession arrests have been touted as part of the NYPD's strategy of Order Maintenance Policing. However, we find that street stops for marijuana and marijuana possession arrests are largely separate phenomena. Figure 2 shows that many of the precincts highest in marijuana arrests record the fewest stops on suspicion of marijuana possession. It is possible that differences between observed stop and arrest patterns are, at least in part, an artifact of reporting practices. Under *DeBour*, for example, the "reasonable suspicion" required for a street stop may be met and superseded by "probable cause" if marijuana is found, which would permit escalation by Level IV under DeBour, resulting in an arrest. Although the NYPD Patrol Guide requires that street stops be documented using UF-250 forms whether or not an arrest results, officers may substitute arrest documentation when stops lead to arrest in place of the stop documentation. As a result, some of the arrest-producing stops are censored from the UF-250 database. The New York City Civilian Complaint Review Board (2002) and United States Commission on Human Rights (2000) have both established that under-filing of UF-250 forms has historically been a problem. The inconsistency of stop documentation underscores the importance of examining race disparities in the totality of marijuana enforcement based not simply on documented stop totals or arrest totals, but considering a combination of the two.

[Figure 2 about here]

Nonetheless, whether examining arrests or street stops, the majority of marijuana possession stops take place disproportionately in neighborhoods housing the city's minority population, both compared to their representation in the city's population, and their representation among marijuana arrestees. Accordingly, Table 2 shows that blacks are

overrepresented in the NYPD's marijuana stop activity compared to their representation in the general population. For example, officers stop blacks on suspicion of marijuana possession at a rate of 14.83 per 1,000 population, while Hispanics are only stopped 5.41 times per 1,000 population, and whites are stopped only 1.96 times per 1,000 population. This pattern also holds for stop activity more broadly, with blacks stopped at a rate of 564 per 1,000 in the population and blacks stopped 269 times per 1,000, while whites are only stopped 93 times per 1,000.

Similar disparities exist for marijuana arrests, with 48 blacks arrested for marijuana possession for every 1,000 in the population, 24 Hispanics arrested per 1,000 population, and 6 whites arrested per 1,000 population. The targeting of enforcement efforts toward blacks and Hispanics is dramatically out of proportion to national statistics that suggest comparable usage rates across racial group (SAMHSA 2004, 2005) or higher rates of marijuana use among whites (Saxe et al. 2001; Johnston et al. 2005).

[Table 2 about here]

Disparities in marijuana enforcement can also be seen geographically. Figure 3 details the geocoded locations of marijuana stops made between 2004 and 2008, and shows substantial clustering in areas like the 73rd, 75th, and 79th precincts. Figure 4 arrays these precincts by race. The places with the highest concentration of marijuana stops are predominantly black neighborhoods.

[Figures 3 and 4 about here]

B. Results

1. Marijuana Stop Levels

Table 3 presents the estimates from negative binomial GEE models predicting marijuana stop levels by precinct and year. These models further quantify the disparities suggested in Figures 3 and 4: marijuana stop activity is significantly higher in neighborhoods with a greater concentration of black residents, and this relationship is not explained by differences in local socioeconomic conditions, or by historic crime levels, or general enforcement patterns (past-year marijuana arrests, or current year stop totals). For Hispanics, the stop rates also are higher with higher population concentrations, but these effects are not significant once controls for neighborhood social and crime conditions are included. In Model 5, marijuana stops are negatively correlated with prior year precinct crime rates and enforcement activity: there are fewer marijuana stops in precincts violent crime rates are higher, and where marijuana arrests in the past year were higher. Marijuana stops are predicted by the total number of stops concurrently in the precinct. In other words, there are fewer marijuana stops in places where marijuana arrests are greater, and more stops where violent crime is lower, and where the total number of stops is higher. Marijuana stops, in these places, seem to be a marginal enforcement activity – in effect, a luxury – that is pursued in predominantly black neighborhoods beyond other enforcement efforts.

[Table 3 about here]

The negative relationship between past-year marijuana arrests and current-year marijuana stops can be interpreted in two ways. One interpretation is that this is a reporting anomaly and artifact: officers making marijuana stops that produce arrests are bypassing the stop

documentation in favor of arrest documentation. Since marijuana arrest rates in these places are higher, there may be unrecorded stops that in fact are producing arrests. Or, it could be that marijuana arrests are produced by a different process than the process that produces stops. In New York's marijuana statutes, "plain view" possession, such as smelling smoke or observing marijuana, is itself probable cause for an arrest, and detection of marijuana under those circumstances obviates the predicate or antecedent of the stop. Levine and Small (2008) question the legality of those stops, citing a long tradition of "dropsy" arrests that essentially entrap persons who are stopped into revealing that they possess marijuana by emptying their pockets.

2. Totality of Enforcement

If marijuana stops and arrests are conjoined in a complex enforcement process that produces marijuana arrests but suppresses indicia of stops, then explaining the totality of marijuana enforcement requires that we view stops and arrests as two parts of an integrated tactic. Accordingly, we estimated models for the totality of marijuana enforcement: that is, the sum of marijuana stops and arrests within a precinct[24]. Table 4 shows that, as with total marijuana stops, total enforcement levels are significantly higher in precincts with large black populations, and this disparity is robust to controls for socioeconomic conditions, past-year crime complaints, and prior enforcement patterns. Examining total marijuana enforcement the disparity for Hispanics also remains significant when other precinct characteristics are controlled. The totality of marijuana enforcement is concentrated in the city's black communities.

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[24] To avoid double-counting stops that lead to an arrest and are documented in the UF-250 forms, we subtract from the number of marijuana arrests documented in the UF-250 forms from the "stop plus arrest" totals.

[Table 4 about here]

Here, there are interesting and important differences compared to the results in Table 2 on stops alone. First, model fits are much improved: the pseudo-R^2 in Model 5 in Table 4 is nearly 50% greater than in the comparable model in Table 3. Next, unlike models predicting stop activity alone, total marijuana enforcement is significantly and positively predicted by marijuana arrests in the previous year, further underscoring the importance of considering stop and arrest activity combined. Further, unlike stop activity alone, total marijuana enforcement is significantly predicted by violent crime in Models 3 and 4, though this relationship is diminished and statistically insignificant in Model 5, once total stop activity is controlled for. The insignificance of violent crime complaints in the face of overall stop activity suggests that marijuana stop and arrest activity may be a consequence of the broader stop and frisk targeted at high-crime precincts. Moreover, the persistently higher enforcement levels in black and Hispanic neighborhoods suggest that the tactics used in these precincts are a disproportionate response to local crime conditions. As Fagan and Davies (2000) and Fagan et al. (2010) showed with stop activity more generally, marijuana enforcement seems to be focused not on violent crime but on predominantly minority neighborhoods.

3. Marijuana Enforcement and OMP

Table 5 examines the links between total marijuana enforcement and the two documented objectives of order maintenance: reduction of disorder and the search for weapons. Through programs such as Operation Condor, marijuana enforcement was an application of *Broken Windows* theory, where policing of minor crimes was instrumental in reducing rates of violent crime by reducing disorder. Weapons were a part of this focus. We estimate a series of models

that include crime complaints for several disorder crimes, such as public drunkenness, loitering and other offenses against public order, and the concentration street stops on weapons.

Model 1 in Table 5 reproduces Model 5 from Table 4, examining the demographic, socioeconomic, violent crime, and general enforcement predictors of marijuana stop activity. This sets out a baseline to examine the influence of disorder in Model 2 in Table 5. Model 2 shows virtually no relationship between disorder complaints and marijuana street stops. The model fit is unchanged, and the parameter estimate for disorder is not significant. The racial disparity for the percent non-Hispanic black population and the percent Hispanic also is unaffected with the inclusion of disorder.

Model 3 tests the link between marijuana stop activity and the other principal goal of OMP, the search for weapons. We again find a strong and significant connection between marijuana enforcement and precinct stop activity (total stops), and also find a significant relationship between marijuana enforcement and the share of stops that are based on suspicion of weapons possession. Marijuana stops and arrests are more prevalent not only in precincts where overall stop activity is greater, but in precincts where, holding stop levels constant, a greater portion of stops are on suspicion of weapons possession. As in Model 1, marijuana enforcement is not predicted by violent crime, though prior year marijuana arrests predict current year activity, a sign of the stability of the pattern and practice over time.

In Model 4, which includes both disorder complaints and weapons focus as additional controls, the predictive power of weapons focus is virtually unchanged. The results are unchanged. Not only is enforcement disconnected from local crime conditions once overall stop patterns are controlled for, but it also is disconnected from the indicia of disorder that central to the logic of OMP.

Marijuana enforcement activity is most active in precincts where overall enforcement is most focused on weapons detection, but with little connection to crime or disorder conditions in those places. This pattern raises unsettling concerns that officers use marijuana enforcement as a pretext for searching for weapons. It seems that marijuana enforcement is an adjunct to overall OMP enforcement, disconnected to local crime conditions but closely tied to the search for weapons. Total OMP enforcement, including the search for weapons, leads to more extensive marijuana enforcement, but the allocation logic is more closely tied to the racial and ethnic composition of the area than crime conditions or social structure..

[Table 5 about here]

4. The Legality of Stops

While the modifications of the UF-250 form following the Spitzer (1999) report have enabled a more structured identification of the legal circumstances justifying a street stop, officers maintain considerable flexibility in reporting stop circumstances. Table 6 presents factor loadings from a principal components factor analysis of the stop-level data, identifying consistencies in the cited stop rationales. Although these factors combine to explain only half the total variation in stop justification, several consistencies emerge.

The first factor suggests that stops justified by a suspect description are frequently also justified with a report by a victim, witness, or officer. This relationship is encouraging, because it indicates that the descriptions used to justify stops have been obtained from legally sufficient sources,[25] rather than a vague profile unconnected to the case. The second factor identifies suspicion generated by the suspect changing direction at the sight of the officer and offering

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[25] *People v. Benjamin*, 414 N.E.2d 645, 647 (N.Y. 1980), *People v. Schwing*, 787 N.Y.S.2d 715, 717 (3rd Dep't 2005).

evasive responses when questioned. The third factor identifies suspicion generated by suspects in a "high crime area" at a time of day fitting the incidence of a crime.

The fourth factor identifies suspects who appear to be casing a victim or a location, or acting as a lookout in conjunction with a planned crime. The fifth factor identifies stops justified for "other" reasons, either as a stop justification alone or in conjunction with "other" as additional circumstances., Tthe sixth factor identifies actions indicating a drug transaction, and the seventh identifies stops based on an individual carrying a "suspicious object." While these factors explain only half the variance in the justifications for stop activity, they form substantively meaningful narratives that may explain disparities in marijuana street stop practices.

Table 7 replicates the marijuana enforcement models from Table 4, including additional controls for the strongest individual items in each of the seven stop factors. We also estimated these models using only marijuana street stops, since only a portion of marijuana arrests result from undocumented marijuana stops. The results are the same for both sets of models, suggesting that legal narratives fit comparably in explaining both stops and total enforcement. For each model, we note changes in goodness-of-fit when the stop rationales are included.

In each of the models, several of the stop factors computed in Table 5 indeed are significant predictors of marijuana enforcement at the precinct level. In all models, marijuana stops are significantly more prevalent in precincts where stops are likely to be justified by suspicion of a drug transaction, suggesting that police officers are particularly sensitive to drug issues in these precincts. It is unlikely that the "drug transaction" factor simply reflects high levels of marijuana stops, since documented marijuana stops comprise fewer than three percent

of the stops recorded in the city from 2004-2008. Instead, the factors are likely to reflect police enforcement priorities and narratives of suspicion in each precinct.

Marijuana stops are also more prevalent in precincts where large portions of street stops are justified by "other" rationales, and in some models, when stops take place in what officers deem a "high-crime area" (which is correlated with "time of day"). These stop rationales are cause for concern, as neither of these factors, on their face, are constitutionally sufficient to justify a street stop, and are opaque with respect to the specific conditions that motivated the stop. While "high crime area" may justify a stop in conjunction with other factors, it is not legally sufficient in conjunction with "time of day". Finally, marijuana stops are less prevalent in precincts justifying a large portion of stops with suspect descriptions, or the suspicion of casing. Table 4 suggested that when considered in the context of overall stop patterns, marijuana enforcement was disconnected from crime conditions, and the negative influence of these crime-specific stop rationales seems to confirm that disconnect.

The bottom rows of Table 7 examine the goodness-of-fit of stop models, both with and without controls for precinct–level stop rationales. While Model 1 suggests that stop rationales explain more of the variation in stop patterns than does racial composition itself, these factors explain less than five percent more of the variance in enforcement activity. Moreover, as more controls are added for precinct socioeconomic conditions, crime levels, and more general enforcement patterns, models including stop justifications actually explain a smaller portion of total variance in enforcement. more detailed models with progressively more controls indicate that the contribution of stop rationales explain less and less of the variation in marijuana stop levels. These models suggest few systematic links between the rationales for street stop activity and the levels of marijuana enforcement realized. Instead, even with a full set of legal

justifications, marijuana enforcement seems to be explained by the racial composition of the area and previous enforcement levels, rather than crime conditions or social structure. Despite the inclusion of legal justifications and rationales for stops, marijuana enforcement is significantly higher precincts with large black and Hispanic populations. The persistent race disparities in marijuana enforcement activity suggest legality may simply be a cosmetic or post-hoc justification for overall marijuana enforcement..

[Table 7 about here]

5. Stop Efficacy and Public Safety

Given the emphasis of OMP on weapons detection and seizure, and the links between marijuana and weapons policing demonstrated in Table 5, we evaluate the public safety implications of marijuana enforcement based primarily on its role in weapons detection.   Table 8 classifies the 2.2 million stops between 2004 and 2008 into four categories, based on the crimes suspected that are recorded for each stop: marijuana possession stops, weapons possession stops, violent crime stops, and "other" stops, encompassing property crimes, minor crimes such as trespass and quality of life offenses, other offenses, and stops with no suspected crime interpretable. The table suggests that street stops are highly unlikely to lead directly to weapon seizures – weapons are seized in fewer than one percent of stops. Even among stops driven by suspicion of weapons possession, seizure rates are less than three percent. Marijuana stops, despite a prevalence that covaries with weapons stops at the precinct level, lead to weapon seizures in only approximately one-half of one percent of stops. If marijuana enforcement is designed to stop more serious crime by catching criminals "on their day off" (Maple and Mitchell, 2000), it is quite inefficient.

[Table 8 about here]

At the precinct level, the link between the tactic of marijuana street stops and the objective of weapon detection is equally tenuous. As shown in Figure 5, weapons stops are indeed more prevalent in precincts making more marijuana stops in a given year. However, this relationship appears to be largely driven by a single observation: the 103rd precinct in 2004, a year where the officers in that precinct made nearly 19,000 stops overall, resulting in 233 weapon seizures.   Without this outlier observation, the relationship between weapon seizures and marijuana stops plateaus around 600 stops per year. Put another way, as shown in Figure 6, the rate at which street stops lead to weapon seizures plateaus around 1%; however, when omitting the outlier point of the 103rd precinct, the smoothed graph suggests a steady decline in stop efficacy in precincts where the police make more marijuana stops. Put another way, Figure 5 shows that with rare exception, weapon seizures plateau in precincts making substantially more than 500 marijuana stops in a given year, and Figure 6 suggests that these additional marijuana stops have diminishing returns in the search for weapons.

The negative relationship between marijuana stops and weapon seizures may, alternatively, reflect a deterrent effect in which citizens refrain from carrying weapons in anticipation of being stopped by the police. However, per capita homicide rates declined by 2.7 percent across the country between 2004 and 2008, suggesting a nationwide decrease in the prevalence and use of firearms. The reduced prevalence of weapon possession in New York City is likely to reflect this secular trend, rather than a causal effect of local policing practices, and high levels of street stops are likely to be limited in their productivity.

We test this notion further in a series of models that examine the public safety benefits associated with marijuana stop activity. Table 9 presents the regression coefficients from four

models, each with a negative binomial functional form predicting the number of weapons seizures made from street stops in a given precinct and year. The first two models in this table, like the stop and enforcement models in Tables 2-4 and 6, use a population exposure. The third and fourth models use precinct stop totals as an exposure for seizures, thereby approximating a model of the precinct seizure rate.

Models 1 and 2 in this table suggests that weapon seizures are indeed higher in precincts and years with higher overall stop volumes; however, they suggest no significant relationship between marijuana enforcement and weapons detection above and beyond that associated with total stop volume. In other words, marijuana enforcement adds no public safety benefit to overall OMP efforts. Moreover, when considering the likelihood of each individual street stop to lead to a weapon seizure in Models 3 and 4, marijuana enforcement is not only unrelated to weapon seizures, the relationship between total stops and seizures per stop is significant and negative, suggesting that stop-and-frisk patterns may have diminishing returns in the search for weapons when conducted in conjunction with marijuana enforcement.

[Table 9 about here]

V. CONCLUSION

Since mid-1990s, OMP strategies have relied on two main tactics to reduce crime – aggressive interdictions and detentions of citizens to remove weapons and identify persons involved in violent crimes, and leveraging enforcement of social and physical disorder to identify more serious offenders and reduce crime opportunities. The result was the temporary detention and questioning of an average of more than half a million New Yorkers each year beginning in 2004, with about nine in ten released with no finding of wrongdoing (Fagan et al, 2010). On top

of those detentions were more than 35,000 misdemeanor marijuana arrests each year over the decade beginning in 1998 (Levine and Small, 2008). Each effort required a massive mobilization of police resources and, in the case of Operation Condor, a substantial outlay of public dollars.

Marijuana enforcement was an essential component of the disorder-based strategy to implement "broken windows" theories of disorder and crime, and it is this endeavor that we assess in this paper. In fact, the manifestation of disorder that attracted the most intensive police attention was plain-view use of marijuana. Arrests for marijuana rose sharply through the 1990s, and remain near their peak levels today (Levine and Small 2008, Golub et al. 2007, Harcourt and Ludwig 2007). Accordingly, while quality of life offenses or "broken windows" enforcement were a small part of the OMP strategy in New York, marijuana has become the new "broken windows", supplementing the hundreds of thousands of street stops each year. The racial distribution of marijuana enforcement, and its disconnect from the crime control interests of criminal justice policy, raises recurring constitutional concerns on selective enforcement that were first raised by Spitzer (1999) and then addressed in the 2003 *Daniels* consent decree.

We find these concerns to be well-grounded empirically and that they remain salient. We show significant racial disparities in the implementation of marijuana enforcement activity; street stops for marijuana are more prevalent in precincts with large black populations, as are combined marijuana stop and arrest rates. This disparity holds up across neighborhoods after controlling for local crime and socioeconomic conditions. Moreover, stop patterns are disconnected from patterns of the social disorder complaints that are a central feature of order maintenance policing. Instead, marijuana stops are higher in precincts where police focus on weapons detection, even as crime conditions in those precincts are unrelated to drug problems. The disconnect between marijuana enforcement and crime, and its close ties to race and weapons, suggests that street

stops for marijuana possession may serve as a pretext for higher rates of citizen interdictions in pursuit of weapons in minority neighborhoods, rather than the regulation of low-level offenses or even enforcement of marijuana laws. In other words, police in New York are doubling down on weapons enforcement by also searching for marijuana, and finding little success in either.

The legal rationales for marijuana enforcement seem to be a pretext for citizen stops and marijuana arrests, and this pattern also is racially skewed. We also show that despite recent litigation requiring police officers to specify the reasons for each stop, there are recurring patterns of stops that lack legal justification under both federal and New York law. The documented justifications for each street stop suggest that officers often justify marijuana stops not only as drug transactions, but also based on suspects' presence in a "high crime area" and "other" non-specific circumstances. These justifications on their face are constitutionally insufficient to justify a street stop. On the other hand, in precincts where officers justify stops on valid bases such as suspicion of "casing" a location or where a suspect fits a description provided by a crime victim, marijuana stop activity is less prevalent and enforcement seems to be more closely tied to actual crime conditions. Even after controlling for the priorities of crime conditions and the legal narratives of suspicion provided for stop activity, black and Hispanic precincts seem to be targeted for marijuana enforcement at levels above what legal justifications and other precinct characteristics would suggest are appropriate.

Marijuana enforcement is inefficient to a point where it may distract from other strategies to produce security. Each street stop made is progressively less likely to lead to a weapon seizure, suggesting diminishing returns to the practice. Although the detection of weapons is one of the overarching goals of marijuana policing, fewer than one half of one percent of marijuana stops lead to the seizure of a weapon. Furthermore, while weapons seizures are indeed more

prevalent in areas with higher stop levels, marijuana enforcement plays no significant role in the detection of weapons.

This is not a small problem in the context of race and policing in New York, the epicenter of marijuana enforcement in the U.S. In 2006 the NYPD made over 506,000 stops, .. including 64,166 stops of black males between the ages of 15 and 19, oran average rate of 77 stops for every 100 such persons. [28]. Of these stops, fewer than four percent resulted in an arrest, and fewer than one half of one percent revealed a weapon.[29]

The striking feature of the war on marijuana in New York is not simply the racial imbalance in enforcement compared to the racial distribution of marijuana use (c.f., Saxe et al., 2001; Johnston et al., 2005), nor its disconnect from crime conditions or the legality of marijuana stops, nor its negative effect on the chase for weapons. Instead, we are struck by the dogged (and expensive) pursuit of marijuana offenders in light of the robust empirical evidence of marijuana's equivocal relationship to both more serious forms of drug use and to other crimes. For a short time after the war on marijuana began in New York, the discourse on the escalation of marijuana enforcement focused on how marijuana markets had replaced the waning street markets in cocaine and crack, how marijuana had become more potent and its users more behaviorally unpredictable, and that the violence of those markets had migrated to marijuana markets (Flynn, 2001). In the wake, dollars of overtime money flowed to the police, and arrests skyrocketed.

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[28] ESRI projections suggest that approximately 6.6 million of the city's 8.3 million residents in 2006 were over the age of fifteen.

[29] Street stops are hardly neutral with respect to the person stopped and found to be innocent of any wrongdoing. Stuntz (1998) notes four distinct harms that victims of unjustified and inaccurate stops might suffer. "The first is a harm to the victim's privacy - the injury suffered if some agent of the state rummages around in the victim's briefcase, or examines the contents of his jacket pockets. The second is … "targeting harm," The injury suffered by one who is singled out by the police and publicly treated like a criminal suspect. Third is the injury that flows from discrimination, the harm a black suspect feels when he believes he is treated the way he is treated because he is black. Fourth is the harm that flows from police violence, the physical injury and associated fear of physical injury that attends the improper police use of force."

But the prediction of marijuana-fueled violence seems to have been a false alarm. Homicides reached a 45 year low of 466 in 2009, and overall crime is down by 35% since that discourse on marijuana was first advanced nearly a decade ago. Marijuana use rates among high school and college students across the nation have been relatively flat since 1999 (Johnston et al. 2005), yet the insistence on marijuana's dangers still translates into widespread and racially imbalanced misdemeanor marijuana arrests. Nor are the arrests brief and non-intrusive encounter: persons arrested on misdemeanor marijuana charges are routinely booked, strip-searched, and detained for as long as 48 hours until they are arraigned on charges that are almost always dismissed (Golway, 2000). Observing a sweep of six marijuana arrests at the outset of the current war on marijuana a decade ago, one detective lamented that rather than lowering crime, "[w]e're just ruining people's lives now" (Sargent, 2001).

Order Maintenance Policing practices have persisted through sharp criticism (Spitzer, 1999; Greene, 1999; Harcourt, 2001; Levine and Small, 2008) and civil rights litigation against the City. However, the intractability of racial disparities in police practices in the face of prior judicial efforts at constitutional oversight raise difficult questions about the prospects for either legal or democratic regulation of policing. The deep reach of Order Maintenance Policing into the city's minority communities has serious social costs, undermining perceived police legitimacy, and potentially leading to civilian withdrawal from the co-production of public safety. The diminishing returns of street stops in the production of public safety suggests not only that the practice not only has an unjustified and disparate impact on the city's minority population, that the broader enforcement strategy is misguided its approach to crime control. Marijuana enforcement consumes a great deal of police resources, and for the past decade has been a stable feature of the policing landscape in New York. The social and political objectification of marijuana through this time gave police institutions the opportunity to

transform marijuana enforcement to their own advantage without concern for the central aim of crime reduction. The purpose of the marijuana doctrine, then, may be the expansion of the panoptical or intelligence-generating dimension of police work, enhancing the centrality of police organizations without the burden of distributional or efficiency concerns. As practiced, the police seem to show little interest in maintaining the everyday legitimacy that law-abiding citizens grant to them. The failure to practice discretion in marijuana enforcement signals indifference to those concerns, and threatens to instantiate among the policed a deeply-rooted culture of permanent challenge to police authority. Whether policing without legitimacy is sustainable remains a worrisome question.

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	Mean	SD	Minimum	Maximum
Marijuana possession stops	137.2	163.9	0	1,303
Marijuana possession arrests	419.9	445.9	7	2,472
Total marijuana enforcement	524.9	512.8	10	2,787
Total street stops	5,920.8	4,544.1	442	31,242
% NH-white	30%	0.25	<1%	84%
% NH-black	26%	0.26	<1%	89%
% Hispanic	30%	0.21	5%	79%
% NH-other	14%	0.12	2%	70%
% Poverty	20%	0.11	5%	45%
% Unemployed	10%	0.05	3%	23%
Physical Disorder (factor score)	0.06	1.66	-2.16	5.10
Violent crime (complaints)	651.0	333.1	66	1,937

Table 1: Precinct-Level Enforcement, Demographic, Socioeconomic, and Crime Characteristics (N=375 precinct-year observations)

Sources: Street stop and crime complaints: NYPD, 2004-2008, Arrests: NY State DCJS, 2004-2008, Demographic and employment data: ESRI, 2006, Poverty data: American Community Survey, 2005-2007, Physical Disorder, NYCHVS, 2005. 22nd Precinct (Central Park) is excluded from calculations.

Table 2: Population and NYPD Enforcement Activity by Race/Ethnicity
(rate per 1,000 population in parentheses)

Race/Ethnicity	Marijuana Stops	All Street Stops	Marijuana Arrests	Total Arrests	Estimated 2006 Population
Black	29,854 (14.83)	1,134,539 (563.71)	97,069 (48.23)	748,029 (371.66)	2,012,646
Hispanic	13,315 (5.41)	661,546 (268.59)	58,298 (23.67)	521,386 (211.69)	2,463,016
White	4,931 (1.96)	233,179 (92.81)	15,168 (6.04)	181,545 (72.26)	2,512,415
Other	3,604 (2,80)	191,025 (148.91)	2,886 (2.25)	56,487 (44.03)	1,282,782
Race Unknown	57	3,859	1,536	15,834	N/A
Total N	51,761	2,224,148	174,957	1,523,281	8,270,859

Totals may not sum to 100% due to rounding
Sources: Stop counts and percents extrapolated from 10% random sample of stops from UF-250 data.
Arrest totals based on DCJS counts, 2004-2008. Population distribution based on citywide ESRI projections

Table 3: Negative Binomial Regression of Marijuana Stops by Precinct Demography, Socioeconomic Conditions, Crime, and Enforcement, 2004–2008

VARIABLES	Model 1 Racial Composition		Model 2 Including SES and Foreign Born		Model 3 Including Past-Year Violent Crime		Model 4 Including Past-Year Marijuana Arrests		Model 5 Including Total Stops	
% Black-NH	2.706	**	2.583	**	2.097	**	2.279	**	1.654	*
	[0.450]		[0.674]		[0.721]		[0.678]		[0.656]	
% Hispanic	1.255	**	1.73		1.485		1.612		0.614	
	[0.471]		[1.032]		[1.088]		[1.056]		[0.919]	
% Other Race	0.746		2.049		2.144		1.939		1.045	
	[0.910]		[1.331]		[1.255]		[1.247]		[1.267]	
Socioeconomic Disadvantage			0.0819		0.0605		0.0444		0.016	
			[0.156]		[0.178]		[0.171]		[0.164]	
% Foreign Born			-2.658	*	-2.404		-2.134		-1.274	
			[1.309]		[1.338]		[1.361]		[1.134]	
Past-Year Violent Crime (1000 complaints)					0.299		0.532		-0.65	*
					[0.334]		[0.346]		[0.302]	
Past-Year Marijuana Arrests (1000s)							-0.387	**	-0.312	*
							[0.131]		[0.152]	
Total Stops (logged)									1.06	**
									[0.126]	
Constant	-7.746	**	-7.191	**	-7.122	**	-7.271	**	-15.16	**
	[0.349]		[0.459]		[0.511]		[0.506]		[1.186]	
Observations	375		375		300		300		300	
Number of pct	75		75		75		75		75	
Marginal-R^2	-0.006		0.228		0.318		0.307		0.455	

Models are Negative Binomial GEE's with population exposure and AR(1) covariance within precincts.

All models include fixed effects for borough and year.

Standard errors in brackets, ** p<0.01, * p<0.05

Table 4: Negative Binomial Regression of Total Marijuana Enforcement by Precinct Demography, Socioeconomic Conditions, Crime, and Enforcement, 2004-2008

VARIABLES	Model 1 Racial Composition		Model 2 Including SES and Foreign Born		Model 3 Including Past-Year Violent Crime		Model 4 Including Past-Year Marijuana Arrests		Model 5 Including Total Stops	
% Black-NH	2.583	**	2.387	**	2.089	**	1.986	**	1.688	**
	[0.337]		[0.455]		[0.466]		[0.446]		[0.466]	
% Hispanic	2.230	**	1.973	**	1.968	**	1.899	**	1.580	*
	[0.408]		[0.688]		[0.719]		[0.708]		[0.677]	
% Other Race	-0.602		-0.637		-0.365		-0.234		-0.624	
	[0.684]		[0.936]		[0.846]		[0.853]		[0.814]	
Socioeconomic Disadvantage			0.0915		-0.0299		-0.0244		-0.0458	
			[0.112]		[0.112]		[0.111]		[0.11]	
% Foreign Born			-0.221		-0.253		-0.475		-0.143	
			[0.772]		[0.842]		[0.886]		[0.745]	
Lag Violent Crime Complaints (thousands)					0.665	*	0.580	*	0.131	
					[0.269]		[0.259]		[0.221]	
Lag Marijuana Arrests (thousands)							0.192	*	0.241	**
							[0.0757]		[0.0665]	
Total Stops (logged)									0.454	**
									[0.0878]	
Constant	-6.498	**	-6.294	**	-6.625	**	-6.548	**	-9.97	**
	[0.396]		[0.445]		[0.426]		[0.426]		[0.794]	
Observations	375		375		300		300		300	
Number of pct	75		75		75		75		75	
Marginal-R^2	0.61		0.61		0.73		0.76		0.76	

Models are Negative Binomial GEE's with population exposure and AR(1) covariance within precincts.
All models include fixed effects for borough and year.
Standard errors in brackets, ** p<0.01, * p<0.05

Table 5: Negative Binomial Regressions Predicting Total Marijuana Enforcement by Demographics, Crime, Other Enforcement, and OMP Objectives

Variables	Model 1 "Full model" from Table 4, Model 5		Model 2 Including disorder complaints		Model 3 Including weapons		Model 4 Including disorder and weapons	
% Non-Hispanic Black	1.688	**	1.669	**	1.59	**	1.573	**
	[0.466]		[0.457]		[0.464]		[0.455]	
% Hispanic	1.58	*	1.491	*	1.507	*	1.421	*
	[0.677]		[0.670]		[0.672]		[0.665]	
% Other Race	-0.624		-0.638		-0.562		-0.574	
	[0.814]		[0.803]		[0.803]		[0.794]	
SES Disadvantage	-0.0458		-0.0738		-0.0676		-0.0962	
	[0.110]		[0.107]		[0.106]		[0.103]	
% Foreign Born	-0.143		0.0446		-0.107		0.0782	
	[0.745]		[0.788]		[0.726]		[0.769]	
Lag Violent Crime	0.131		0.344		0.1		0.316	
	[0.221]		[0.246]		[0.221]		[0.246]	
Lag Marijuana Arrests	0.241	**	0.243	**	0.244	**	0.246	**
	[0.0665]		[0.0654]		[0.0670]		[0.0650]	
Total Stops (log)	0.454	**	0.467	**	0.473	**	0.485	**
	[0.0878]		[0.0881]		[0.0892]		[0.0898]	
Lag Disorder Complaints			-0.479				-0.479	
			[0.349]				[0.349]	
% Weapons Stops					0.598	*	0.588	*
					[0.241]		[0.245]	
Constant	-9.97	**	-10.03	**	-10.19	**	-10.24	**
	[0.794]		[0.777]		[0.798]		[0.784]	
Observations	300		300		300		300	
Number of precincts	75		75		75		75	
Marginal-R2	0.75		0.78		0.76		0.78	

Models estimated as GEE's with AR(1) covariance within precincts. All models include fixed effects for borough and year. Standard errors in brackets.

Significance: ** p<0.01, * p<0.05

**Table 6: Factor Loadings from Principle Components Analysis of
Case-Level Stop Justifications (N=2,224,148)**

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
Stop Rationales							
Carrying Suspicious Object	-.041	-.085	0.014	-.054	-.113	-.015	**.783**
Fits a relevant description	**.818**	-.079	-.094	-.035	-.082	-.059	-.040
Casing a victim or location	-.142	.015	.152	**.723**	-.217	-.244	-.034
Acting as a lookout	-.058	.087	.187	**.607**	-.184	.034	-.070
Wearing clothes commonly used in a crime	.107	.258	.321	-.112	.015	-.167	.069
Actions indicative of a drug transaction	-.083	.050	.026	-.059	-.100	**.817**	-.028
Furtive movements	-.144	.578	.064	-.162	-.296	.042	-.090
Actions of engaging in a violent crime	.116	.482	.102	.115	.135	-.120	.112
Suspicious bulge	-.161	.042	.136	-.573	-.330	-.326	-.081
Other	-.121	-.158	.037	-.138	**.804**	-.046	-.007
Additional Circumstances							
Report by victim/witness/officer	**.722**	-.045	-.147	-.007	-.026	.036	.040
Ongoing investigation	.159	.254	.393	.200	.026	-.207	.068
Proximity to scene of offense	.558	.049	.280	-.091	.001	-.064	-.055
Evasive response to questioning	-.040	**.692**	-.069	.086	-.025	.069	.018
Associating with known criminals	.170	.143	.277	-.011	.104	.433	.021
Change direction at sight of officer	-.100	**.651**	-.055	.028	-.158	.079	-.043
Area has high crime incidence	-.204	-.115	**.694**	.091	-.030	.113	.002
Time of day fits crime incidence	-.048	.015	**.718**	.102	-.019	-.002	-.011
Sights or sounds of criminal activity	.013	.124	-.022	.050	.155	-.014	**.639**
Other	-.005	.051	-.141	-.022	**.569**	-.116	-.091
Eigenvalue	2.170	1.701	1.533	1.225	1.174	1.123	1.047
Factor Variance Explained	.1085	.0851	.0766	.0613	.0587	.0561	.0523
Cumulative variance Explained	.1085	.1936	.2702	.3315	.3902	.4463	.4986

Factor loadings based on varimax rotation.

"Thematic" stop justifications (with factor loading magnitudes greater than 0.6) are highlighted in **bold**.

Table 7: Negative Binomial Regression of Total Marijuana Enforcement by Precinct Demography, Socioeconomic Conditions, Crime, Enforcement, and Stop Justifications, 2004–2008

Variables	Model 1 Racial Composition Only		Model 2 Including SES and Foreign Born		Model 3 Including Past-Year Violent Crime		Model 4 Including Past-Year Marijuana Arrests		Model 5 Including Total Stops	
% Non-Hispanic Black	2.025	**	1.832	**	1.615	**	1.512	**	1.442	**
	[0.371]		[0.427]		[0.455]		[0.451]		[0.426]	
% Hispanic	1.94	**	1.577	**	1.81	**	1.749	**	1.635	**
	[0.389]		[0.575]		[0.589]		[0.575]		[0.547]	
% Other Race	-0.371		-0.672		-0.177		0.0085		-0.151	
	[0.672]		[0.847]		[0.747]		[0.726]		[0.687]	
SES Disadvantage			0.074		-0.0532		-0.0481		-0.0652	
			[0.101]		[0.0981]		[0.0956]		[0.0966]	
% Foreign Born			0.307		0.0537		-0.247		-0.147	
			[0.520]		[0.574]		[0.603]		[0.595]	
Lag Violent Crime					0.686	**	0.567	*	0.234	
					[0.238]		[0.221]		[0.204]	
Lag Marijuana Arrests							0.265	**	0.292	**
							[0.0825]		[0.0821]	
Total Stops (logged)									0.400	**
									[0.101]	
Legal Justifications										
Fits relevant description	-0.973	**	-0.988	**	-0.968	**	-0.994	**	-0.469	
	[0.202]		[0.205]		[0.274]		[0.271]		[0.290]	
Evasive Response	0.411		0.417		0.399		0.379		0.428	
	[0.238]		[0.241]		[0.284]		[0.276]		[0.258]	
High crime Area	0.274		0.271		0.527	*	0.528	*	0.391	
	[0.161]		[0.162]		[0.209]		[0.209]		[0.205]	
Casing victim or location	-0.0944		-0.0894		-0.165		-0.124		-0.148	
	[0.195]		[0.196]		[0.199]		[0.199]		[0.193]	
Other Stop Justification	0.406	*	0.424	*	0.731	**	0.757	**	0.83	**

	[0.177]		[0.178]		[0.247]		[0.237]		[0.238]
Drug Transaction	0.790	**	0.786	**	0.732	**	0.782	**	0.868	**
	[0.175]		[0.179]		[0.204]		[0.205]		[0.208]
Carrying suspicious	0.282		0.287		0.326		0.357		0.372
object	[0.306]		[0.313]		[0.395]		[0.394]		[0.397]
Constant	-6.298	**	-6.201	**	-6.549	**	-6.476	**	-9.669	**
	[0.392]		[0.435]		[0.445]		[0.443]		[0.809]
Observations	375		375		300		300		300
Number of Precincts	75		75		75		75		75
Marginal R2 (no justifications)	0.61		0.61		0.73		0.76		0.76
Marginal R2 (with justifications)	0.64		0.64		0.69		0.69		0.65

Total marijuana enforcement computed as: marijuana stops+marijuana arrests - marijuana arrests in stop documentation.

Models structured as GEE's with AR(1) covariance within precincts.

All models contain fixed effects for borough and year. Standard errors in brackets

Significance: ** p<0.01, * p<0.05

Table 8: Weapons Seizure Rates Associated with Four Categories of Street Stops, 2004-2008

Crime Suspected	Number of stops made	Weapons Seizure Rate
Marijuana Possession	52,018	0.49%
Weapons Possession	442,552	2.37%
Violent Crime	340,792	0.71%
Other Offenses	1,388,786	0.43%
Total	2,224,148	0.86%

Weapons seizure rates based on seizures documented in UF-250 database, resulting from each type of stop.

Table 9: Negative Binomial regression of weapons seizures as a function of marijuana enforcement activity and covariates

VARIABLES	Model 1 Based on mj stop volume, population exposure		Model 2 Based on mj stops+arrests, population exposure		Model 3 Based on mj stop volume, total stop exposure		Model 4 Based on mj stops and arrests, total stop exposure	
Marijuana Stops	0.000406				0.000264			
	[0.000332]				[0.000265]			
Total Marijuana Enforcement			-5.24E-05				0.000104	
			[0.000247]				[0.000152]	
% Non-Hispanic Black	0.847	*	0.911	*	0.191		0.202	
	[0.373]		[0.373]		[0.226]		[0.227]	
% Hispanic	0.723		0.727		0.0167		0.000263	
	[0.577]		[0.567]		[0.321]		[0.320]	
% Other Race	1.142		1.133		0.597		0.633*	
	[0.717]		[0.696]		[0.366]		[0.372]	
SES Disadvantage	0.0721		0.0704		-0.101		-0.0967	
	[0.0994]		[0.104]		[0.0544]		[0.0552]	
% Foreign Born	-2.072	**	-1.999	**	-0.187		-0.212	
	[0.682]		[0.677]		[0.360]		[0.359]	
Total Stops	5.47E-05	*	6.48E-05	**	-5.72E-05	**	-5.42E-05	**
	[2.36e-05]		[2.31e-05]		[1.50e-05]		[1.28e-05]	
Lag Violent Crime	0.169		0.178		0.833	**	0.799	**
	[0.257]		[0.273]		[0.213]		[0.216]	
Lag Marijuana Arrests	-0.308	*	-0.285		-0.142		-0.215	
	[0.142]		[0.213]		[0.110]		[0.148]	
Constant	-7.191	**	-7.23	**	-4.537	**	-4.517	**
	[0.343]		[0.319]		[0.198]		[0.201]	
Observations	300		300		300		300	
Number of Precincts	75		75		75		75	
Pseudo-R2	0.24		0.24		0.66		0.66	

Total marijuana enforcement computed as: marijuana stops+marijuana arrests - marijuana arrests in stop documentation. All models include fixed effects for borough and year.
Models estimated as GEE's with AR(1) covariance within precincts. Standard errors in brackets.
Significance: ** $p<0.01$, * $p<0.05$

Figure 1: Marijuana Possession Arrests, NYC
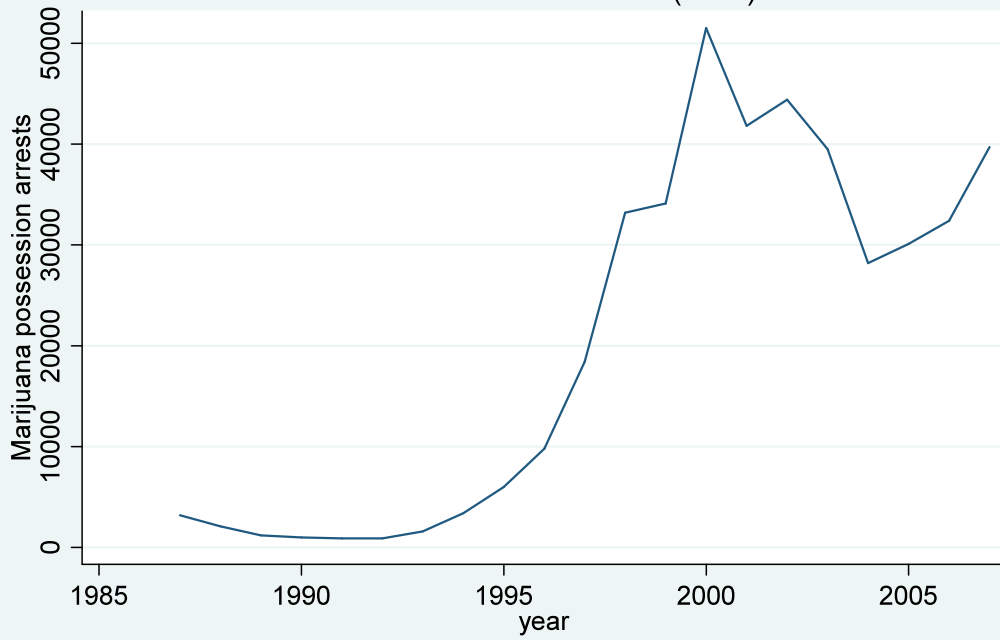Source: Levine and Small (2008)

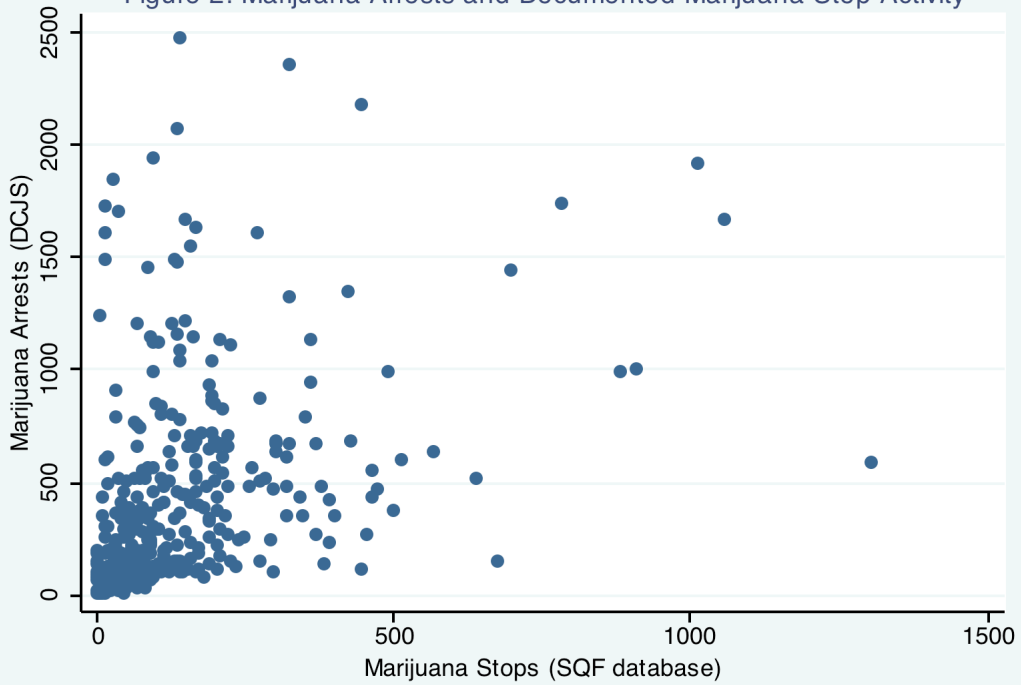Figure 2: Marijuana Arrests and Documented Marijuana Stop Activity

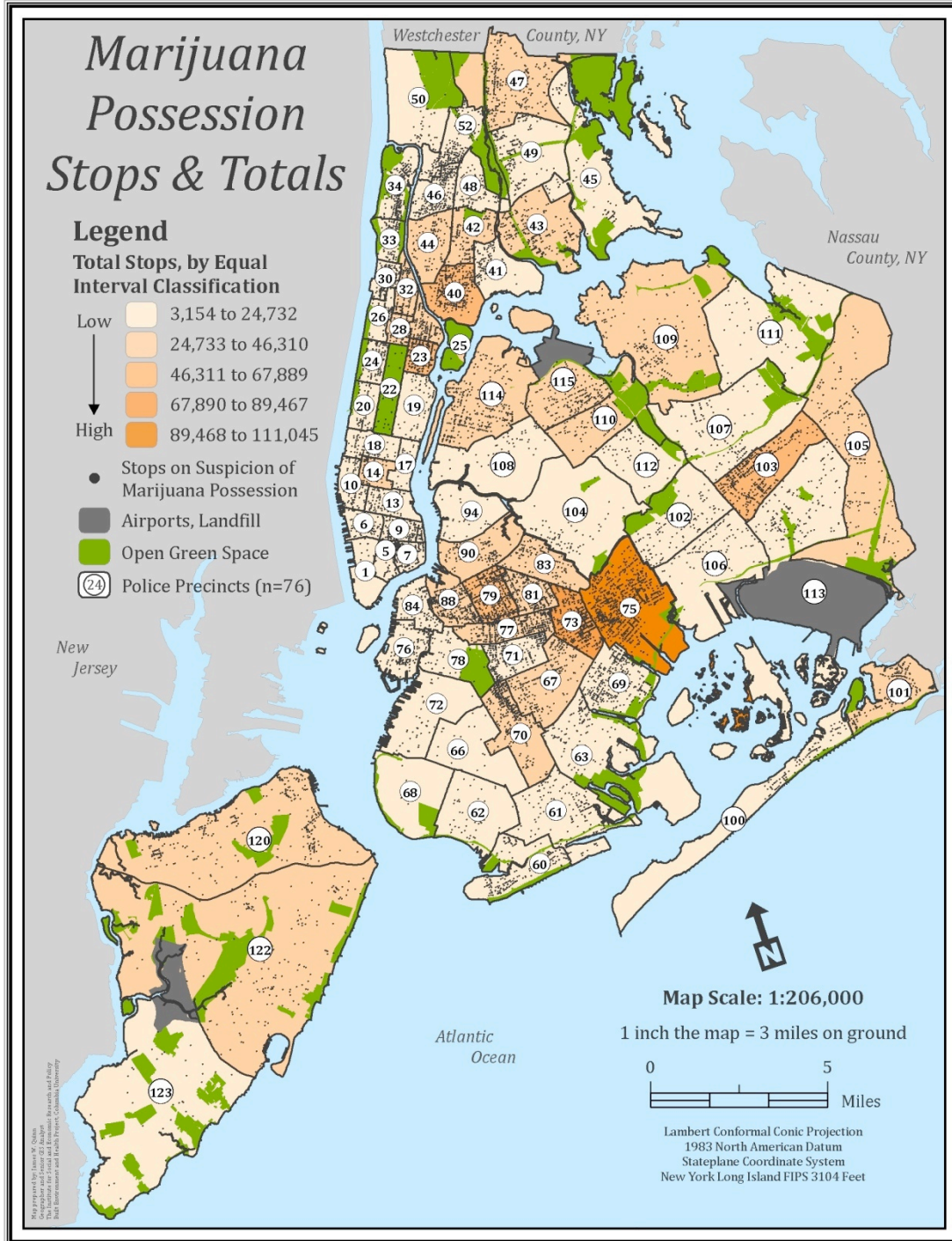Figure 3: New York City Map of Marijuana Possession Stops

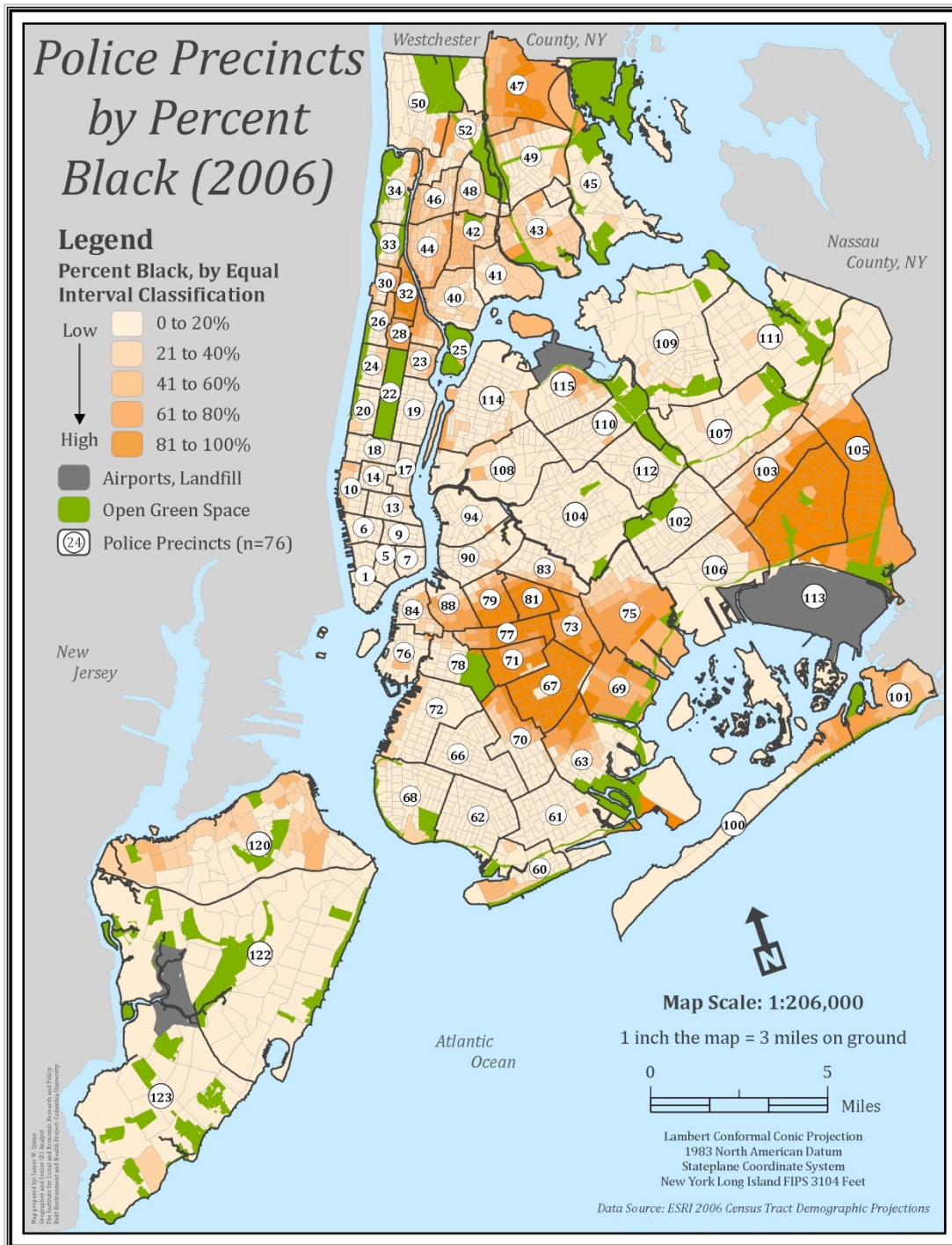Figure 4: New York City Map, Shading by Tract % Black, Overlaid with Police Precinct Boundaries

Figure 5: Precinct-level weapon seizures and marijuana stop volume, 2004-08
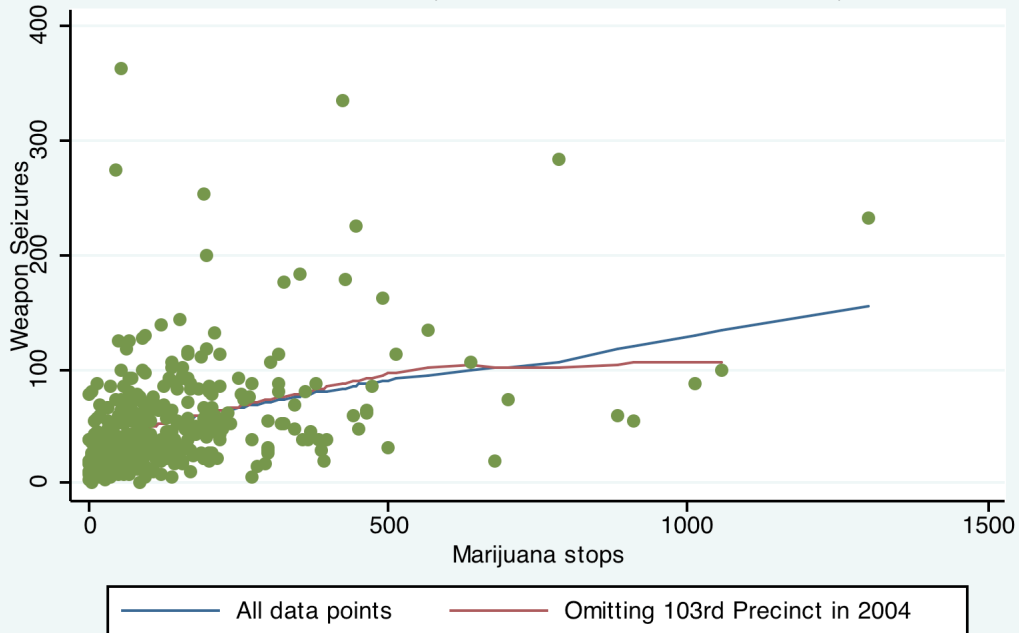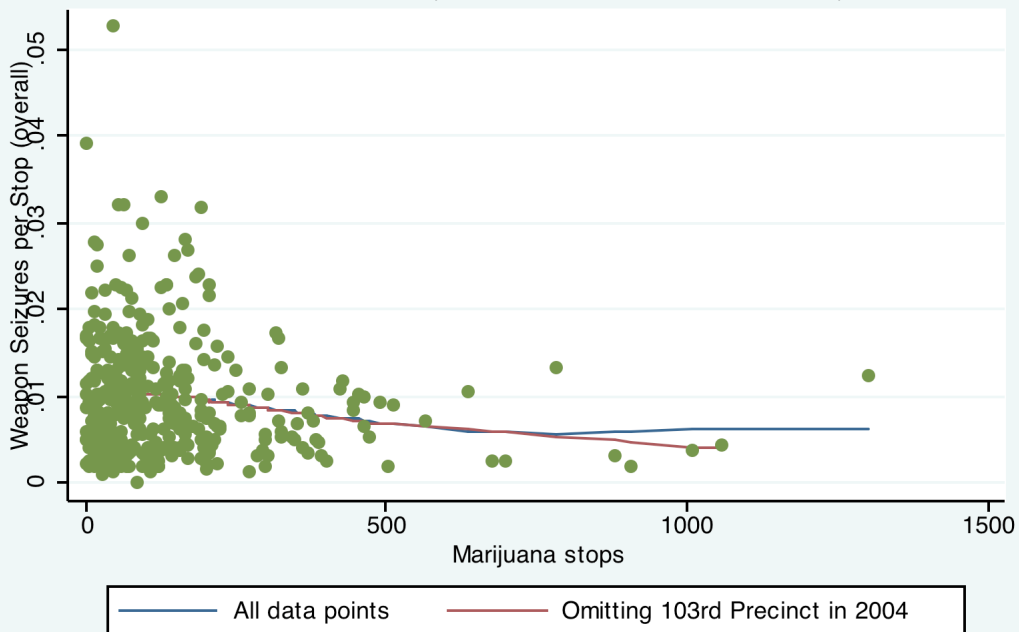Lowess-smoothed line, with and without 103rd Precinct, 2004

Figure 6: Precinct-level weapon seizure rate and marijuana stop volume, 2004-08
Lowess-smoothed line, with and without 103rd Precinct, 2004

1. What is a Stop?

Police stop and frisk procedures have been ruled constitutional under specific conditions articulated in *Terry v. Ohio* (1968). Under *Terry*, Fourth Amendment restrictions on unreasonable searches and seizures allow a police officer to stop a suspect on the street and search her without probable cause to arrest if the police officer has a reasonable suspicion that the person has committed, is committing, or is about to commit a crime. For their own protection, police may perform a quick surface search of the person's outer clothing for weapons if they have reasonable suspicion that the person stopped is armed. This reasonable suspicion must be based on "specific and articulable facts" and not merely upon an officer's hunch.

2. Permissible Behaviors

New York law regulates police conduct more thoroughly than does *Terry*. New York law articulates a four-step analysis articulated in *People v. DeBour* (1976) and *People v. Holmes* (1996). Stops are governed by N.Y. Crim. Proc. Law § 140.50(1) (2007):

> In addition to the authority provided by this article for making an arrest without a warrant, a police officer may stop a person in a public place located within the geographical area of such officer's employment when he reasonably suspects that such person is committing, has committed or is about to commit either (a) a felony or (b) a misdemeanor defined in the penal law, and may demand of him his name, address and an explanation of his conduct.

"Stops" and "frisks" are considered separately under New York statutes. A police officer may stop a suspect but not be permitted to frisk the suspect given the circumstances. Frisks and searches are governed by N.Y. Crim. Proc. Law § 140.50(3), which requires a legitimate "stop" as a predicate to any frisk.[31] In many cases, reasonable suspicion that a person is engaging in violent or dangerous crime (such as murder, burglary, assault, etc.) will justify both a stop *and* a frisk. Table B.1 shows the circumstances that are necessary for a stop to escalate to a frisk and ultimately to an arrest. Table B.2 shows the specific police actions that are permitted at each level of a *Terry/DeBour* stop in New York.

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[31] "When upon stopping a person under circumstances prescribed in subdivisions one and two a police officer or court officer, as the case may be, reasonably suspects that he is in danger of physical injury, he may search such person for a deadly weapon or any instrument, article or substance readily capable of causing serious physical injury and of a sort not ordinarily carried in public places by law-abiding persons. If he finds such a weapon or instrument, or any other property possession of which he reasonably believes may constitute the commission of a crime, he may take it and keep it until the completion of the questioning, at which time he shall either return it, if lawfully possessed, or arrest such person." N.Y. Crim. Proc. Law § 140.50(3)

Table B1. DeBour's Four Levels of Street Encounters[a]

Predicate	Permissible Response
Level 1	Objective Credible Reason Approach to Request Information
Level 2	Founded Suspicion - Common Law Right of Inquiry
Level 3	Reasonable Suspicion Stop and (if fear of weapon) Frisk
Level 4	Probable Cause Arrest and Full Search Incident

a. *People v. DeBour*, 40 N.Y. 2d 210 (1976)

Table B2. Permissble Actions by Police Officers during Stops

Predicate	Permissible Response
Level 1	P.O. can ask non-threatening questions regarding name, address, destination and, if person carrying something unusual, police officer can ask about that. Encounter should be brief and non-threatening. There should be an absence of harassment and intimidation. PO can: • say "STOP" (If not "forceful") • approach a stopped car • touch holster. PO cannot: • request permission to search • cause people to reasonably believe they're suspected of crime, no matter how calm and polite the tone of the questions
Level 2	PO can ask pointed questions that would reasonably lead one to believe that he/she is suspected of a crime. Questions can be more extended and accusatory. Focus on possible criminality. PO can: • request permission to search PO cannot: • pursue • forcibly detain
Level 3	PO can: • forcibly detain • frisk for weapons if in fear • pull car out of traffic flow • order defendant to lie on the ground • handcuff (for good reason) • pursue
Level 4	PO can arrest and search suspect

APPENDIX B: NEW YORK STATE PENAL LAW

§221.05-221.30: POSSESSION OF MARIHUANA

§ 221.05 Unlawful possession of marihuana.   A person is guilty of unlawful possession of marihuana when he knowingly and unlawfully possesses marihuana.   Unlawful possession of marihuana is a violation punishable only by a fine of not more than one hundred dollars. However, where the defendant has previously been convicted of an offense defined in this article or article 220 of this chapter, committed within the three years immediately preceding such violation, it shall be punishable (a) only by a fine of not more than two hundred dollars, if the defendant was previously convicted of one such offense committed during such period, and (b) by a fine of not more than two hundred fifty dollars or a term of imprisonment not in excess of fifteen days or both, if the defendant was previously convicted of two such offenses committed during such period.

§ 221.10 Criminal possession of marihuana in the fifth degree.   A person is guilty of criminal possession of marihuana in the fifth degree when he knowingly and unlawfully possesses: 1. marihuana in a public place, as defined in section 240.00 of this chapter, and such marihuana is burning or open to public view; or   2. one or more preparations, compounds, mixtures or substances containing marihuana and the preparations, compounds, mixtures or substances are of an aggregate weight of more than twenty-five grams.   Criminal possession of marihuana in the fifth degree is a class B misdemeanor.

§ 221.15 Criminal possession of marihuana in the fourth degree.   A person is guilty of criminal possession of marihuana in the fourth degree when he knowingly and unlawfully possesses one or more preparations, compounds, mixtures or substances containing marihuana and the preparations, compounds, mixtures or substances are of an aggregate weight of more than two ounces.   Criminal possession of marihuana in the fourth degree is a class A misdemeanor.

§ 221.20 Criminal possession of marihuana in the third degree.   A person is guilty of criminal possession of marihuana in the third degree when he knowingly and unlawfully possesses one or more preparations, compounds, mixtures or substances containing marihuana and the preparations, compounds, mixtures or substances are of an aggregate weight of more than eight ounces.   Criminal possession of marihuana in the third degree is a class E felony.

§ 221.25 Criminal possession of marihuana in the second degree.   A person is guilty of criminal possession of marihuana in the second degree when he knowingly and unlawfully possesses one or more preparations, compounds, mixtures or substances containing marihuana and the preparations, compounds, mixtures or substances are of an aggregate weight of more than sixteen ounces.   Criminal possession of marihuana in the second degree is a class D felony.

§ 221.30 Criminal possession of marihuana in the first degree.   A person is guilty of criminal possession of marihuana in the first degree when he knowingly and unlawfully possesses one or more preparations, compounds, mixtures or substances containing marihuana and the preparations, compounds, mixtures or substances are of an aggregate weight of more than ten pounds.   Criminal possession of marihuana in the first degree is a class C felony.

APPENDIX C. REPLICATION OF THE NYPD'S UF-250 FORM

(COMPLETE ALL CAPTIONS)

STOP, QUESTION AND FRISK REPORT WORKSHEET
PD344-151A (Rev. 11-02)

Pct. Serial No.		
Date		Pct. Of Occ.

Time Of Stop	Period Of Observation Prior To Stop	Radio Run/Sprint #

Address/Intersection Or Cross Streets Of Stop

☐ Inside ☐ Outside	☐ Transit ☐ Housing	Type Of Location Describe:

Specify Which Felony/P.L. Misdemeanor Suspected	Duration Of Stop

What Were Circumstances Which Led To Stop?
(MUST CHECK AT LEAST ONE BOX)

☐ Carrying Objects In Plain View Used In Commission Of Crime e.g., Slim Jim/Pry Bar, etc.
☐ Fits Description.
☐ Actions Indicative Of "Casing" Victim Or Location.
☐ Actions Indicative of Acting As A Lookout.
☐ Suspicious Bulge/Object (Describe)
☐ Other Reasonable Suspicion Of Criminal Activity (Specify)

☐ Actions Indicative Of Engaging In Drug Transaction.
☐ Furtive Movements.
☐ Actions Indicative Of Engaging In Violent Crimes.
☐ Wearing Clothes/Disguises Commonly Used In Commission Of Crime.

Name Of Person Stopped	Nickname/ Street Name	Date Of Birth

Address	Apt. No.	Tel. No.

Identification: ☐ Verbal   ☐   Photo I.D.   ☐   Refused
☐   Other (Specify) _____

Sex: ☐ Male   Race: ☐ White ☐ Black ☐ White Hispanic ☐ Black Hispanic
☐ Female   ☐ Asian/Pacific Islander   ☐ American Indian/Alaskan Native

Age	Height	Weight	Hair	Eyes	Build

Other (Scars, Tattoos, Etc.)

Did Officer Explain Reason For Stop ☐ Yes ☐ No	If No, Explain:

Were Other Persons Stopped/ Questioned/Frisked?	☐ Yes ☐ No	If Yes, List Pct. Serial Nos.

If Physical Force Was Used, Indicate Type:
☐ Hands On Suspect
☐ Suspect On Ground
☐ Pointing Firearm At Suspect
☐ Handcuffing Suspect
☐ Suspect Against Wall/Car

☐ Drawing Firearm
☐ Baton
☐ Pepper Spray
☐ Other (Describe)

Was Suspect Arrested? ☐ Yes ☐ No	Offense	Arrest No.
Was Summons Issued? ☐ Yes ☐ No	Offense	Summons No.

Officer In Uniform? ☐ Yes ☐ No	If No, How Identified? ☐ Shield ☐ I.D. Card ☐ Verbal

APPENDIX D: STOP RATIONALES AND ADDITIONAL CIRCUMSTANCES LISTED ON UF-250

Stop Rationales	Additional Circumstances
Carrying suspicious object	Report by victim/witness/officer
Fits a relevant description	Ongoing investigation
Casing a victim or location	Proximity to scene of offense
Acting as a lookout	Evasive response to questioning
Wearing clothes commonly used in a crime	Associating with known criminals
Actions indicative of a drug transaction	Change direction at sight of officer
Furtive movements	Area has high crime incidence
Actions of engaging in a violent crime	Time of day fits crime incident
Suspicious bulge	Sights or sounds of criminal activity
Other	Other