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Race and Selective Enforcement in Public Housing

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ABSTRACT

Drugs, crime and public housing are closely linked in policy and politics, and their nexus has animated several intensive drug enforcement programs targeted at public housing residents. In New York City, police systematically conduct “vertical” patrols in public, making tens of thousands of “Terry” stops to detect drugs or weapons each year under the Trespass Abatement Program, or TAP. Both uniformed and undercover officers move systemically within the halls and stairwells of buildings, temporarily detaining and questioning residents and visitors, often at a low threshold of suspicion, and usually alleging trespass to justify the stop. . This pattern of selective enforcement through elevated rates of high discretion stops in public housing under TAP raises constitutional concerns at the intersection of the Fourteenth Amendment prohibitions on racial discrimination – residents of public housing are overwhelming non-white – and Fourth Amendment prohibitions on suspicionless stops. We use a case-control design to identify the effects of living in a public housing development on the probability of stop, frisk and arrest for trespass or other crimes in New York City’s 330 public housing developments from 2005-8. We find that the incidence rate ratio for trespass stops and arrests is 1.5 times greater in public housing than in the immediate surrounding neighborhoods. We decompose these effects using first differences models and find that the difference in percent Black population in public housing compared to the surrounding area predicts the disparity in trespass enforcement. Four-wave cross-lag regressions show that trespass enforcement in public housing is independent from enforcement in the surrounding area, suggesting that public housing is specifically targeted for intensive enforcement. The results raise constitutional concerns about equal protection. Qualitative evidence suggests that stops have a stigmatizing effect on public housing residents and their families, and that they inhibit basic social interactions such as child care arrangements and family visitation.

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I. INTRODUCTION

Crime and public housing are closely linked in the popular and political imagination, and have been so for nearly 50 years. It should be no surprise, then, that public housing has been a focus of policy interest by lawmakers as well as academics, and strategic interest by legal actors, especially the police. Throughout this time, a nearly intractable popular fear of urban public housing projects¹ has led to a variety of law enforcement tactics that place both residents and visitors under a very specific police gaze. This gaze has led to efforts to “contain” residents as well as to closely surveil visitors and neighbors from the surrounding communities who venture into its perimeter.

Relying on theories of order maintenance and on the recent jurisprudence of high crime areas,² police have adopted tactics that raise complex questions of legality and fairness. In recent years, for example, public housing residents have faced systematic, suspicionless searches of their homes,³ banishment statutes,⁴ and an increase in incidents of police misconduct.⁵

¹ See Michael H. Schill, *Distressed Public Housing: Where Do We Go from Here?*, 60 U. Chi. L. Rev. 497, 497 (1993) (“Scarcely a day goes by without reports in the media about the . . . problems that plague some publicly-owned housing developments. Accounts of appalling apartment conditions, corrupt administrators, and innocent bystanders killed by gang warfare are commonplace. Negative images of public housing have even found their way into popular culture.”). See also Sarah N. Kelly, *Separating the Criminals from the Community: Procedural Remedies for “Innocent Owners” in Public Housing Authorities*, 51 N.Y.L. Sch. L. Rev. 379, 382 (2006) (referring to public housing as a “dangerous environment”); Andrew Byers, Note, *The Special Government Needs Exception: Does it Allow for Warrantless Searches of Public Housing?*, 41 Wayne L. Rev. 1469, 1469 (1995) (comparing the conditions within public housing to a “war zone”). See also Jeffrey Fagan et al., *The Paradox of the Drug Elimination Program in New York City Public Housing*, 13 Geo. J. Poverty L. & Pol’y 415, 415--16 (2006) [hereinafter Fagan, DEP] (“In the last twenty years, the notion that public housing is, by its physical and social design, a dangerous milieu has been reinforced by rare but widely publicized episodes of youth violence, sequential drug epidemics, and elevated rates of drug-related violence.”).

² Under current Supreme Court doctrine, those living in “high crime areas” receive less robust protection from the Fourth Amendment than do those in areas with lower crime rates. Andrew Guthrie Ferguson & Damien Bernache, *The “High-Crime Area” Question: Requiring Verifiable and Quantifiable Evidence for Fourth Amendment Reasonable Suspicion Analysis*, 57 Am. U. L. Rev. 1587, 1588 (2008).

³ See Sudhir Alladi Venkatesh, *American Project 129--130* (2000) (describing the searches conducted by the Chicago Housing Authority and the Chicago Police Department as part of operation clean sweep).

In New York, the negative attention to public housing took the form of intensive enforcement of trespass statutes. Together with widespread marijuana enforcement⁶ and extensive use of *Terry* stops (known as Stop, Question and Frisk, or SQF),⁷ trespass enforcement was one of the core engines of Order Maintenance Policing, the influential policing model that has been credited with lowering crime rates in New York and that has been adopted by police agencies across the country.⁸ The results in New York are stark: over 35,000 trespass arrests each year since 1995, most in public housing, and few that lead to convictions.⁹

As with its strategic and policy predecessors, trespass enforcement in public housing was animated by the empirical and theoretical connection between drug selling and crime. But the modern version is a significant departure strategically from past public housing interventions to eliminate drug use and disrupt drug markets. Past efforts focused on evictions of tenants who were implicated in the drug business, as well as undercover drug buys in and around public housing to disrupt drug selling enterprises. This form of “retail” enforcement had limited success through a succession of drug epidemics since the 1960s. Trespass enforcement was something new: a larger scale effort that was “wholesale” in two ways: its scope and reach, and the fact that it was implemented as a pre-emptive engagement with would-be offenders. The similarity in the patterns of street stops and trespass arrests under OMP have led to characterizations of trespass as a special version of *Broken Windows* theory with limited application to public housing.¹⁰ In this vein, people moving about in the hallways and stairwells of

⁴ See generally *Virginia v. Hicks*, 539 U.S. 113 (2003) (finding that the trespass policy of the Richmond Redevelopment and Housing Authority, which banned certain individuals from housing authority property, did not violate the First Amendment rights of non-residents banished from the property).

⁵ In New York City, for example, complaints filed with the civilian review board increased sixty-six percent between 2002 and 2006. New York City Civilian Complaint Review Board, Status Report January-June 2007, at 11 (2007), available at http://www.nyc.gov/html/ccrb/pdf/ccrbsemi_2007_Jan_June.pdf. Similarly, San Francisco has seen a “gradual increase in complaints of police misconduct.” The First Amendment and Police Misconduct: Criminal Penalty for Filing Complaints Against Police Officers, 27 *Hamline L. Rev.* 225, 239 (2004).

⁶ Levine and Small; Harcourt and Ludwig, Golub and Johnson, Geller and Fagan

⁷ Spitzer, 1999; Waldeck, 2000; Harcourt 2001; Garnett 2005 and in press

⁸ Skogan and Frydl, 2004; Kubrin et al., 2010

⁹ Bronx Defenders data, Legal Aid data

¹⁰ Wilson and Kelling, Taylor, Garnett, others

public housing are a manifestation of underlying crime and disorder problems that justifies aggressive, pre-emptive policing.

Just as OMP gave rise to equal protection concerns because of its racial and spatial concentration,¹¹ the totality of trespass enforcement runs similar risks based on its shared policy and tactical foundations. And because of the social fact of the demography of public housing – predominantly non-white, poor and young residents – the trespass-OMP link in public housing has led to claims of racial disparities in trespass enforcement.¹² These fears are compounded by the ease and low legal burden needed to engage a citizen-suspect for a high discretion crime such as trespass. In other words, trespass stops and arrests seem to be based not on the necessary predicate for stops – reasonable suspicion – but on broad-based high discretion police stops and interdictions of both residents and visitors alike at relatively low levels of categorically defined suspicion. This, in turn, has led to claims of widespread Fourth Amendment violations.

These issues are the focus of this article. They take on additional normative and constitutional importance in light of the limited efficacy of OMP in preventing more serious crime,¹³ the observed racial disparities in its implementation,¹⁴ and the history of constitutional concerns that have surrounded the policy.¹⁵ We use a quasi-experiment to assess claims of racial disparities in trespass enforcement, and capitalize on variation in the siting of public housing across the city to determine if, compared to its immediate and adjacent neighbors, there are observable differences in trespass enforcement, and the extent to which these differences are attributable to race or differences in other relevant characteristics, especially patterns of crime, in the surrounding areas.

The article proceeds in four sections. First, we review the history of efforts to control crime in public housing. These efforts, which focused largely on evictions, date back to the heroin epidemics of the 1960s that coincided with the first of three sharp crime shocks to legal institutions as well as to the polity. Next, we examine the legal and background and tactical details of the trespass enforcement regime as practiced in New

¹¹ Spitzer, 1999; Daniels v City of New York consent decree, 2003

¹² LDF complaint, newspaper stories

¹³ Harcourt, 2000; Ludwig and Harcourt, 2006; Rosenfeld et al., 2007; but see Corman and Mocan (2003)

¹⁴ Spitzer, 1999; Gelman Fagan and Kiss, 2007, Fagan and Davies, 2000; Fagan et al. 2010

¹⁵ Daniels v City of New York, 2003.

York. The fact that the implementation of this design required a statutory modification of the state’s trespass law is a sign of the commitment by legal actors to pursuing this tactic. We then discuss the details of the empirical test and present the result. The evidence shows that there is a racial disparity in trespass enforcement that cannot be explained by its crime predicates. While not providing evidence of intentional discrimination, we offer the test as a process of ruling out counterfactuals – violent or drug crimes, specifically – that are the predicates for the policy. We find that trespass enforcement is a function of the Black population in public housing, even after accounting for those counterfactuals. We offer brief concluding thoughts on the costs of trespass enforcement that are borne by the residents who are the intended beneficiaries of the project.

II. BACKGROUND

A. Crime in Public Housing

Public housing in the U.S. evolved in the 1930s as a benevolent social experiment to alleviate slum conditions and benefit mostly (white) working class populations in American cities. It also was a Great Depression Era public works projects designed to both employ Americans and provide housing for those suffering from the economic downturn.¹⁶ “In its infancy, public housing was used primarily as a tool that allowed families on the road to the middle class a way station in which to acquire the necessary economic status to move on.”¹⁷ Public housing expanded after World War II to assist the poor and working poor to escape “slum” conditions. Much of this second wave of housing projects was clusters of high rise towers that were sited in neighborhoods already in the midst of significant social structural change.¹⁸

But since that time, public housing has become increasingly problematized through the bifocal lenses of race and crime. Beginning in the 1950s, public housing became a source of social and political conflict as white working class families in public

¹⁶ Gordon Cavanaugh, *Public Housing: From Archaic to Dynamic to Endangered*, 14 *J. Affordable Housing & Community Dev. L.* 228, 229 (2005).

¹⁷ Gregory J. Delone, *Public Housing and the Fear of Crime*, 36 *J. Crim. Just.* 115, 115 (2008).

¹⁸ More recently, public housing design began to include low slung garden apartments, but these also were built in neighborhoods that traditionally were “slums” with high concentrations of many of the correlates of violence.

housing were replaced by poor non-whites.¹⁹ This occurred (more or less) in parallel with the fundamental economic transformation of cities in the 1950s as manufacturing and unskilled labor jobs began to migrate to other regions of the U.S. and eventually out of the country.²⁰ As the white population in public housing in New York and elsewhere continued to decline,²¹ these structures looked more and more like reservations for the city's poorest residents of color. The racial threat of concentrated minority populations in public housing signaled 'danger' for older, declining white populations, both those already in public housing and in the surrounding neighborhoods.²² This coerced racial heterogeneity led to social conflicts in a wide range of social policy domains such as housing, education (school busing), and welfare policy.²³ By the 1960s, public housing had grown to symbolize the dangers of inner city urban life, and was labeled as a place requiring greater surveillance and social control. By 1970, public housing had become known, somewhat ominously and unfairly, as "government ghettos."²⁴

The popular and political image of public housing hardened further as crime rates rose. Just as public housing construction boomed in the 1950s, crime rates in neighborhoods with public housing sites had begun to climb, and rapid population change and economic decline had changed the fortunes of neighborhood residents for the

¹⁹ Peter Marcuse, *Interpreting Public Housing History*, 12 *Journal of Architectural and Planning Research* 240 (1995)

²⁰ Wilson, *The Truly Disadvantaged* (1987); Wilson, *When Work Disappears* (1996)

²¹ NYCHA's black population was only 4.7% in 1930 and 12.4% in 1940. Nicholas Dagen Bloom, *Public Housing That Worked: New York in the Twentieth Century* 88 (2008). At this time, there was an almost non-existent Latino population in public housing and, even in 1945, whites made up 85% of NYCHA residents. *Id.* at 89. By 1974, however, NYCHA residents were 14.1% white, 57.7% black, and 28.2% Puerto Rican." *Id.* at 175. Today, NYCHA's white population has dwindled to less than 5%. New York City Housing Authority, *Comprehensive Annual Financial Report for the Year Ended December 31, 2008*, at 104 (2009).

²² For example, the Black population in public housing in New York was only 4.7% in 1930 and 12.4% in 1940. Nicholas Dagen Bloom, *Public Housing That Worked: New York in the Twentieth Century* 88 (2008). At this time, there was an almost non-existent Latino population in public housing and, even in 1945, whites made up 85% of NYCHA residents. *Id.* at 89. By 1974, however, NYCHA residents were 14.1% white, 57.7% black, and 28.2% Puerto Rican." *Id.* at 175. Today, NYCHA's white population has dwindled to less than 5%. New York City Housing Authority, *Comprehensive Annual Financial Report for the Year Ended December 31, 2008*, at 104 (2009).

²³ Katz, *The Undeserving Poor*; Massey and Denton, *American Apartheid* (1993); Richard Perlestein, *Nixonland* (2008)

²⁴ Wallace F. Smith, *Housing: The Social and Economic Elements* 477 (1970)

worse.²⁵ A heroin epidemic began in New York and other large metropolitan areas in the mid-1960s and continued into the early 1970s.²⁶ Initially, the heroin epidemic received little mainstream attention, but that changed in the late 1960s when, due to fear of urban crime and heroin use among American military personnel in Vietnam, it became defined as a threat.²⁷ Crime rose concurrently, and perhaps somewhat causally, as homicides tripled from 1967-1973.²⁸ Riots in minority neighborhoods in 47 American cities in 1967-8 reinforced both the threat of crime and racialized (however inaccurately) its narrative.²⁹

Although crime risks in public housing at the time were no greater than in their surrounding neighborhoods, public housing in the late 1960s was, by its physical and social design, seen as a dangerous milieu and a crime hot spot. In the 1970s, that perception was spread and reinforced by rare but widely publicized episodes of youth violence,³⁰ sequential drug epidemics,³¹ and elevated rates of drug-related violence.³² With the crack epidemic in the mid-1980s, the high rise towers of large, isolated, and ominous public housing projects came to symbolize drug and crime problems. Stylized social facts on crime and public housing in the 1990s tended to further strengthen those perceptions.³³ The takeover of Chicago's public housing system by HUD in 1995, a

²⁵ See, for example, Alex Kotlowitz, *THERE ARE NO CHILDREN HERE* (1990); Nicholas Lemann, *THE PROMISED LAND* (1991). Also, see earlier sociological works by Lee Rainwater, *BEHIND GHETTO WALLS* (1966), Ulf Hannerz, *SOULSIDE* (1969), and James Garbarino, *CHILDREN AND FAMILIES IN THE SOCIAL ENVIRONMENT* (1992).

²⁶ Don C. Des Jarlais & Gopal S. Uppal, Heroin Activity in New York City, 1970-1978, 7 *Am. J. Drug & Alcohol Abuse* 335, 336 (1980).

²⁷ Michael Agar & Heather Schacht Reisinger, A Heroin Epidemic at the Intersection of Histories: The 1960s Epidemic Among African Americans in Baltimore, 21 *Medical Anthropology* 189, 191 (2002).

²⁸ Erik Monkennen, Roger Lane, Zimring and Hawkins, others

²⁹ Kerner Commission, Eisenhower Commission Reports

³⁰ Kotlowitz, Time Magazine piece from July 77

³¹ CITES

³² Goldstein et al., Chaiken and Chaiken on 'predatory violence'

³³ See, e.g., Timothy Ireland et al., Violence Among Adolescents Living In Public Housing: A Two-Site Analysis, 3 *Criminology and Public Policy* 3 (2003); Susan Popkin, et al., *THE HIDDEN WAR: THE BATTLE TO CONTROL CRIME IN PUBLIC HOUSING IN CHICAGO* (2000); Tamara Dumanovsky et al., *Neighborhood Contexts of Crime in New York City's Public Housing*, presented at the September Research Institute on Neighborhood Effects on Low-Income Families, Joint Center for Poverty Research, The University of Chicago and Northwestern University (1999). Recent efforts by HUD to conduct victimization surveys in public housing projects suggest elevated rates, but with a host of methodological artifacts and complexities. See, for example, Harold R. Holzman and Lanny Piper, Measuring Crime in Public Housing: Methodological Issues and Research Strategies, 14 *Journal of Quantitative Criminology* 331 (1998);

response in part to intense activity in Chicago public housing by drug gangs,³⁴ reinforced these images of public housing in the popular and political imagination.³⁵

These connections are routinely revisited in the press as a reminder of the persistence of drug problems in public housing.³⁶ Public housing, despite its proud history,³⁷ is currently portrayed as a dangerous, homogenous, place where crime and disorder run rampant.³⁸ This perception is reinforced by both academic³⁹ and media⁴⁰ portrayals of public housing and leads to a situation where outsiders – those not intimately familiar with the neighborhoods themselves – perceive those communities as more dangerous than either the residents themselves or than the facts can substantiate.⁴¹

Harold R Holzman, *Criminological Research on Public Housing: Toward a Better Understanding of People, Places and Spaces*, 42 *Crime and Delinquency* 361 (1996).

³⁴ See, for example, Sudhir Alli Venkatesh, *AMERICAN PROJECT: THE RISE AND FALL OF AN AMERICAN GHETTO* (2000).

³⁵ Judy A. England-Joseph, HUD's takeover of the Chicago Housing Authority, statement to the Subcommittee on Housing and Community Opportunity, Committee on Banking and Financial Services, House of Representatives, 1995.

³⁶ See, for example, N.R. Kleinfeld, *With Drugs in Open, Elderly Live Behind Locks*, *New York Times*, May 2, 2004, at 41 (describing drugs and violence in Harborview Terrace Houses on the west side of Manhattan, primarily by illegal tenants in a housing complex with a high proportion of elderly residents).

³⁷ Public housing, which got its start during the Great Depression, was originally seen as a way in which a family, seeking entry into the middle class, could build stability and save money before moving on to bigger and better things. See Gregory J. DeLone, *Public Housing and the Fear of Crime*, 36 *J. Crim. Just.* 115, 115 (2008). See, also, Nicholas Dagen Bloom, *Public Housing That Worked: New York in the Twentieth Century* 88 (2008).

³⁸ Bloom, *id.* (“[P]ublic housing is more often than not also portrayed by the media as rife with crime and disorder.” (internal quotations omitted)).

³⁹ See Andrew Byers, Note, *The Special Government Needs Exception: Does It Allow for Warrantless Searches of Public Housing?*, 41 *Wayne L. Rev.* 1469, 1469 (1995) (comparing conditions within public housing to “war zone”); Sarah N. Kelly, Note, *Separating the Criminals from the Community: Procedural Remedies for “Innocent Owners” in Public Housing Authorities*, 51 *N.Y.L. Sch. L. Rev.* 379, 382 (2006) (referring to public housing as a “dangerous environment”). See, Ireland et al, *supra*.

⁴⁰ See Jeffrey Fagan et al., *The Paradox of the Drug Elimination Program in New York City Public Housing*, 13 *Geo. J. Poverty L. & Pol’y* 415, 415-16 (2006) (“In the last twenty years, the notion that public housing is, by its physical and social design, a dangerous milieu has been reinforced by rare but widely publicized episodes of youth violence, sequential drug epidemics, and elevated rates of drug-related violence.”); Michael H. Schill, *Distressed Public Housing: Where Do We Go from Here?*, 60 *U. Chi. L. Rev.* 497, 497 (1993) (“Scarcely a day goes by without reports in the media about the... problems that plague some publicly-owned housing developments. Accounts of appalling apartment conditions, corrupt administrators, and innocent bystanders killed by gang warfare are commonplace. Negative images of public housing have even found their way into popular culture.” (footnotes omitted)).

⁴¹ See Lincoln Quillian & Devah Pager, *Black Neighbors, Higher Crime? The Role of Racial Stereotypes in Evaluations of Neighborhood Crime*, 107 *Am. J. Soc.* 717, 749 (2001) (“[O]ur results suggest that whites (and Latinos) systematically overestimate the extent to which percentage black and neighborhood crime rates are associated; this association persists even when official crime rates are controlled.”); Robert J. Sampson & Stephen W. Raudenbush, *Seeing Disorder: Neighborhood Stigma and the Social Construction*

The result is that, to the outside world, public housing – and those who live there – is readily viewed as the focal point of criminality in a neighborhood and, regardless of whether such a perception is justified, that understanding has been used for more than three decades to justify intrusive police tactics targeting crime occurring within the buildings.⁴²

B. Law and Social Control in Public Housing

Beginning in the 1960s, several features of drug law and policy in that era specifically targeted public housing, and expressed the deeply held connection between public housing, crime and drugs.⁴³ That suspicion has led to policing tactics that have targeted public housing in ways unheard of in other apartment buildings.⁴⁴

Initially, the heroin epidemic received little mainstream attention. Public scrutiny came “in the late 1960s when, due to fear of urban crime and heroin use among American military personnel in Vietnam, it became defined as a threat.”⁴⁵ Before the peak of the epidemic, drug exchanges mostly “existed in private domains: drug[s] were bought, sold

of “Broken Windows,” 67 Soc. Psychol. Q. 319, 336 (2004) (finding “social structure” is a “powerful predictor of perceived disorder”); see also id. at 329--30 (“[C]oncentrated poverty, proportion black, and proportion Latino are related positively and significantly to perceived disorder” while minorities, particularly those living within chaotic neighborhoods, have a higher threshold for perceiving disorder).

⁴² See, e.g., David G. Lazarus, Here Comes the Neighborhood---*Virginia v. Hicks* and How the New York Legislature Should Empower Law Enforcement with More Powerful Trespass-Barrment Statutes as a Tool to Combat Crime in Public Housing Projects, 29 Seton Hall Legis. J. 315, 327 (2004) (claiming that “the use of every conceivable tool in New York City’s arsenal will be necessary to combat the ever-present criminal element in its housing projects”).

⁴³ See, for example, the federal Anti-Drug Abuse Act, 42 U.S.C. § 1437d(l)(6) (1994), requiring lease terms that give local public housing authorities the discretion to terminate the lease of a tenant when a member of the household or a guest engaged in drug-related activity, regardless of whether tenant knew, or should have known, of the drug-related activity). Section 5101 of the Act strengthened existing public housing lease provisions by including language in the leases to the effect that: “A public housing resident, any member of the resident’s household, or a guest or other person under the resident’s control shall not engage in criminal activity, including drug-related criminal activity, on or near public housing premises . . . and such criminal activity shall be cause for termination of tenancy” (HUD, April 1991). A resident does not need to be convicted of criminal activity to be considered in violation of Section 5101.

⁴⁴ See, e.g., *Virginia v. Hicks*, 539 U.S. 113 (2003) (upholding Richman Redevelopment and Housint Authority's trespass policy, which banned some individuals from housing authority property); Sudhir Alladi Vankatesh, American Project: The Rise and Fall of a Modern Ghetto 139-30 (2000) (describing systematic, warrantless searches of Chicago public housing buildings conducted by the Chicago housing Authority and the Chicago Police Department).

⁴⁵ Michael Agar & Heather Schacht Reisinger, A Heroin Epidemic at the Intersection of Histories: The 1960s Epidemic Among African Americans in Baltimore, 21 Medical Anthropology 189, 191 (2002).

and used in discreet settings" and specific locations.⁴⁶ Taking advantage of anonymity, and in close proximity to retail markets, heroin became readily available in "large apartment buildings . . . where landlords were not often present."⁴⁷ Drug dealers attempting to avoid street sweeps by NYPD officers during the crack epidemic would later mimic this move to indoor drug sales.⁴⁸

Evicting public housing tenants who were participants in or supporters of drug dealing was a logical response. In New York, these evictions were one of the first constitutional battles in the use of legal coercion to make public housing safe, and much of the early debate centered on the 1971 *Escalera* consent decree.⁴⁹ *Escalera* was a class action brought by NYCHA residents challenging, on due process grounds, the procedures employed by the housing authority to (1) terminate tenancy on the ground of non-desirability; (2) terminate tenancy for violation of Housing Authority rules; and (3) assess rent augmentations based on "undesirable acts" by tenants.⁵⁰ The question before the court was whether public housing residents had a property interest in their lease, and how easily the government could terminate that interest in the face of evidence of drug activity.

Prior to the court's order in *Escalera*, NYCHA had wide discretion to determine who received public housing and who was permitted to remain in it. "Housing Authority managers could apply rigorous, and sometimes subjective or even discriminatory, screening criteria to new applicants,"⁵¹ and, just as importantly, were able to fast track the removal of undesirable tenants through a streamlined administrative process.⁵²

The *Escalera* consent decree required NYCHA to adhere to a number of procedural safeguards before terminating a tenant's lease, including detailed notice of

⁴⁶ Ric Curtis, Crack, Cocaine and Heroin: Drug Eras in Williamsburg, Brooklyn, 1960-2000, 11 *Addiction Research & Theory* 47, 49 (2003). See, *Panic in Needle Park*.

⁴⁷ *Id.* at 50.

⁴⁸ Barbara Boland, The Manhattan Experiment: Community Prosecution, *in* *Crime and Place: Plenary Papers of the 1997 Conference on Criminal Justice Research and evaluation* 51, 52-53 (Nat. Inst. of Justice 1998).

⁴⁹ *Escalera v. New York City Housing Authority*, 67 Civ. 4307 (S.D.N.Y., Judgment entered Mar. 21, 1971).

⁵⁰ *Escalera v. New York City Housing Authority*, 425 F.2d 853, 857 (2d Cir. 1970).

⁵¹ See Franco, , at 1200.

⁵² White, at 388 n.75

charges, and a full evidentiary hearing, complete with a right to cross examine hostile witnesses, before terminating tenancy on the grounds of "non-desirability."⁵³ Similarly, the Second Circuit also required heightened procedural safeguards before tenancy could be terminated for violation of Housing Authority rules.⁵⁴ The result of *Escalera* was narrowed discretion for building managers to terminate the tenancy of residents they didn't approve of, and longer times to remove tenants whom NYCHA was fully-authorized to terminate.⁵⁵

Both NYCHA and law enforcement institutions attacked the consent decree from the beginning. NYCHA, which litigated its own case, saw the decree as an unnecessary and inappropriate barrier that constrained police and protected drug dealers and other wrongdoers from the consequences of their actions.⁵⁶ After several unsuccessful attempts to undo the consent decree, especially in the years after it first went into effect,⁵⁷ the City finally succeeded in 1996 in modifying the procedures.⁵⁸ NYCHA and the City used the Bawdy House Law – adopted in the early 1900s as part of part New York's Real Property Actions and Proceedings Laws to fight brothels and other forms of vice – to evict tenants involved in illegal activity. in cases involving drug traffickers.⁵⁹ The basic argument was the consent decree should be modified due to "the dramatic increase in drug trade in public housing" due to a crack epidemic that was "unforeseen when the consent agreement was made."⁶⁰ Together with a spike in drug related crimes, NYCHA sought the consent decree's alteration so that it can more easily

⁵³ See Franco, , at 1204 n.24.

⁵⁴ *Escalera v. New York City Housing Authority*, at 863

⁵⁵ See White, at 379.

⁵⁶ See, e.g., Defendant's Motion to Modify the Escalera Decree, *Escalera v. New York City Hous. Auth.*, 67 Civ. 4307, at 2 (S.D.N.Y. Aug. 2, 1993) (explaining modification necessary to facilitate eviction of those using their apartments for illegal gain, i.e. selling drugs); White, supra note **Error! Bookmark not defined.**, at 377-79 (using examples of drug trafficking in public housing as justification for modifying the consent decree).

⁵⁷ *Thompson v NYCHA*, *Thompson v NYCHA*

⁵⁸ *Escalera v. New York Hous. Auth.*, 924 F.Supp. 1323 (S.D.N.Y. 1996).

⁵⁹ N.Y.McKinney's RPAPL §§ 711 and 715. See, Valerie D. White, Note, Modifying the *Escalera* Consent Decree: A Case Study on the Application of the *Rufo* Test, 23 *Fordham Urban Law Journal* 377 (1996); Bill Alden, Procedure to Evict Drug Dealers Eased, Modification of 1071 Consent Decree Granted. *New York Law Journal*, April 22, pg 1.

⁶⁰ White, supra note **Error! Bookmark not defined.**, at 394.

evict residents who create safety risks by dealing drugs out of their apartments.⁶¹ The federal district court explicitly rested its decision on the heightened safety problem posed by the crack epidemic.⁶²

Federal law followed the pattern of *Escalera* by broadening the use of eviction to and creating a framework for prosecutions of public housing residents⁶³. In 1996, President Clinton announced the “One Strike” policy to encourage public housing authorities to apply the 1988 provisions to speed the eviction of residents involved in criminal activity. The Supreme Court sanctioned such evictions in *HUD v. Rucker*, a 9th Circuit case involving the eviction of a 63-year old grandmother and her family – based on the drug arrest of her mentally disabled granddaughter several blocks away from public housing grounds.⁶⁴

Policing followed suit. The changes in New York City’s policing strategies in the 1990s were well-suited to crime and drug problems in public housing. New York City had received millions of dollars in federal drug control funds under the HUD Drug Elimination Program (DEP).⁶⁵ The primary policing program in DEP was Operation Safe Home (OSH), which fielded intensive patrols in and around public housing sites. This prong of DEP expanded in 1994, coinciding with the advent of Order Maintenance

⁶¹ White, supra note **Error! Bookmark not defined.**, at 400-01.

⁶² See *Escalera v. New York Hous. Auth.*, 924 F.Supp. 1323, 1333-34 (S.D.N.Y. 1996) (stating that the “appearance of crack was a quantum leap in the drug problem” that led to a “dramatic increase in the amount of crime and violence in the public housing developments throughout the city”).

⁶³ The federal Anti-Drug Abuse Act of 1988 (Section 5101) strengthened existing public housing lease provisions by including language in the leases to the effect that: “A public housing resident, any member of the resident’s household, or a guest or other person under the resident’s control shall not engage in criminal activity, including drug-related criminal activity, on or near public housing premises . . . and such criminal activity shall be cause for termination of tenancy” (HUD, April 1991). A resident does not need to be convicted of criminal activity to be considered in violation of Section 5101.

⁶⁴ *Dep’t of Housing. & Urban Development v Rucker*, 535 U.S. 125,(2002) (holding that the federal Anti-Drug Abuse Act, 42 U.S.C. § 1437d(l)(6) (1994), requires lease terms that give local public housing authorities the discretion to terminate the lease of a tenant when a member of the household or a guest engaged in drug-related activity, regardless of whether tenant knew, or should have known, of the drug-related activity). In New York, public housing officials have similar discretion to evict tenants following conviction of co-residents on drug charges. See, also, *Escalera v. N.Y. Hous. Auth.*, 924 F. Supp. 1323, 1343-45 (S.D.N.Y. 1996).

⁶⁵ Fagan, Davies and Holland, *Drug Control in Public Housing* (2007)

Policing (OMP), a law enforcement strategy that emphasized proactive patrol and aggressive use of *Terry* stops to seize weapons and interdict crimes.⁶⁶

The problematics of public housing fit well with the growing influence of new models of policing based on Wilson and Kelling’s “broken windows” theory⁶⁷. The visible social disorder of crime and drugs in public housing and environs was exactly the type of crime manifestation that served both the theory and justifying ideology of OMP⁶⁸. Broken Windows is premised on the belief that visible signs of disorder tell potential wrongdoers that the neighborhood tolerates misdeeds, therefore encouraging further transgressions.⁶⁹ Under OMP, police departments “focus on quality of life crimes, eliminating visible signs of disorder before they spiral into something worse.”⁷⁰ Trespass was a perfect fit.

C. Trespass as Disorder

During the cocaine and crack epidemics of the 1980s, police tried to disrupt outdoor drug bazaars with retail initiatives such as Operation Pressure Point⁷¹ and the TNT teams.⁷² Drug sellers adapted to these efforts by shifting to indoor markets. They bifurcated their operations: “felony weight” stashes were kept in apartments, while street

⁶⁶ See, for example, William Bratton and Peter Knobler, TURNAROUND (1998); Judith A Greene, Zero Tolerance: A Case Study of Police Policies and Practices in New York City, 45 *Crime and Delinquency* 171 (1999). George Kelling and Catherine Cole, FIXING BROKEN WINDOWS (1996); New York State Attorney General, Stop and Frisk Report, 1999; Jeffrey Fagan and Garth Davies, Street Stops and Broken Windows: *Terry* Race, and Disorder in New York City, 28 *Fordham Urban Law Journal* 457 (2000). Bernard Harcourt, ILLUSION OF ORDER (2001); Gelman, Fagan and Kiss, *J Amer Stat Assn* (2007).

⁶⁷ Wilson and Kelling, Broken Windows, *The Atlantic Monthly*, Mar. 1982

⁶⁸ Bernard Harcourt, *Reflecting on the Subject: A Critique of the Social Influence Conception of Deterrence, the Broken Windows Theory, and Order-Maintenance Policing New York Style*, 97 *Mich. L. Rev.* 291, 292 (1998); see generally George Kelling and Catherine M. Coles, *Fixing Broken Windows: Restoring Order and Reducing Crime in Our Communities* (1996)

⁶⁹ Harcourt, *Reflecting on the Subject*, *supra*, at 303.

⁷⁰ Scott Duffield Levy, *The Collateral Consequences of Seeking Order Through Disorder: New York’s Narcotics Eviction Program*, 43 *Harv. C.R.-C.L. L. Rev.* 539, 547 (2008) (“[Broken Window’s] solution . . . was to focus the attention of law enforcement on low-level crime and disorder in order to eliminate the signs of social decay and cut off more serious crime before it started.”).

⁷¹ Lynn Zimmer, *Operation Pressure Point*; Bruce Johnson et al, 1990

⁷² Michele Sviridoff et al., *The Neighborhood Effects of Street-Level Drug Enforcement: Tactical Narcotics Teams in New York* (1992); Bernard E. Harcourt & Jens Ludwig, *Broken Windows: New Evidence from New York City and a Five-City Social Experiment*, 73 *U. Chi. L. Rev.* 271, 276 (2006).

dealers carried only “misdemeanor weights.”⁷³ In fact, in an attempt to avoid arrest, some retail level dealers shifted their entire operations indoors⁷⁴ to apartment buildings that enjoyed heightened Fourth Amendment protection.⁷⁵

This bifurcation complicated and challenged drug law enforcement in and around large urban apartment buildings.⁷⁶ Without permission from tenants or building managers, or exigent circumstances, the police were unable to enter these buildings, arrest the dealers, and confiscate their larger stashes of drugs. As a result, drug dealers were able to shield themselves from felony prosecution and prevent the authorities from seizing a large portion of their product each time a low-level (usually outdoor street) dealer was arrested. The open air drug markets had moved indoors and – to the frustration of building residents and managers – addicts, street level dealers, and those associated with the drug trade began to use building hallways as thoroughfares and foyers as gathering places to sell, buy and use drugs.⁷⁷

While the apartment-based retail or even wholesale drug deals may have moved out of reach of routine patrols in and around apartment buildings, an adaptation of broken windows theory to indoor, apartment-based drug dealing suggested that the arrest of persons loitering in the hallways or stairwells could disrupt the indoor retail trade.⁷⁸ To sidestep the traditional Fourth Amendment protections of the home, and create probable cause for the arrests, the Trespass Affidavit Program (TAP) was created.

III. THE PRACTICE AND LEGALITY OF VERTICAL PATROL

⁷³ Johnson et al., 1990; Richard Curtis, *The Improbable Transformation*, 1998; Barbara Boland, *The Manhattan Experiment: Community Prosecution, in Crime and Place: Plenary Papers of the 1997 Conference on Criminal Justice Research and Evaluation* 51, 52-53 (National Institute of Justice 1998).

⁷⁴ *Id.* at 52.

⁷⁵ *See Payton v. New York*, 445 U.S. 573, 590 (1980) (“In terms that apply equally to seizures of property and to seizures of persons, the Fourth Amendment has drawn a firm line at the entrance to the house. Absent exigent circumstances, that threshold may not reasonably be crossed without a warrant.”); Boland, *supra* note 73, at 53 (“Police officers cannot pursue dealers indoors without court-issued search warrants ..”).

⁷⁶ Boland, at 52-53.

⁷⁷ *Id.* at 56; Johnson et al., *supra* note __; Curtis, 1998

⁷⁸ The Manhattan district attorney’s office agreed, believing that it would be “...a good idea for officers to be in [these] buildings arresting trespassers.” Boland, at 56.

Conceptually, TAP is designed to permit the NYPD to act as both landlord and police. It works this way: First, the NYPD administration reaches out to building owners across the city and encourages them to enroll their buildings in the TAP program.⁷⁹ Then, the landlords post signs indicating their participation in the program and notifying the public that trespassing is forbidden within the building. They simultaneously supply the NYPD with an up-to-date tenant list, and grant permission for police officers to enter the premises in order to identify and remove trespassers.⁸⁰ Once a building is enrolled, police officers have the legal authority to enter at will, act as complainant on the owner's behalf, and arrest individuals for the crime of trespass.⁸¹ More than any other policing development, including the saturation of citizen surveillance through widespread Stop-and-Frisk tactics,⁸² it is the TAP program that has allowed enforcement of the drug laws to pursue drug dealers in apartment dwellings in New York City.

Around the same time TAP was created, the New York legislature passed a law criminalizing trespass in public housing buildings⁸³ and the New York City Housing Authority (NYCHA) granted the NYPD permission to enter public housing complexes in order to arrest trespassers.⁸⁴ This effectively expanded TAP to public housing. This step was necessary because historically, New York City Housing Authority (NYCHA) buildings were considered public property, and thus beyond the reach of the state's criminal trespass statutes.⁸⁵ This made it difficult for police to "effectively cope" with the problem of "non-residents who enter[ed] the lobbies of public housing apartment buildings and threaten[ed] the safety and security of the residents therein."⁸⁶

⁷⁹ See Boland, at 57

⁸⁰ *Id.*

⁸¹ N.Y. City Council, Committee on Public Safety and Subcommittee on Public Housing, Meeting Minutes 23-24 (April 29, 2004) [hereinafter Meeting Minutes].

⁸² New York State Attorney General, An Investigation of SQF (1999); Harcourt,; Jeffrey Fagan and Garth Davies, XXX; Sarah Waldeck, XXX; Jeffrey Fagan et al., Street Stops and Broken Windows Revisited, in White and Rice (eds.), ___ (2010).

⁸³ See N.Y.P.L. § 140.10(e) (2001).

⁸⁴ *Id.* at 23.

⁸⁵ *People v. Carter*, 645 N.Y.S.2d 725, 728 (Crim. Ct. 1996); see also *People v. Leonard*, 465 N.E.2d 831, 834 (N.Y. 1984) ("When the property is 'open to the public' at the time of the alleged trespass, however, the accused is presumed to have a license and privilege to be present.").

⁸⁶ *People v. Carter*, 645 N.Y.S.2d 725, 728 (Crim. Ct. 1996).

The new statute expanded the trespass prohibition to include individuals who “knowingly enter or remain unlawfully in a building or upon real property . . . (e) where the building is used as a public housing project in violation of conspicuously posted rules or regulations governing entry and use thereof”⁸⁷ The elements of this new form of trespassing are straightforward. The suspect must have (1) unlawfully entered into or remained inside of (2) a public housing building (3) in violation of conspicuously posted signs governing the use of the building.

Currently, TAP extends to over 3,200 buildings city wide,⁸⁸ including all 330 NHYCHA public housing complexes, and many independently owned apartments in the surrounding area.⁸⁹ As we show below, TAP departs radically from traditional models of retail, street-level drug enforcement, and fits well with other strategies that use proactive policing to reduce social control.

A. Trespass as the New Loitering

The enforcement of New York’s public housing trespass ban⁹⁰ bears a striking resemblance to the vague and overbroad loitering, vagrancy, and disorderly conduct laws used to isolate and control the movement of non-whites during the mid-1900s.⁹¹ Those statutes enabled “the police [to] seize just about anyone on the street” because they could be “applied to almost any public behavior.”⁹² As a result, a dangerous confluence of unbridled police discretion and widespread racism developed, eventually leading to the

⁸⁷ N.Y. Penal Law § 140.10(e) (McKinney 2001). Violation of this statute is a class B misdemeanor, punishable by a fixed term in prison of up to three months. *Id.* § 70.15

⁸⁸ New York County District Attorney’s Office, *Trespass Affidavit Program*, available at http://manhattanda.org/communityaffairs/commaffunit/crime/tres_prog.shtml (on file with author).

⁸⁹ See Boland, *supra* note at 57 (“Community Affairs now routinely works with community policing officers and landlords to enroll problem buildings”); Meeting Minutes, *supra*, at 23 (“The New York City Housing Authority has given the Police Department permission to enter these buildings and inquire of those they encounter the reasons for them being there.”).

⁹⁰ N.Y. Penal Law § 140.10(e) (McKinney 2001).

⁹¹ See Debra Livingston, *Police Discretion and the Quality of Life in Public Places: Courts, Communities, and the New Policing*, 97 Colum. L. Rev. 551, 596 (1997) (“This regime was politically acceptable for an extended period because the police, in the main, did not arrest just anyone. Instead, they used their authority primarily against traditional subjects of heightened police surveillance who lacked effective political power to complain: ‘undesirables’ of various sorts, and especially minorities, the poor, and the young.”).

⁹² William J. Stuntz, *Privacy’s Problem and the Law of Criminal Procedure*, 93 Mich. L. Rev. 1016, 1076 (1995).

invalidation of many of these statutes.⁹³ However, as Lawrence Rosenthal points out, even some of the conventional, modern criminal statutes “allow... the police enormous freedom to undertake a variety of quite heavy-handed measures against the residents of inner-city minority communities.”⁹⁴ Some statutes, like a Chicago anti-loitering ordinance, were struck down by the courts and subsequently revised to cabin police discretion in reacting to the inherent inchoateness of loitering.⁹⁵ Others, like the public-housing specific trespass law in New York, remain on the books.⁹⁶

Like those statutes struck down for permitting the police nearly unfettered discretion to stop and arrest those they encounter, the New York trespass statute permits police officers patrolling public housing to stop---and often arrest---nearly everyone they encounter.⁹⁷ Currently, New York courts seem to permit police officers to question any individual found in the common areas of public housing buildings, whether or not the police have a founded suspicion that criminal activity that criminal activity is afoot.⁹⁸ During that questioning, police inquire into the suspect’s residency.⁹⁹ Those not lawfully present in the building are arrested.¹⁰⁰ As a result, the movement of public housing residents, their guests, and those simply present in the building – a group almost exclusively comprised of people of color¹⁰¹ -- is severely constrained.

B. The Tactical Model

⁹³ *Id.* at 1077

⁹⁴ Lawrence Rosenthal, *Gang Loitering and Race*, 91 *J. Crim. L. & Criminology* 99, 152 (2000).

⁹⁵ *Chicago v. Morales*, 527 U.S. 41 (1999).

⁹⁶ N.Y. Penal Law § 140.10(e) (McKinney 2001).

⁹⁷ See, e.g., *People v. Anderson*, 759 N.Y.S.2d 676, 676 (App. Div. 2003); *People v. Babarich*, 561 N.Y.S.2d 255, 256 (App. Div. 1990); *People v. Tinort*, 709 N.Y.S.2d 511, 512 (App. Div. 2000) (justifying stop on finding that building was high crime area with which police officer was sufficiently familiar to inquire into Tinort’s reason for being there); *People v. Carter*, 645 N.Y.S.2d 725, 728 (Crim. Ct. 1996) (“Thus, simply being in the lobby of a housing project can subject someone to a criminal trespass violation.”).

⁹⁸ Adam Carlis, *The Illegality of Vertical Patrols*, 109 *Colum. L. Rev.* (2009).

⁹⁹ See *People v. Hendricks*, 841 N.Y.S.2d 94, 95 (App. Div. 2007) (“It is standard practice for officers, upon encountering an individual in such an area, to inquire whether the individual lives in the building . . . and to ask for identification to determine if the individual is trespassing”).

¹⁰⁰ See, e.g., *People v. Tinort*, 709 N.Y.S.2d 511, 512 (App. Div. 2000) (detailing arrest of non-resident unable to justify his presence in the building).

¹⁰¹ New York City Housing Authority, *Comprehensive Annual Financial Report for the Year Ended December 31, 2008*, at 104 (2009) (reporting that only 4.3% of New York’s public housing residents are white).

TAP is designed to permit the New York Police Department (NYPD) to act as both landlord and police. It works as follows. First, the NYPD reaches out to building owners across the city and encourages them to enroll their buildings in the TAP program.¹⁰² Then, the landlords post signs indicating their participation in the program and notifying the public that trespassing is forbidden within the building. They simultaneously supply the NYPD with an up-to-date tenant list, and grant permission for police officers to enter the premises in order to identify and remove trespassers.¹⁰³ Once a building is enrolled, police officers have the legal authority to enter at will, act as complainant on the owner's behalf, and arrest individuals for the crime of trespass.¹⁰⁴ More than any other policing development, it is the TAP program that has allowed enforcement of the drug laws to follow the dealers into the buildings.

The police tactic most frequently associated with TAP is the vertical patrol.¹⁰⁵ These patrols serve two basic functions. The first is related to building safety. During a vertical patrol, officers systematically move through the building looking for hazards such as malfunctioning elevators, broken handrails, and poorly lit hallways.¹⁰⁶ The second function is related to security. When the officers enter the building, they travel to the roof and work their way down, floor by floor, questioning individuals they encounter¹⁰⁷ in order to determine whether they are a resident or invited guest.¹⁰⁸ Individuals not authorized to be present in the building are subject to arrest.¹⁰⁹

The amended trespass statute is the main tool of police officers seeking to make arrests while on vertical patrol. Without the expanded trespass statute, this initial

¹⁰² See Boland, at 57

¹⁰³ *Id.*

¹⁰⁴ N.Y. City Council, Committee on Public Safety and Subcommittee on Public Housing, Meeting Minutes 23--24 (April 29, 2004) [hereinafter Meeting Minutes].

¹⁰⁵ New York City Police Department Patrol Guide §§ 212-59, 212-60 (2005).

¹⁰⁶ *Id.*

¹⁰⁷ See, e.g., *People v. Roque*, 99 N.Y.2d 50, 52 (2002) (“Police . . . stop people they encounter . . . to ask for identification and to inquire if they are . . . lawfully in the building.”); *People v. Powell*, 691 N.Y.S.2d 263, 265 (Sup. Ct. 1999) (“[T]he officers stop all who are found, question them as to why they are in the building or on the grounds, and ask for identification showing they live in the building or for an apartment number to verify a legitimate visit.”).

¹⁰⁸ Meeting Minutes, *supra* at 23.

¹⁰⁹ See *People v. Roque*, 780 N.E.2d 976, 977 (N.Y. App. Div. 2002) (“The purpose of vertical sweeps, or vertical patrols, is to find and apprehend trespassers”); Meeting Minutes, at 23-24.

questioning would pose almost no threat of arrest: before 1992, non-residents were permitted to occupy the public areas of these buildings. Under the new statute, however, non-residents unable to identify a resident with whom they were visiting are subject to arrest.¹¹⁰ This is because arrests are justified if the officer has probable cause to believe that the suspect either entered into, or remained inside of, the building unlawfully.¹¹¹

Even during the most routine vertical patrol stop, police officers can quickly develop probable cause for a trespass arrest. Under *People v. De Bour*, the leading New York Court of Appeals case on state stop and frisk law, a police officer need only have “some articulable reason”¹¹² to ask “basic, nonthreatening questions.”¹¹³ This low bar prevents only those inquiries “undertaken with intent to harass or . . . based upon mere whim, caprice or idle curiosity.”¹¹⁴

Historically, New York courts have considered inquiries “regarding . . . identity, address or destination” to be background information, for which the police officer need only some articulable suspicion.¹¹⁵ And, given the permissible standard for what constitutes articulable suspicion, courts have upheld inquiries into a suspect’s place of residency on little more than their mere presence in the building.¹¹⁶ As a result, current New York jurisprudence places almost no barriers between the police officer and the arrest of a non-resident unlawfully present in public housing. Once the initial inquiry begins, a non-resident will quickly have to divulge their non-residency and, absent some evidence that they are a lawfully present guest, that alone is sufficient to justify their

¹¹⁰ *People v. Tinort*, 709 N.Y.S.2d 511, 512 (App. Div. 2000) (upholding a non-resident’s conviction after he “claimed to have been visiting a friend, but claimed not to know the friend’s name, and supplied an apartment number known by the officer to be non-existent.”); *People v. Carter*, 645 N.Y.S.2d 725, 728 (Crim. Ct. 1996) (permitting arrest of nonresident for unlawful presence in public housing).

¹¹¹ *People v. De Bour*, 352 N.E.2d 562, 572 (N.Y. 1976).

¹¹² *People v. De Bour*, 352 N.E.2d 562, 565 (N.Y. 1976).

¹¹³ *People v. Hollman*, 590 N.E.2d 204, 206 (N.Y. 1992).

¹¹⁴ *People v. De Bour*, 352 N.E.2d 562, 567 (N.Y. 1976).

¹¹⁵ *People v. Hollman*, 590 N.E.2d 204, 206 (N.Y. 1992); see also *People v. McIntosh*, 755 N.E.2d 329, 331 (N.Y. 2001) (asserting that “it is well settled” that, before an officer “asks an individual to provide identification,” the officer need only an articulable reason for the inquiry); *People v. Anderson*, 759 N.Y.S.2d 676, 676 (App. Div. 2003) (rejecting suspect’s claim that policy inquiry into his residency status required more than an articulable suspicion).

¹¹⁶ See *People v. Hendricks*, 841 N.Y.S.2d 94, 96 (App. Div. 2007) (justifying initial stop because Hendricks “appeared to be staying in the [building’s] vestibule” with no intention to leave or enter); *People v. Anderson*, 759 N.Y.S.2d 676, 676 (App. Div. 2003) (finding articulable suspicion when suspect was part of group of “nine or ten persons” moving from second floor to building lobby).

arrest.¹¹⁷ The result is that the common areas of public housing buildings are no longer spaces where individuals can mingle. Those who try are frequently confronted by the police and, if they are unable to justify their presence, they are often hauled away to jail.¹¹⁸

While the large number of vertical patrols may make the tactic appear routine,¹¹⁹ they are, in fact, rife with danger for both officers and residents. For officers, traversing these buildings late at night, especially when encountering suspects on the roof, or in other off-limits areas, adds a great deal of uncertainty. As the New York Times points out, “[T]he rooftops of the housing project can be perilous. They provide a convenient escape route for criminals who like to conduct business---robberies, assaults and drug deals---on the darkened top-floor landings of the stairwells.”¹²⁰ As a result, officers often conduct this part of the patrol with their guns drawn.¹²¹ For residents, the danger is magnified. Not only must they be wary of criminals, but, sadly, of the police as well: Recent years have seen to unarmed residents shot and killed by police on vertical patrol.¹²²

Nevertheless, vertical patrols continue because they are presented as an effective crime fighting strategy.¹²³ Targeting trespass, rather than funneling resources toward direct enforcement of the drug laws, provides the police with a tactical benefit. To make an arrest pursuant to a trespass stop, probable cause is required.¹²⁴ As a result, targeting street-level dealers usually involves undercover buy-and-bust operations, an expensive, dangerous, and time-consuming tactic. On the other hand, targeting trespass violations in TAP buildings eliminates the need for police officers to actually witness a drug-crime taking place. Instead, police officers on vertical patrol can rely on the public housing

¹¹⁷ *People v. Tinort*, 709 N.Y.S.2d 511, 512 (App. Div. 2000).

¹¹⁸ M. Chris Fabricant, Rousting the Cops, Village Voice, October 30, 2007, <http://www.villagevoice.com/2007-10-30/news/rousting-the-cops/>

¹¹⁹ In New York City there were approximately 396,000 conducted in 2003 alone, *See* Meeting Minutes, at 26. 156,000 of which took place in public housing buildings.

¹²⁰ A Wrongful Death in Brooklyn, N.Y. Times, Jan. 27, 2004, at A22.

¹²¹ *Id.*; see also Meeting Minutes, at 31.

¹²² See, e.g., Bennett Capers, Crime, Legitimacy, and Testifying, 83 Ind. L.J. 835, 847 (2008) (discussing the killing of Timothy Stansbury Jr. by police officer on vertical patrol); see also N.Y. Lawyers for the Public Interest, No Place Like Home: A Preliminary Report on Police Interactions with Public Housing Residents in New York City 6 (2008) (detailing shooting death of Nicholas Heyward by police officers on vertical patrol in Brooklyn’s Gowanus Houses).

¹²³ See Meeting Minutes, at 25.

¹²⁴ *People v. De Bour*, 352 N.E.2d 562, 572 (N.Y. 1976).

specific trespass law, and the suspect’s presence in the building, to make their initial approach.¹²⁵ They therefore are able to question more people with less evidence. And, while overinclusive, these systematic stops do sometimes lead to the arrest of individuals for drug-related activity.¹²⁶

C. Vertical Patrol and the Fourth Amendment

Despite the concerns of residents, and academics, neither TAP, nor vertical patrols, have been directly challenged in the courts.¹²⁷ Instead, state courts have treated trespass arrests as individual occurrences,¹²⁸ determining their legality based on the familiar De Bour standard for searches and seizures, rather than assessing the legality of the tactic itself.¹²⁹ Nevertheless, the systematic stops and resulting trespass arrests inherent in TAP raise potential state law and Fourth Amendment claims related to suspicionless searches. Furthermore, because of the nature of public housing and urban poverty, vertical patrols have a dramatic disparate impact on people of color. This effect problematizes the tactic and demands a close scrutiny of vertical patrols before they should be allowed to continue.

Courts have not spoken as to whether vertical patrols and the resulting systematic stops violate New York state law protections against unreasonable searches and seizures.

¹²⁵ Because New York common law requires “articulable suspicion” before an officer approaches a suspect, *id.* at 563, police officers generally attempt to justify these stops on presence in public housing plus some additional factor. See, e.g., *People v. Anderson*, 759 N.Y.S.2d 676, 676 (App. Div. 2003) (finding articulable suspicion when suspect was part of group of “nine or ten persons” moving from second floor to building lobby); *People v. Tinort*, 709 N.Y.S.2d 511, 512 (App. Div. 2000) (justifying stop on finding that building was high crime area with which police officer was sufficiently familiar to inquire into Tinort’s reason for being there); *People v. Taylor*, No. 54639C-2005, 2006 WL 1348745, at *3 (N.Y. Sup. Ct. May 12, 2006) (finding no objective credible reason to approach suspect who was merely exiting public housing building); *People v. Carter*, 645 N.Y.S.2d 725, 726 (Crim. Ct. 1996) (finding suspect’s nervous demeanor and smell of marijuana created articulable reason for initial inquiry).

¹²⁶ See, e.g., *People v. Hendricks*, 43 A.D.3d 361, 363 (N.Y. App. Div. 2007) (2007) (detailing an arrest made while on vertical patrol that led to the confiscation of \$794, a box cutter, and thirty-two baggies of cocaine); *People v. Quinones*, No. 2006 NY 010937, 2007 WL 764714, at *1-2 (N.Y. Crim. Ct. 2007) (detailing confiscation of cocaine by officer on vertical patrol).

¹²⁷ Carlis, *Vertical Patrols*

¹²⁸ See, e.g., *People v. Crawford*, 719 N.Y.S.2d 18, 19 (N.Y. App. Div. 2001) (failing to question the legality of TAP and finding officer had “an objective credible reason” to approach suspect); *People v. Thompson*, 686 A.D.2d 242, 243 (N.Y. App. Div. 1999) (failing to assess legality of vertical patrols when upholding a conviction for drug possession); *People v. Plower*, 574 N.Y.S.2d 337, 338 (N.Y. App. Div. 1991) (same).

¹²⁹ See generally *People v. De Bour*, 352 N.E.2d 562 (1976) (articulating the standard for search and seizure under New York common law).

Under New York law, police need an “articulable reason” to justify approaching a suspect for the purpose of requesting background information.¹³⁰ To ask “more pointed” questions indicating that the suspect is under suspicion of violating the law requires a “founded suspicion that criminal activity is afoot.”¹³¹ Vertical patrols targeting trespassers may violate these requirements because the stops are systematic and therefore are often conducted without reliance on facts particular to the suspect being questioned. For the practice to be sustained, a court would have to permit systematic stops based on mere presence in a public housing building, something the New York courts are unlikely to do.¹³²

A challenge to vertical patrols asserting that asserted Fourth Amendment violations might also be successful. While 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,¹³³ the systematic nature of the stops associated with vertical patrols may fall below even this low threshold. This is because location alone does not provide the reasonable suspicion necessary for an investigatory stop.¹³⁴ Similarly, if it can be shown that the stops taking place during vertical patrols rise to the level of systematic seizures, a question beyond the scope of this paper, then they almost certainly violate the Supreme Court’s ruling in *City of Indianapolis v.*

¹³⁰ *Id.* at 378.

¹³¹ *Id.* at 385.

¹³² See, BARRY KAMINS NEW YORK SEARCH & SEIZURE § 2.04 (Matthew Bender, Rev. Ed. 2009) (citing *People v. Holmes* 619 N.E.2d 396 (N.Y. 1993) (“In New York, . . . an officer who merely observes an individual in a high crime area would, at most, have the right to approach and request basic information. Should the individual flee, this would not elevate the encounter to reasonable suspicion, and, therefore, the officer would not be permitted to pursue the suspect.”) In *People v. Holmes*, the New York Court of Appeals held that police officers who observed a suspect with a bulge in his jacket pocket standing with other men in a known narcotics location did not have reasonable suspicion to pursue the suspect when he fled. *Holmes*, 619 N.E.2d at 397 (“Flight alone . . . or even in conjunction with equivocal circumstances that might justify a police request for information is insufficient to justify pursuit because an individual has a right ‘to be let alone’ and refuse to respond to police inquiry” (citations omitted)). Even in a high crime area flight must be combined with some other more particularized indication of criminality to give rise to reasonable suspicion. See, e.g., *People v. Martinez*, 606 N.E.2d 951, 953 (N.Y. 1992) (holding that flight when the officers approached, presence in a narcotics prone neighborhood, and possession of a special device known to be used for hiding drugs gave rise to reasonable suspicion).

¹³³ *Illinois v. Wardlow*, 528 U.S. 119, 124 (2000); Andrew Guthrie Ferguson & Damien Bernache, *The “High-Crime Area” Question: Requiring Verifiable and Quantifiable Evidence for Fourth Amendment Reasonable Suspicion Analysis*, 57 Am. U. L. Rev. 1587, 1589 (2008).

¹³⁴ See, e.g., *United States v. See*, 574 F.3d 309, 313–14 (6th Cir. 2009) (finding unconstitutional stop that took place in high crime area because police lacked sufficient additional factors to create reasonable suspicion).

Edmond, which struck down a narcotics roadblock because it constituted systematic, suspicionless seizures for the purpose of general crime control.¹³⁵

D. Trespass and Equal Protection

The demography of public housing makes racial disparity in the tactic's implementation inevitable, regardless of legal or policy justifications. Nevertheless, residents of public housing, as a group, hardly qualify as a protected class under the Fourteenth Amendment. But that fact alone should not end the discussion. One could argue that vertical patrols do not target residents of public housing as a class, but rather are specifically targeted at residents of color.

Public housing in New York is dramatically segregated. In 2008, 91% of public housing residents were African-American or Latino, and only 4.3% were white.¹³⁶ When it comes to those residents most affected by vertical patrols and trespass stops, these numbers are even more dramatic. The white population contains a disproportionately high number of individuals over the age of 62.¹³⁷ Senior citizens would seem both less likely to be targeted during a vertical patrol and less likely to be in the common areas of the building for an extended period of time. And, white residents are not uniformly distributed across all NYCHA buildings. Instead, they tend to be clustered in the more desirable buildings.¹³⁸ Because vertical patrols are also not conducted uniformly across all NYCHA buildings, but rather targeted to those buildings where the police believe they will be most effective,¹³⁹ it is likely that many white residents escape the brunt of vertical patrol activity.

The tactic itself, which consists of systematic stops of anyone found in the common areas of public housing, continues in part because of a racially-charged

¹³⁵ Systematic, suspicionless seizures executed for the general purpose of crime control violate the Fourth Amendment. *City of Indianapolis v. Edmond*, 531 U.S. 32, 34, 36 (2000)

¹³⁶ New York City Housing Authority, Comprehensive Annual Financial Report for the Year Ended December 31, 2008, at 104 (2009).

¹³⁷ *Id.*

¹³⁸ See generally *Davis v. New York City Housing Authority*, 166 F.3d 432 (1999) (reversing lower court's injunction against implementation of a presidential preference policy that would have had disproportionate negative effects on minority applicants in the twenty-one NYCHA developments that were more than 30% white, including eleven that were more than 50% white).

¹³⁹ New York City Police Department Patrol Guide §§ 212-59, 212-60 (2005).

perception of public housing. Vertical patrols, and the trespass arrests that accompany them, borrow heavily from theories of order maintenance that focus on visible signs of disorder.¹⁴⁰ But, similar to high crime area doctrine, the metrics for moving from perception of disorder to categorization of a place as disorderly are subjective and relativistic. Sociologists and social psychologists have shown that perceptions of disorder are influenced by the racial make-up of the community being observed, but also by characteristics of the observer.¹⁴¹ A body of good social science shows that “Americans hold persistent beliefs linking blacks and disadvantaged minority groups to many social images, including but not limited to crime, violence, disorder, welfare, and undesirability as neighbors.”¹⁴² As a result, when viewing public housing, police and politicians may be prone to attributions of a higher level of disorder simply because the majority of residents are people of color.¹⁴³

Of course, an Equal Protection claim here would require direct proof that the implementation of TAP in public housing was race-dependent and purposeful. Since public housing is predominantly non-white, showing that race was a motivating factor in trespass enforcement would require a complex analysis of relevant non-racial factors that are associated with the conditions of crime and disorder that would lead police to conduct sweeps in public housing. The police could argue, perhaps persuasively, that the higher crime rates in public housing motivated the higher rate of sweeps. Or perhaps it is the verticality of public housing that lends itself to programs such as Operation Clean Hallways, a factor that is correlated with race. Certainly, case law creates a high barrier to a claim here of intentional discrimination.¹⁴⁴ Even if the inferences by police about race and crime rates of public housing residents were made plain, the state’s interest in crime control may void a claim of intentional discrimination based on race.

¹⁴⁰ Skogan, Livingston, Harcourt, Taylor, Waldeck

¹⁴¹ Robert J. Sampson & Stephen W. Raudenbush, *Seeing Disorder: Neighborhood Stigma and the Social Construction of “Broken Windows,”* 67 *Soc. Psychol. Q.* 319, 320 (2004).

¹⁴² *Id.*

¹⁴³ *Id.* at 330 (“[C]oncentrated poverty, proportion black, and proportion Latino are related positively and significantly to perceived disorder.”); see also Lincoln Quillian & Devah Pager, *Black Neighbors, Higher Crime? The Role of Racial Stereotypes in Evaluations of Neighborhood Crime,* 107 *Am. J. Soc.* 717, 749 (2001) (“[O]ur results suggest that whites (and Latinos) systematically overestimate the extent to which percentage black and neighborhood crime rates are associated; this association persists even when official crime rates are controlled.”).

¹⁴⁴ McClesky, Armstrong, others

In this case, an equal protection claim would have to squarely face the question of crime and disorder that are the rationale for the allocation of vertical patrols. If trespass enforcement is indexed to crime, we should observe variation from one place to the next that is predicted by its crime rate, net of other non-racial factors that are correlated with crime. In this case, the search for drugs and weapons are the two compelling policy justifications articulated by the NYPD,¹⁴⁵ and indexing trespass enforcement to rates of drugs or other crime in public housing would provide a benchmark on which to assess the distribution of police enforcement and the attendant burdens of police suspicion and interdiction.

This is the test we conduct to determine if, in fact, the targeting of public housing in New York for trespass enforcement masks an underlying racial targeting, or excess of enforcement that cannot be explained by crime rates alone. We consider two faces of trespass enforcement under TAP: trespass stops, pursuant to the ongoing tactics of Stop, Question and Frisk,¹⁴⁶ and trespass arrests. The former bypass the *DeBour* Level 1 right of common-law inquiry and proceed directly to Level 3 -- probable cause leading to arrest.¹⁴⁷ The former bypass Level 1 and proceed directly to Level 2. We enhance the test by simulating an experiment that controls for one-off similarities of public housing with its immediate environs, and testing to see if the excess in enforcement above and beyond a “signal” of race-crime patterns can be identified.

¹⁴⁵ Bratton and Knobler, 1998; Spitzer, 1999; Maple and Mitchell, 2000; Fagan et al., 2010

¹⁴⁶ *Id*

¹⁴⁷ *People v. DeBour*, 40 N.Y. 2d 210 (1976). While *Terry* assumes that police-civilian encounters, even suspicionless ones, are consensual and could be terminated by the suspect, *People v DeBour* forbids inquiries “based on mere whim, caprice, or idle curiosity”. See, Adam Carlis, Vertical Patrols.

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. At Level 1, officers can stop a citizen based on an objective credible reason to approach to request information. At Level 2, officers must have founded suspicion. Level 3 is requires “reasonable suspicion” to engage the citizen and (if there is reason to fear that the suspect has weapons or the officer is in danger, to frisk. Level 4 is a probable cause arrest and full search incident to the arrest. See, Patrick J. McCloskey, Street Encounters Made Simple, http://nassau18b.org/search_seizure/Street%20Encounters%20Made%20Simple.pdf

III. DATA AND METHODS

A. Data

1. Stops, Crimes and Arrests

Counts and locations trespass stops and arrests and other crime conditions were obtained from databases maintained by the NYPD.

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 consent decree in *Daniels v City of New York* (2003). 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).¹⁴⁸ Due to inconsistencies between the first year in the panel and later years, 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 trespass possession, we use a few key and recurring terms to identify these “trespass” stops.¹⁴⁹ We use similar procedures to identify stops for suspicion of carrying a concealed weapon (e.g., “CPW”¹⁵⁰), a primary focus of OMP policing (Spitzer, 1999; Fagan et al., 2010), and other suspected crimes, including “index crimes”, other felonies and misdemeanors and non-fingerprintable offenses. The UF-250 also includes information on the demographic

¹⁴⁸ *New York Civil Liberties Union v. New York City Police Department*, 2008 WL 2522233 (N.Y. Sup. Ct., May 7, 2008).

¹⁴⁹ Stops are identified as trespass 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. Variations on the spelling of the word trespass, or variations in the designation of the trespass statute under NYPL §140.05, 140.10, 140.15, 140.17, were recoded as trespass stops or abbreviations with the obvious connotation of trespass

¹⁵⁰ “Criminal possession of a weapon”

and physical characteristics of the persons stopped and the legal basis for the stop.¹⁵¹

While records of stop locations in some years in the panel were geocoded to x-y (latitude, longitude) coordinates by the NYPD, other years included only a text string stating the stop location. Those records were geocoded using spatial software to locate their x-y coordinates based on the address recorded.¹⁵² Using boundary maps provided by the New York City Department of City Planning, we located each stop either to a public housing site, its immediately surrounding area, or elsewhere in the police precinct or borough. The surrounding area was determined by identifying the census block groups that surrounded the public housing site. Figure 1 illustrates one of these spatial clusters.

Trespass arrests were recorded in a similar fashion. Records of each arrest were obtained by one of the authors from the NYPD pursuant to litigation in *Floyd et al. v. City of New York*¹⁵³. These records identify the suspect race and alleged offense, as well as the location of the arrest and the crime. Geocoding procedures identical to those used for stops were used to locate the arrests to a geographic space.

Data on reported crimes also were obtained from the NYPD as part of the *Floyd* litigation. Similar geocoding procedures were used to locate crimes. Each crime record included one of 113 crime codes supplied by the NYPD, and were collapsed into a smaller set of homogeneous categories that correspond to the crime types in the federal crime reporting system.¹⁵⁴ Crime complaints were aggregated for each month within each category for each of the three spatial divisions. They are measured by thousands, though substantive results are robust to a control for logged crime complaints.

¹⁵¹ Both federal (*Terry v Ohio*, 392 U.S. 1 (1968)) and New York State caselaw (*People v DeBour*, 40 N.Y. 2d 210 (1976)) require articulable and individualized suspicion for a stop. See, Patrick J. McCloskey, Street Encounters Made Simple, *supra*. The legal bases for stops are stated on the UF-250 form, and officer check off the relevant reasons. See, Amanda Geller and Jeffrey Fagan, *Pot as Pretext: Marijuana, Race and the New Disorder in New York City Street Policing*. CELS 2009, on SSRN.

¹⁵² ArcView GIS 9.3 (<http://www.esri.com/software/arcgis/arcview/index.html>). Unintelligible records were omitted from this analysis, though they were assigned to precincts and boroughs based on the available information in other fields that specifically recorded precinct or patrol beat separately from address.

¹⁵³ *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.)

¹⁵⁴ U.S. Department of Justice, Federal Bureau of Investigation, Uniform Crime Reports, <http://www.fbi.gov/filelink.html?file=ucr/handbook/ucrhandbook04.pdf>. For example, “violent crime” complaints refer to homicide, manslaughter, rape, robbery, aggravated assault, arson, and kidnapping.

2. *Social and Economic Conditions*

Data on social and economic conditions were recorded separately for public housing sites and the areas adjacent neighborhoods. Table 1 shows descriptive statistics for the two sets of areas.

The population characteristics of public housing sites were drawn from the NYCHA *Resident Data Handbooks*, for 2005-2008.¹⁵⁵ These records are based on annual tenant surveys that NYCHA conducts as part of its residency certification process. Of course, tenants have incentives to underreport occupancy, and to perhaps discount income totals and other economic indicators. The critical measures for this analysis are age and race. Non-reporting of unrelated adults in the household is far more likely than withholding information on unrelated children. Accordingly, population estimates and age distributions may have errors whose parameters are difficult to estimate. We doubt that there is distortion by race, given the very low rates of mixed race households in the survey data. There is no *ex ante* reason to assume that non-reported adults or children would be from different racial or ethnic groups than the official residents. From the tenant survey data, we extracted measures of racial composition, percent minors (below 18), household size, per capita income, and total population. These were aggregated for each project site.

For the surrounding areas, the same measures were obtained from 2006 tract-level projections of U.S. Census data, (see ESRI, 2006 for details.)

The core comparison is the difference in the rates of trespass stops and arrests in public housing versus the immediate surrounding area, adjusted for any differences in the crime and socioeconomic conditions between the two areas. However, four of the covariates were highly correlated with the dummy indicator for public housing. This result was hardly surprising, since public housing is not randomly distributed throughout the city. Figure 2 shows that public housing is highly concentrated in economically disadvantaged and racially segregated areas. We considered, even attempted, to construct propensity scores for these conditions to simulate experimental conditions for the

¹⁵⁵ The 2004 data were unavailable, so 2005 values were substituted for 2004. This presents little problem as the numbers are very stable across years.

comparison.¹⁵⁶ But we observed the same problem of multicollinearity, and as a result there was no variation in the computed propensity score. To reduce multicollinearity and identify a parameter to reflect the ecological differences between the two spatial units, we reduced the four variables to a single factor using simple principal components analysis (PCA).¹⁵⁷ The resulting factor score was included as a covariate in the estimates, together with population (logged) and crime conditions (lagged).

We also control for the number of tall multi-residence buildings in the surrounding areas.¹⁵⁸ Population density was one consideration in introducing this control, as was the built environment in the surrounding areas. Because of the design of TAP, we anticipated that there would also be vertical patrols in buildings of similar physical design and size in the surrounding areas. Accordingly, we control for the number of residential buildings that are six (6) stories or higher in the surrounding area.

The data on building size and location are from the New York City Lot Info files (2000).¹⁵⁹ The files are organized by tax lots, and lots were aggregated to the block group level to fit into boundaries shown (illustratively) in Figure 1. In most instances, each lot has one building, so the computation is largely straightforward. However, in a small number of cases, a lot has more than one building. In these cases, the number of buildings was divided into the total number of floors to produce an averaged measure. As a validity check, all models were specified with an alternate version of this variable, where all of the lots with multiple buildings were removed from consideration. The alternative variable produced identical results in all cases.

¹⁵⁶ See, e.g., Donald B. Rubin, *Estimating Causal Effects from Large Data Sets Using Propensity Scores*, 127

ANNALS INTERNAL MED. 757 (1997). See, also, Heejung Bang and James M. Robins, *Doubly Robust Estimation in Missing Data and Causal Inference Models*, 61 *BIOMETRICS* 962 (2005); A. Indurkha, N. Mitra, and Deborah Schrag, *Using Propensity Scores to Estimate the Cost-Effectiveness of Medical Therapies*, 25 *STATISTICS IN MEDICINE* 1561 (2006). For a thoughtful discussion, see David A. Freedman and Richard A. Berk, *Weighting Regressions by Propensity Scores*, 32 *EVALUATION REVIEW* 392 (2008).

¹⁵⁷ The eigenvalue of the single factor was 2.53, and the explained variance was 63.3%.

¹⁵⁸ TAP focused on tall residential apartment buildings throughout the City, but was concentrated in the City's poorer neighborhoods where building managers and tenant groups requested the City's support to control illegal entries onto and into their premises. Accordingly, the NYPD entered into agreements not only with NYCHA to conduct vertical patrols in its project sites, but also to private buildings and multi-unit residential buildings that were administered by other state and federal housing programs. Neither the NYPD nor the city's housing agencies made a list of such buildings available.

¹⁵⁹ http://www.lotinfo.com/index.php?page=lotinfo_gis

B. Model Specification

The analysis proceeds in three stages. First, we use random effects negative binomial regressions, with a dummy variable for public housing, to estimate differences in trespass stop and arrest rates in public housing versus surrounding areas. The dependent variables are counts of each event. We prefer negative binomials to poisson models to avoid the assumptions of independence of these events within a temporal or physical space. We estimate a baseline model and then a model with covariates. By way of brief review, Poisson models are estimated using maximum likelihood, where the predicted rate is a function of the observed rate given an exposure to conditions X:

$$\Pr(Y_{it} = y_{it} | \mathbf{x}_{it})$$

Negative binomial models operate in the same way, with the addition of a dispersion parameter δ_i :

$$\Pr(Y_{it} = y_{it} | \mathbf{x}_{it}, \delta_i)$$

For random effects negative binomial models, δ_i is allowed to vary randomly across groups.¹⁶⁰

In this study, Y_{it} represents counts of a) trespass stops; b) trespass arrests; and c) total trespass measures (stops plus arrests). The vector of independent variables \mathbf{x}_{it} includes a dummy variable for public housing, a demographic factor, controls for population and building composition, and a series of dummy variables corresponding to years. Crime complaint reports (lagged by one year) are included as exposure variables, and standard errors are calculated using the bootstrap method.

Next, we decompose the observed differences between public housing and the surrounding areas by estimating a series of difference-in-difference models, or DD models.¹⁶¹ DD models are commonly used to organize data to mimic experimental

¹⁶⁰ Long, 1998

¹⁶¹ Alberto Abadie, *Semiparametric Difference-in-Differences Estimators*, 72 REV. ECON. STUD. 1 (2005); Marianne Bertrand, Esther Duflo & Sendhil Mullainathan, *How Much Should We Trust Differences-in-Differences Estimates?*, 119 Q. J. ECON. 249 (2004); Whitney Newey & Kenneth D. West, *A Simple, Positive Semi-Definite, Heteroskedasticity and Autocorrelation Consistent-Covariance Matrix*, 55

designs under conditions when randomization is unavailable.¹⁶² Here, we estimate a linear mixed model regression to determine whether the differences in any of the trespass measures are predicted by differences between public housing sites and their surrounding areas in the crime or socioeconomic conditions. First, we assume

$$Y_{it} = \beta_0 + \beta_1 t + \beta_2 S_{it} + \beta_3 X_{it} + \varepsilon$$

where:

- (1) Y_{it} = the difference in trespass arrests (or stops or totals) in site i and time t between public housing sites and the surrounding neighborhoods
- (2) β_1 estimates the linear time trend
- (3) β_2 estimates the effects of the difference in various crime conditions (drugs and weapons) between public housing and the surrounding area, and
- (4) β_3 estimates the difference in a vector of demographic variables between public housing and the surrounding area

We use linear mixed effects regressions on first differences using population-averaged models with robust standard errors and fixed effects for years. In addition to baseline models and models with covariates, we also estimate models with each public housing site (and its surrounding area) nested within boroughs and for police precincts. Mixed effects regressions allow for the inclusion of both fixed and random effects, and in effect allow us to nest variables to identify the conditioning effects of the nesting variable (in this case, borough or precinct) on the nested outcome (here, the first difference in the trespass arrest rate).¹⁶³ Nesting acknowledges the influence of the administrative structure for the NYPD's patrol services, including the vertical patrols that are the core of TAP. Vertical patrols in public housing are done by special housing division officers assigned to units (Patrol Service Areas, or PSA's) that are administered by borough

ECONOMETRICA 703 (1987); JAMES H. STOCK AND MARK W. WATSON, INTRODUCTION TO ECONOMETRICS, Chapter 8 (2003).

¹⁶² See, e.g., Susan Athey and Guido Imbens, *Identification and Inference in Nonlinear Difference-in-Differences Models*, 74 ECONOMETRICA 431 (2006); David Card and Alan B. David and Krueger, *Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania*, 84 AMERICAN ECONOMIC REVIEW, 772 (1994); Jacqueline Cohen and Jens Ludwig, *Policing Crime Guns*, in JENS LUDWIG AND PHILIP COOK (eds.), EVALUATING POLICIES TO REDUCE GUN VIOLENCE: THE EFFECTS OF REGULATION AND ENFORCEMENT, 217, 2003.

¹⁶³ Rabe-Hesketh and Skrondal, *Multi-Level Modeling*, 2008.

commands.¹⁶⁴ Officers conducting vertical patrols in the surrounding areas are assigned to precincts. Precincts in turn are organizationally nested in borough commands, although they also operate separately from borough commands for some functions such as detective work.

The third analysis tests for reciprocity in trespass enforcement between public housing and the surrounding areas. The temporal component of the panel design provides leverage to observe how prior levels of enforcement in one area influence future levels in the other area, and vice versa. Enforcement in the two areas could be endogenous: an increase in enforcement in one place could be simultaneous with a rise in the adjacent area, and spuriously tied to some third factor that affects both, such as the dominant culture in the police agency, in turn producing correlated error terms and a “simultaneity bias.”¹⁶⁵

We use cross-lagged regression models to examine the independence of trespass enforcement in the two areas, or to identify reciprocal causal effects in the presence of endogeneity.¹⁶⁶ Independence would suggest that public housing is a specific target for trespass enforcement, unrelated to enforcement in the surrounding area. Reciprocity, or significant relationships between enforcement in the two areas, on the other hand, would indicate that the two are part of an integrated strategy with shared origins in an institutional dimension of policing or in shared crime problems or both. Cross-lagged models correspond to a Granger test for causality in panel data. Essentially, a variable “Granger causes” the other if any value of the first variable at time $t-1$ has a significant effect on the second variable at time t , controlling for the prior values of the second variable.¹⁶⁷

The simplest cross-lagged form is the two-period model, where two variables, X and Y , are measured at two time points, producing four measures: X_1 , X_2 , Y_1 , and Y_2 . Graphically, two-wave cross-lagged models may be presented as follows:

¹⁶⁴ New York City has five boroughs. Four are among the ten most populous U.S. cities: Kings County (Brooklyn), Queens County, Bronx County, and New York County (Manhattan). The fifth borough, Staten Island, has a population equivalent to a mid-size American city.

¹⁶⁵ See, for an example, Robert J. Sampson and Jacqueline Cohen, *Deterrent Effects of the Police on Crime: A Replication and Theoretical Extension*, 22 LAW & SOCIETY REVIEW 163 (1988)

¹⁶⁶ Steven E. Finkel, CAUSAL ANALYSIS WITH PANEL DATA (1995)

¹⁶⁷ Id at 24-8. See, also, C.W.J. Granger, *Investigating Causal Relations by Econometric Models and Cross-Spectral Methods*, 37 ECONOMETRICA 424 (1969).

Figure 3. Two-Wave Cross-Lagged Effects Model

In this model, X_2 is hypothesized to be a function of its period 1 value (X_1), the lagged value of the other variable (Y_1) and an error term (U_1). The functional form for Y_2 is the same. The correlation between the period 1 variables is represented by P_1 , while $P_{U_1U_2}$ represents the correlation between the period 2 residuals. If all of the variables are standardized, intercept terms are eliminated and the structural equations may be written as:

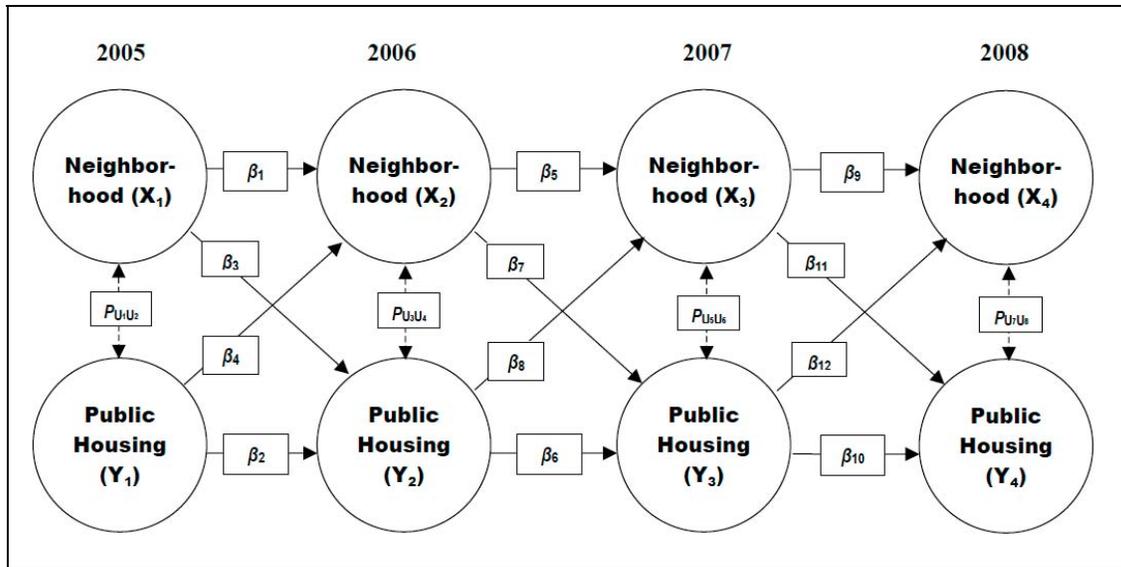
$$X_2 = \beta_1 X_1 + \beta_4 Y_1 + U_1$$

$$Y_2 = \beta_2 Y_1 + \beta_3 X_1 + U_2$$

The β_3 and β_4 coefficients may be used to assess reciprocal effects.

The two-period model can be extended across three (or more) periods. Figure 3 shows the four-wave cross-lagged effects model.

Figure 4. Four-Wave Cross-Lag Effects Model



If the panel periods are equally spaced (as they are in this study), the respective coefficients should be equal across periods. That is, the cross-lagged effects between variables from period 1 to period 2 should be the same as those between periods 2 and 3 (Finkel, 1995). The model can then be estimated using the following parameter constraints:

$$\begin{aligned} \beta_1 &= \beta_5 = \beta_9, \\ \beta_2 &= \beta_6 = \beta_{10}, \\ \beta_3 &= \beta_7 = \beta_{11}, \text{ and} \\ \beta_4 &= \beta_8 = \beta_{12}. \end{aligned}$$

In this analysis the covariances between the residuals is also assumed to be equal across periods 2, 3, and 4, so that $P_{U_3U_4} = P_{U_5U_6} = P_{U_7U_8}$.

The model can be further extended to include a vector of covariates (Z_k). Thus, each of the X s and Y s is predicted by a structural equation consisting of its own lagged value, the lagged value of the other variable (Y for X , X for Y), a vector of covariates (Z_k), and an error term:

$$Y_2 = \beta_2 Y_1 + \beta_3 X_1 + \delta_{12} Z_k + U_{12}$$

$$Y_3 = \beta_6 Y_2 + \beta_7 X_2 + \delta_{13} Z_k + U_{13}$$

$$Y_4 = \beta_{10} Y_3 + \beta_{11} X_3 + \delta_{14} Z_k + U_{14}$$

$$X_2 = \beta_1 X_1 + \beta_4 Y_1 + \delta_{22} Z_k + U_{22}$$

$$X_3 = \beta_5 X_2 + \beta_8 Y_2 + \delta_{23} Z_k + U_{23}$$

$$X_4 = \beta_9 X_3 + \beta_{12} Y_3 + \delta_{24} Z_k + U_{24}$$

To avoid under-identification, the parameter estimates for δ are constrained to be equal across each of the X s and Y s (that is, $\delta_{12} = \delta_{13} = \delta_{14}$ and $\delta_{22} = \delta_{23} = \delta_{24}$).

IV. RESULTS

A. Public Housing in New York City

NYCHA is the nation's largest public housing authority,¹⁶⁸ with an official population of over 600,000 residents in 179,000 units in 344 public housing developments.¹⁶⁹ In 200, public housing in New York comprised approximately 8.5% of all rental housing in New York City.¹⁷⁰ Most public housing developments are large: one in three has more than 1,000 units, and less than one in ten has fewer than 100 units. Most (65%) of the NYCHA developments were built before 1970, though most of the

¹⁶⁸ In comparison, the Chicago Housing Authority (CHA) administers 40,462 units. After these, the largest PHAs include Philadelphia with 22,229 units; Baltimore with 17,119; and Boston with 14,400 units (U.S. Department of Housing and Urban Development, Housing Authority Profiles CITES).

¹⁶⁹ Official population counts of public housing residents tend to undercount the total number of people living in public housing at any given time. Tenants are required to register family and income information with the Housing Authority annually. These figures are used to confirm eligibility for public housing, and in some cases are used to determine rents. Because of these administrative guidelines, tenants do not always report all household members to the Housing Authority. These unofficial residents may be family members or friends moving in for an extended period, or men living in otherwise female-headed single-parent families. This complicates analyses that rely on these official statistics. Comparing 1980 and 1990 census population numbers with NYCHA tenant counts for public housing developments whose boundaries correspond to census block groups shows that official population numbers are consistently lower than census numbers on average, NYCHA population numbers were up to 30% lower than census counts.

¹⁷⁰ Tamara Dumanovsky, *Crime in Poor Places: Examining the Context of NYC's Public Housing Projects*, Doctoral Dissertation, New York University Department of Sociology, 1999. See, also, Tamara Dumanovsky et al., *Neighborhood Contexts of Crime in New York City's Public Housing*, presented at the September Research Institute on Neighborhood Effects on Low-Income Families, Joint Center for Poverty Research, The University of Chicago and Northwestern University (1999).

smaller ones were built after 1970.¹⁷¹

Public housing is not randomly distributed across the five boroughs of New York City, nor is it randomly sited in the city's neighborhoods.¹⁷² Over eighty-five percent of all public housing is in three boroughs: Brooklyn, Manhattan and the Bronx.¹⁷³ This distribution reflects, in part, decades old decisions on where to locate public housing, as well as the success of locally organized opposition in the wealthier neighborhoods.¹⁷⁴ For example, only a few public housing developments were constructed in Queens, a largely middle class residential area. And there, the largest cluster of public housing is on the Rockaway peninsula, on the ocean side of Kennedy Airport, an area that is geographically much closer to eastern Brooklyn than to the center of Queens. Staten Island, with its network of predominately working class white residential neighborhoods, has only ten public housing developments. These are concentrated in the borough's densely populated North Shore, near the ferry terminal that connects the island to Manhattan, and at some distance from the single-home residences in the hilly wooded neighborhoods on the island's interior.

In Manhattan, most developments are located above 110th Street or below midtown on the Lower East Side, well removed from the borough's wealthiest neighborhoods and commercial centers. Brooklyn has the most public housing in the city, with the largest concentrations in the heavily minority neighborhoods of Brownsville, Bushwick and East New York. Particularly for the larger developments in the "outer boroughs," such as Queensbridge, Morrisania or Brownsville, public housing tends to ecologically dominate the surrounding areas, suggesting that some areas are "public housing neighborhoods."¹⁷⁵ These also are the neighborhoods with the most

¹⁷¹ See, e.g., Peter Marcuse, Peter Marcuse, *Interpreting Public Housing History*, 12 JOURNAL OF ARCHITECTURAL AND PLANNING RESEARCH 240 (1995)

¹⁷² Jeffrey Fagan, & Garth Davies, Crime in Public Housing: Two Way Diffusion Effects, in *Analyzing Crime Patterns : Frontiers of Practice* (V. Goldsmith et al., eds.) 121 (1999). See, also, Garth Davies, *Social Ecology and the Diffusion of Crime and Violence In and Around Public Housing in New York City*. Doctoral Dissertation, School of Criminal Justice, Rutgers University (2003).

¹⁷³ NYCHA website.

¹⁷⁴ Marcuse, *supra* note 1; Susan Saegert, Gary Winkel, and H. Swartz, *Social Capital and the Revitalization of New York City's Distressed Inner-City Neighborhoods*, 9 HOUSING POLICY DEBATE 17 (1998).

¹⁷⁵ Garth Davies, *CRIME, NEIGHBORHOOD, AND PUBLIC HOUSING* (2006).

intensive police surveillance and highest rates of *Terry* stops per felony crime and per capita population.¹⁷⁶

Table 1 shows the concentrated disadvantage of both public housing developments and their surrounding neighborhoods compared to the rest of the city. Public housing and the surrounding areas have lower per capita incomes, higher concentrations of racial minorities, and a higher concentration of children and adolescents. NYCHA’s eligibility criteria for public housing narrows the range of incomes in public housing, but there is a large range in incomes in the surrounding areas. Public housing developments are also disadvantaged compared to the immediate surrounding areas, but far less so compared to the rest of the city.

Table 1 Here

Despite their structural similarities, crime rates in public housing are higher than in the surrounding neighborhoods. Assuming that enforcement is distributed proportionately (though not necessarily monotonically) with crime, the enforcement differentials are far greater than would be predicted by the narrow crime rate differences with the surrounding areas. The large standard deviations in the crime rates in public housing suggest that there is quite a bit of variation in these rates across developments, far more variation than in the surrounding areas.

B. Trespass Enforcement in Public Housing

1. Relative Incidence of Trespass Enforcement

For each dimension of trespass enforcement, we estimated baseline models with fixed effects for time and an exposure variable, and then models that included covariates that control for relevant features of the social and built environments in each space. The parameter estimates in Table 2 are exponentiated coefficients, and the results can be interpreted as an incidence rate ratio (IRR), where a coefficient of 1 means that there is no difference in the rates for each increment of the predictor.

¹⁷⁶ Fagan et al., Street Stops and Broken Windows Revisited, in *Exploring Race, Ethnicity and Policing: Essential Readings* (S. Rice and M. White, eds.) 309 (2010).

Table 2 Here

As expected, trespass enforcement is significantly greater in public housing than in the immediate surrounding areas. Table 2 shows that rates of trespass stops, arrests and total enforcement are about twice the rates in the surrounding areas. In all three models, the effects are not moderated by the inclusion of covariates. In fact, the covariates are only significant in the model for stops, and even then their IRRs are clustered close to one. This inelasticity in the models when covariates are entered suggests that the uniqueness if not separateness of trespass enforcement in public housing.

The small influence of the covariates is not surprising, for two reasons. First, public housing and its surrounding neighborhoods are, with the exception of places like *Chelsea Houses* and *344 East 28th Street*, as well as some of the sites with predominantly elderly residents, located in neighborhoods that aren't that dissimilar in terms of their social ecology and built environments. Second, to the extent that crime is correlated with these covariates, most of the variance from these covariates is expressed in the crime exposure variables.

The exposure measure in these models is drug crime, which is an index of crime complaints to the police for drug selling and drug use. The index includes both controlled substances and marijuana offenses, plus drug paraphernalia.¹⁷⁷ We chose drug crimes because of the tight fit of drug crimes with the policy logic of the trespass program, and also because of its centrality in the discourse on the problematics of public housing both in New York and in other major cities.¹⁷⁸ The results are robust to alternate specifications using violent crime complaints and weapons complaints, as well as total crime complaints.¹⁷⁹

Figure 5 Here

¹⁷⁷ Even when there are probable cause arrests that are not initiated by a crime complaint, the police “back fill” the crime complaint records to generate a crime to match that arrest.

¹⁷⁸ See, e.g., Sudhir Aladi Venkatesh, *AMERICAN PROJECT* (2002). See, also, Jeffrey Fagan et al., *Drug Control in Public Housing: The Paradox of the Drug Elimination Program in New York City*, 13 *GEORGETOWN JOURNAL OF POVERTY, LAW & POLICY* 415 (2007).

¹⁷⁹ These include felonies and misdemeanors, as well as many violations that can be characterized as “disorder” crimes. The latter includes “open container” violations, for example.

The effect sizes and ranges from the regressions in Table 2 are shown in Figure 5. Each block shows the mean effect size, and the range falling within one standard deviation of the mean. The “whiskers” in the plot are the observed ranges across the 264 pairs. Adjusting the incidence rate to include the influences of covariates broadens the ranges compared to model with only time and exposure measures, and suggests the variability in the distribution of trespass enforcement.

2. Decomposing Rate Differences

To identify the factors in public housing and the surrounding areas that explain the observed differences in trespass enforcement, we estimate a series of difference-in-difference (DD) regressions that included the full range of predictors. Separate models are estimated for each dimension of trespass enforcement. For each model, we estimate separate models for all sites, and then for trespass effects with public housing sites (and the surrounding areas) nested within boroughs and then within precincts. DD regressions usually are estimated as ordinary least squares regressions. But in this case, the uneven geographical siting of public housing and its nesting of sites within boroughs and precincts suggested that we use hierarchical or mixed effects regressions.¹⁸⁰ In addition to nesting sites within boroughs or precincts, all models also are estimated with fixed effects for time and either borough or precinct.

a. Stops

For trespass stops, the difference in Black population between public housing and the surrounding area predicts the difference in trespass enforcement in two of three tests in Table 3a. When sites are nested in boroughs, the difference in percent Black population is no longer significant, but the difference is significant when sites are nested in police precincts. There are no significant effects for Hispanic population or for other race populations.

Table 3a Here

¹⁸⁰ Andrew Gelman and Jennifer Collins, *Data Analysis Using Regression and Multilevel Hierarchical Models* (2007).

The effect for Blacks is present after controlling for differences in crime and social conditions and other features of the built environment. The effects for Black population differences are small compared to other predictors, especially the coefficients for drug crime rates or weapons offenses. Most of the other social or demographic characteristics are not significant, probably a reflection of the robust relationship of poverty to crime. In all three specifications, trespass stop rates are higher in sites with a higher presence of minors (below age 16), and when population (logged) are greater, compared to the surrounding areas. In two models, there are more stops in public housing when there are fewer tall buildings in the public housing sites compared to the surrounding areas. The effects here too are small compared to crime effects, but still significant in both the borough and precinct models.

The fact that Black population remains significant after controlling for crime and its correlates suggests that the separateness of trespass enforcement that we observed in Table 2 is manifested in the concentration of Black population. The same is not true for Hispanics, a question that we return to below.

b. Trespass Arrests

As with trespass stops, trespass arrests are higher in public housing when Black populations are greater in surrounding areas (Table 3b). The result is robust to nesting in either boroughs or police precincts. There now is a significant effect for both Hispanic population and for other racial and ethnic groups, but only in the specification where public housing is nested in precincts. Otherwise, the overall pattern of results is similar to the results for trespass stops, and confirms the presence of a race effect.

Table 3b and 3c Here

c. Total Trespass Enforcement

The results for total trespass enforcement are similar to the results for stops alone (Table 3c). Trespass enforcement is greater when there is a greater difference in Black populations, but not for Hispanic or other race populations. Again, there are small but significant effects for built environment and for the presence of minors, and for public

housing sites that are larger than their surrounding areas. The results are similar when public housing sites are nested in boroughs or police precincts, or when they are not nested at all.

Beyond racial disparity, the largest effects in all three models are from crime, especially drug crime. Differences in drug crime rates between public housing and the surrounding areas predict higher trespass stop and arrest rates in public housing. This is not surprising, given the targeting of vertical patrols and “Operation Clean Hallways” on the elimination of drug trafficking.

What is surprising is that the effects vary for Black and Hispanic populations. Why are differences significant for Black population and not Hispanics? At first glance, Hispanics and Blacks have similar presence in public housing, separated by about five percentage points. And the rates are similar in the surrounding areas, too, though the difference is reversed. There are no obvious structural reasons: income, for example, is comparable for families in each population group in public housing. The same is true for crime: crime rates – both drugs and weapons – covary with both Hispanic and Black population concentration. So too do other crime measures, especially violent crimes including robbery and assault. Nor are there differences in the siting of public housing projects by neighborhood – housing projects with higher Black populations are no more likely to be sited in predominantly white neighborhoods than are projects where Hispanic populations are higher.

So, if structural conditions don’t predict the disproportionate rates of trespass enforcement where Blacks are a greater presence in public housing, and these differences persist after controlling for crime rates and any unobserved effects in the immediate police precincts, what might? One reason may be the patterns of racial residential segregation in the City, and how those patterns interact with the siting of public housing. More likely, though, are the differential patterns of residential segregation for Hispanics and Blacks in New York,¹⁸¹ and the diversity of Hispanic populations in New York.¹⁸² Hispanics in New York include many more first generation immigrants who, by virtue of

¹⁸¹ We did not separately analyze Black Hispanics, since we are not confident in the reliability of coding of Black Hispanic suspects by NYPD officers making either stops or arrests in public housing.

¹⁸² Community Service Society

citizenship, are excluded from public housing, and live in non-public housing areas such as Sunset Park in Brooklyn.

But an alternative explanation may simply be race. In other analyses of SQF stops, Blacks are stopped at far higher rates than are Hispanics.¹⁸³ They also are more likely to be frisked once stopped, and arrested as well.¹⁸⁴ A growing body of research suggests that skin shade matters in discrimination,¹⁸⁵ and both the cognitive and implicit biases associated with Blacks as criminal suspects may be greater, with a differential large enough to produce meaningful differences. The patterns we observe here may reflect the aggregation of such biases, and the attribution of race-based priors onto places that bear the aggregate characteristic of their residents.

3. Autonomy or Reciprocity

The concentration of trespass enforcement in public housing could reflect a targeting of enforcement in public housing, or could simply be one end of a continuum or gradient where enforcement “moves” between the surrounding areas and the surrounding area depending on the extent of differences between the two “neighborhoods.” In this framework, differences in enforcement between public housing and the surrounding area would covary with the magnitude of differences between those them. At one extreme, trespass enforcement would be concentrated in public housing and independent of enforcement patterns in the surrounding areas. When differences are small, trespass enforcement would be dependent between the two areas, and we would be able to empirically identify mutuality and reciprocal causation.

The cross-lag regressions are designed to identify reciprocal causation or independence. Figures 6a-c show the results of three tests, parallel to the tests in Tables 3a-c of each dimension of trespass enforcement. In each set of regressions, we control for lagged (*t-1*) time-covarying crime and social conditions.

Figures 6a-c Here

¹⁸³ Fagan et al., 2010; Gelman Fagan and Kiss, 2007.

¹⁸⁴ Fagan, id.

¹⁸⁵ Eberhardt, Goff. See, generally, Rick Banks on profiling

The regression estimates support our suspicion that trespass enforcement in public housing and the surrounding areas are independent and autonomous regimes. In each of the figures, the regression coefficients for the year-to-year influence within both public housing sites or within the surrounding neighborhoods are very high, and obviously significant. These coefficients show the time path of trespass enforcement within each spatial unit in relation to its past values. For example, the regression coefficient for T2 trespass stops in public housing from T1 stops in public housing is $\beta=32.75$, $p<.001$. (Recall that these coefficients are assumed to be equal across periods because the periods are equally spaced over time, and exposure is relatively constant¹⁸⁶). The parallel estimate for the surrounding neighborhood is $\beta=18.38$, $p<.001$. So, there is strong stability in trespass enforcement within spatial units from year to year. In effect, the system is stable (in a statistical sense) to the point where it could reach a fixed equilibrium at some future point where the values of β will be constant (even if we don't fix them by virtue of the spacing of time periods), though this seems to be somewhat speculative at this point.¹⁸⁷ We observe similarly high within-area regression coefficients over time in Figures 6b and 6c for the within-unit effects.

There also is good evidence that enforcement in both public housing and the surrounding areas are well correlated. For example, Figure 6a shows that for the relationship between trespass stops in public housing and the surrounding area, $\beta=3.76$, $p<.001$. That particular parameter increases over time to 8.05 for 2006-8, again statistically significant. For trespass arrests, this effect is stable over time (Figure 6b). This stability is characteristic of many social systems, where change is both slow and highly dependent on changes in connected social networks and systems.¹⁸⁸ Thus, for both mathematical and conceptual reasons, the significant and relatively stable year-to-year correlations between public housing and the surrounding areas are hardly surprising. Both spatial units share crime and social structural ecological characteristics, and are

¹⁸⁶ See, Finkel, *supra* note __.

¹⁸⁷ Finkel, *supra* note __ at 9. For now, we cannot claim that these systems have reached that equilibrium, and we expect to see short-term fluctuations based on exogenous factors such as reductions in police personnel or adoption of new tactical initiatives.

¹⁸⁸ James S. Coleman, *The Mathematical Study of Change*, in *Methodology in Social Research* (Hubert Blalock and Ann B. Blalock, eds.) (1968).

joint tenants in a larger political economy of neighborhoods that is, more often than not, characterized by social and economic disadvantage.¹⁸⁹

Though correlated by virtue of their proximity to crime and other indicia of deprivation, our effort to identify mutual or reciprocal influence shows that there is almost no evidence that enforcement patterns in either spatial unit is influencing its next door neighbor. In any of the panel years, the coefficients for the cross-lagged regressions, from public housing in *T1* to the surrounding neighborhood in *T2*, or from the surrounding neighborhood in *T1* to the adjacent public housing site in *T2*, are generally small and statistically not significant. The only exception is for trespass stops (Figure 5a), where the cross-lag regression coefficients are significant for the 2007-8 period. In all other specifications across the three sets of analyses in Figures 6a-c, the results are not significant.

The absence of significant cross-lag regressions, then, suggests that trespass enforcement in public housing is independent from enforcement in the surrounding areas. Tying this analysis back to the DD estimates in Table 3a-c or the “raw” estimates in Table 2, we see near stability in the effects over time in part because the first difference change in any measure of *Y* is nearly constant over time across units. In ordinary terms, the difference between public housing and the surrounding area seems to be constant and fixed. Accordingly, any differences we observe in trespass enforcement either in the overall comparison in Table 2, or the decomposed differences analysis in Tables 3a-c, is evidence of a specific process within public housing that is independent of trespass enforcement in the surrounding areas, that produces a disparate impact on public housing residents, and especially places with higher concentrations of Black residents. Notwithstanding any advantages or disadvantages in public safety that may accrue from this process over time, trespass enforcement seems to be structured into the fabric of public housing, especially those places where Black residents are the majority population group, placing both its residents and visitors under a firm police gaze.

¹⁸⁹ For the most part, both public housing and its surrounding areas are located in poorer and higher crime areas of the city. Jeffrey Fagan, Tamara Dumanovsky, J. Phillip Thompson and Garth Davies, Crime in public housing: Clarifying research issues, National Institute of Justice Journal 2–9 (1998, March). See, also, Dumanovsky, Crime in Poor Places, *supra* note _.

V. CONCLUSION

Distributive concerns predict that public housing residents would enjoy the benefits of vertical patrol, and they would welcome the increased attention. In a contest between depolicing and policing, policing will always win. Accordingly, we expect at least some support from the community.¹⁹⁰ Yet, numbers matter, and for residents, especially those uninvolved in the drug trade, the frequency of vertical patrol is daunting. It is quite possible for a resident to be stopped and questioned multiple times in the same week.¹⁹¹ In fact, some twenty-four percent of public housing residents surveyed reported being stopped more than twenty times in the past year,¹⁹² and only about one in four (28%) reported no stops in the previous year.¹⁹³ According to the same NYLPI survey of the Thomas Jefferson Homes, 14.7% had been arrested for trespass.¹⁹⁴ Residents' frustration is compounded by the fact that the patrols only indirectly target the most serious crimes. Instead, the vast majority of arrests are for trespass, and the connection to more serious crime is not apparent to residents.¹⁹⁵ As a result of the frequency of stops, their tangential relationship to serious criminal conduct, and occasional mistreatment by

¹⁹⁰ Even the much more intrusive searches associated with Operation Clean Sweep in Chicago---during which systematic suspicionless searches of residents' apartment buildings were conducted---garnered a surprising amount of community support. See Yarosh, *supra*, at 1126 (1992). (“[T]he tenant support for Sweeps has been extremely strong, with few dissenters among the residents.”). See also Dirk Johnson, *Target Gangs that Plague Housing*, N.Y. Times, May 20, 1989 (quoting one resident as saying “If you had somewhere to go, too bad. You stay inside. It’s a lot better now” and another as saying “Before the crackdown kids couldn’t sit on the playground for [thirty] minutes [without] having to scatter because of the gunfire”). Furthermore, police saturation sweeps of public housing during the late 1960s were not rejected by the tenants after they initially proved to be somewhat successful in reducing crime. Bloom, *supra*, at 192. Nevertheless, soon after residents became disillusioned by the NYPD’s tactics and would often try and thwart their efforts to arrested suspected criminals. *Id.*

¹⁹¹ With only 343 housing developments across the New York City Housing Authority (NYCHA), New York City Housing Authority, *Fact Sheet 1* (2008), available at <http://www.nyc.gov/html/nycha/downloads/pdf/factsheet.pdf>, and assuming vertical patrols are evenly distributed amongst the developments, the average NYCHA development sees 450 vertical patrols a year.

¹⁹² See NYLPI at 10.

¹⁹³ NYLPI, *supra* at 10. While this was not a scientific study and it would be inappropriate to draw conclusions about other residents' experiences based on surveys conducted in only two housing projects, there is no reason to believe that these results are outliers.

¹⁹⁴ See NYLPI, *supra*, at 11 (showing that 30% of residents reported being arrested and 36% reported being ticketed by the police, with 49% of those incidents being citations or arrests for trespass).

¹⁹⁵ M. Chris Fabricant, *Rousting the Cops: One Man Stands up to the NYPD’s Apartheid-Like Trespassing Crackdown*, *The Village Voice*, Oct. 30, 2007 (reporting on his case load as a public defender in New York and stating “I have handled more trespassing cases than any other single criminal charge ...”).

NYPD officers,¹⁹⁶ public housing residents are ambivalent about the appropriateness and desirability of vertical patrols.¹⁹⁷ In weighing the tradeoff between liberty and security for public housing residents, the way vertical patrols are conducted troubles residents.¹⁹⁸

Vertical patrols regard residents as criminal suspects merely for being present within their own apartment buildings. Their status as public housing residents exposes them and their friends and kin to unnecessary and legally questionable stops. The racialization of this process compounds other racial tensions that create legitimacy deficits that in turn complicate the project of police-citizen cooperation in the pursuit of security. Policing in public housing has the potential to be a transformative force, ensuring building residents feel safe and secure in their homes and broadening the ties between citizens and police. It also has the potential to redistribute the benefits and burdens of patrol by seeking balance in how vertical patrol is conducted. But this process will have to reverse decades of cognitive bias about public housing and its residents, and a policy entropy that seems to move only in one direction.

¹⁹⁶ NYLPI, at 11 (reporting that thirty-four percent of residents have been subjected to excessive force, sixty-six percent reported abuse or harassment of a family member, and twenty-three percent have filed complaints with the Civilian Complaint Review Board).

¹⁹⁷ See generally NYLPI.

¹⁹⁸ See generally NYLPI, at 10--13 (showing resident dissatisfaction with the frequency of stops taking place within their public housing buildings).

Table 1. Descriptive Statistics by Area

Variables	Public Housing		Surrounding Neighborhoods		Other Areas
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	Mean
Trespass Stop Rate (per 1,000)	13.29	23.18	8.12	9.78	1.81
Trespass Arrest Rate (per 1,000)	42.07	63.92	15.21	21.47	2.47
Total Trespass Enforcement (per 1,000)	55.36	75.69	23.33	26.48	4.28
Complaint - Drugs (per 1,000)	14.93	26.59	9.52	8.42	3.19
Complaint - Weapons (per 1,000)	3.28	4.90	2.66	2.09	1.05
White (%)	5.15	9.45	11.67	17.48	32.90
African American (%)	47.74	20.15	36.34	26.89	21.46
Hispanic (%)	42.48	17.42	41.16	23.18	28.15
Other Races (%)	4.63	8.38	10.83	14.42	17.48
Minors (%)	27.76	11.79	27.98	8.52	22.96
Household Size	2.25	0.55	3.10	0.80	2.59
Per Capita Income	20,025	4,021	18,790	17,853	31,462
Total Population	1,534	1,487	8,416	4,665	5,986,359

Table 2. Negative Binomial Regression of Public Housing Status on Three Measures of Trespass Enforcement, 2004-8 (β , SE)

Predictors	Trespass Stops		Trespass Arrests		Total Trespass Enforcement	
	Baseline Model	With Covariates	Baseline Model	With Covariates	Baseline Model	With Covariates
Public Housing	2.420 *** (.142)	2.337 *** (.260)	1.813 *** (.098)	1.914 *** (.152)	2.226 *** (.136)	2.259 *** (.179)
Demography		.903 * (.040)		0.993 (.044)		.943 (.032)
Building Density		.995 * (.002)		1.000 (.001)		.997 (.002)
Population (logged)		1.014 (.050)		1.035 (.037)		1.037 (.049)
<i>Model Fit (-2LL)</i>	20259	20223	15073	15071	21245	21222

Significance: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

† For all models, exposure = crime complaint reports for drug offenses. All models estimated with year fixed effects.

Table 3a. Linear Mixed Model Difference-in-Difference Estimates for Trespass Stops, 2005-8

<i>Effect</i>	<i>Public Housing</i>	<i>PH within Borough[†]</i>	<i>PH within Precinct[†]</i>
% Black	.022 * (.011)	.021 (.011)	.036 * (.018)
% Hispanic	-.004 (.012)	.001 (.012)	.001 (.018)
% Other Race	-.001 (.017)	.006 (.017)	.022 (.025)
Crime - Drugs (lagged)	.204 *** (.034)	.209 *** (.034)	.157 *** (.034)
Crime - Weapons (lagged)	.084 ** (.031)	.087 ** (.031)	.056 (.031)
% Minors	.043 * (.018)	.050 ** (.017)	.052 ** (.020)
Household Size	-.275 (.295)	-.300 (.288)	-.227 (.342)
Per Capita Income	.047 (.227)	-.033 (.225)	-.080 (.277)
N of Tall Buildings	-.008 (.006)	-.025 (.007)	-.029 ** (.010)
Population	.360 ** .128	.300 * .124	.276 .149
Model Fit (-2LL)	3,903	3,882	3,715
Wald Chi-square			

[†] Fixed effects for Time, Boroughs and Precincts not shown.
Significance: * p < 0.05; ** p < 0.01; *** p < 0.001

Table 3b. Linear Mixed Model Difference-in-Difference Estimates for Trespass Arrests, 2005-8

<i>Effect</i>	<i>Public Housing</i>	<i>PH within Borough[†]</i>	<i>PH within Precinct[†]</i>
% Black	.020 * (.009)	.020 * (.009)	.044 ** (.014)
% Hispanic	.011 (.010)	.015 (.010)	.030 * (.015)
% Other Race	.008 (.013)	.018 (.014)	.062 ** (.020)
Crime - Drugs (lagged)	.269 *** (.031)	.260 *** (.031)	.214 *** (.032)
Crime - Weapons (lagged)	.153 *** (.030)	.151 *** (.030)	.120 (.030)
% Minors	.021 (.014)	.028 * (.014)	.032 (.017)
Household Size	-.098 (.235)	-.145 (.232)	-.150 (.283)
Per Capita Income	.049 (.177)	-.047 (.177)	-.046 (.223)
N of Tall Buildings	-.009 * (.004)	-.023 *** (.005)	-.028 ** (.008)
Population	.490 *** (.099)	.446 *** (.098)	.505 *** (.120)
Model Fit (-2LL)	3,718	3,700	3,561
Wald Chi-square			

[†] Fixed effects for Time, Boroughs and Precincts not shown.

Significance: * p < 0.05; ** p < 0.01; *** p < 0.001

Table 3c. Linear Mixed Model Difference-in-Difference Estimates for Total Trespass Enforcement, 2005-8

<i>Effect</i>	<i>Public Housing</i>	<i>PH within Borough[†]</i>	<i>PH within Precinct[†]</i>
% Black	.025 * (.012)	.025 * (.012)	.045 * (.018)
% Hispanic	-.003 (.013)	.002 (.013)	.006 (.018)
% Other Race	.002 (.018)	.011 (.018)	.037 (.026)
Crime - Drugs (lagged)	.126 *** (.032)	.130 *** (.032)	.092 ** (.032)
Crime - Weapons (lagged)	.061 * (.029)	.063 * (.029)	.041 (.029)
% Minors	.045 (.018)	.052 ** (.018)	.055 ** (.020)
Household Size	-.284 (.304)	-.302 (.297)	-.249 (.345)
Per Capita Income	.046 (.239)	-.052 (.237)	-.138 (.287)
N of Tall Buildings	-.011 * (.006)	-.030 *** (.007)	-.033 ** (.010)
Population	.443 *** (.134)	.375 *** (.131)	.368 ** (.154)
Model Fit (-2LL)	3,773	3,749	3,574
Wald Chi-square			

[†] Fixed effects for Time, Boroughs and Precincts not shown.

Significance: * p < 0.05; ** p < 0.01; *** p < 0.001

Figure 1. Example of Identification of Public Housing Neighborhood

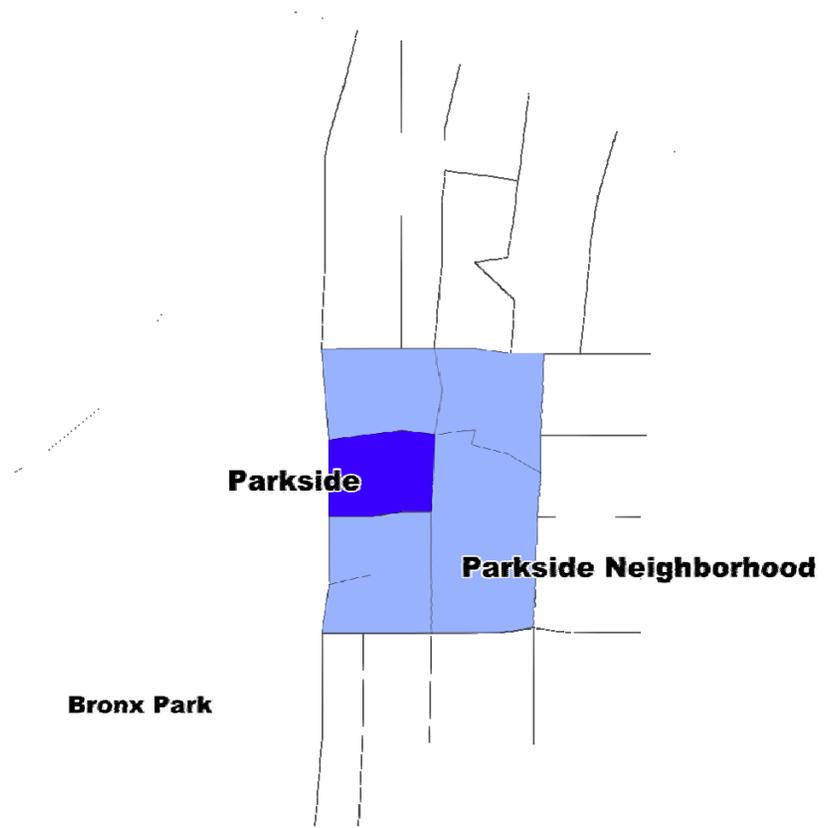


Figure 2. Public Housing Sites by 2006 Poverty Rate in Surrounding Census Tracts

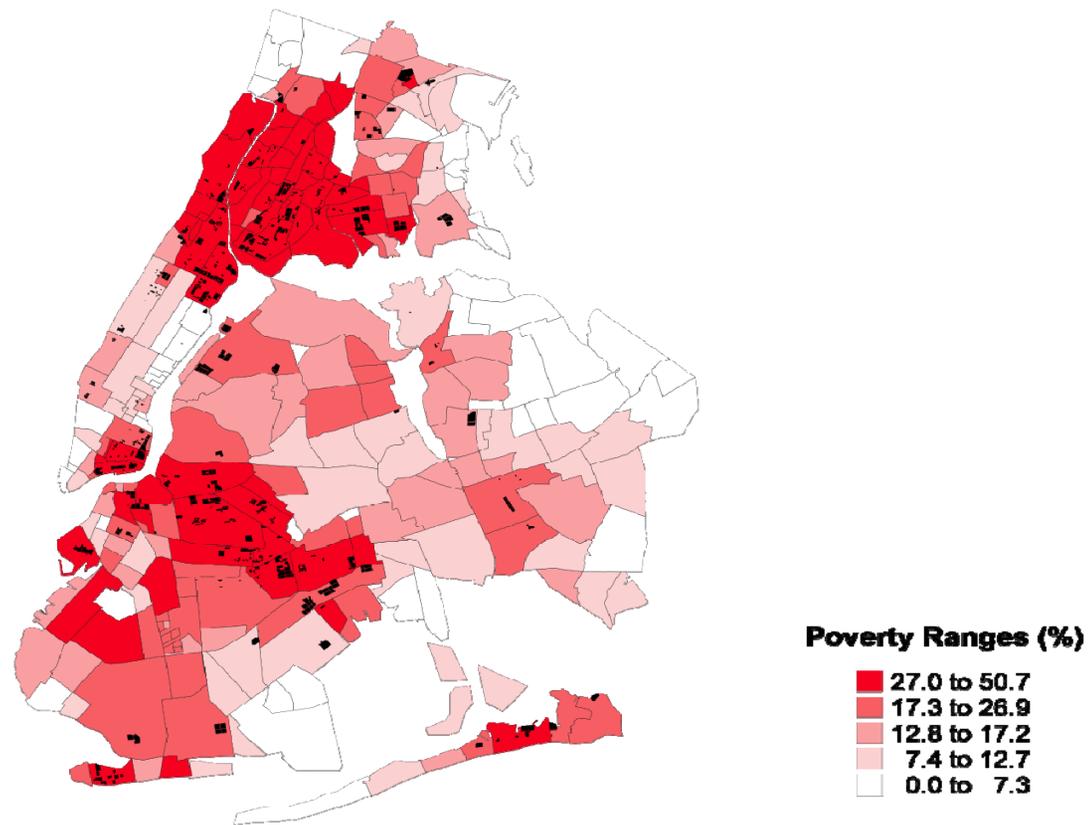


Figure 5. Effect Sizes for Trespass Enforcement in Public Housing and Surrounding Area - Adjusted Incidence Rates (Mean, Range, and 95% Percentile)

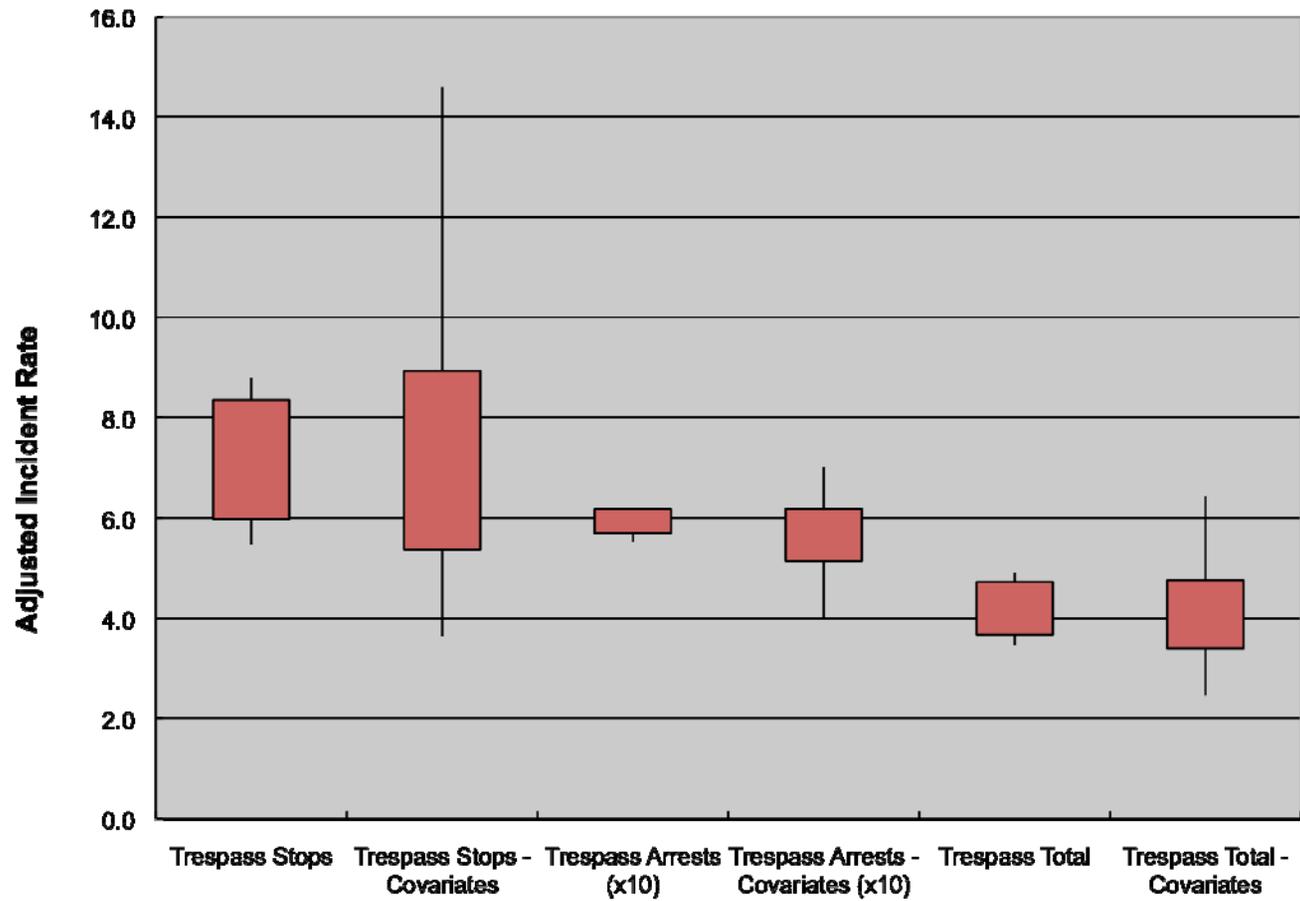
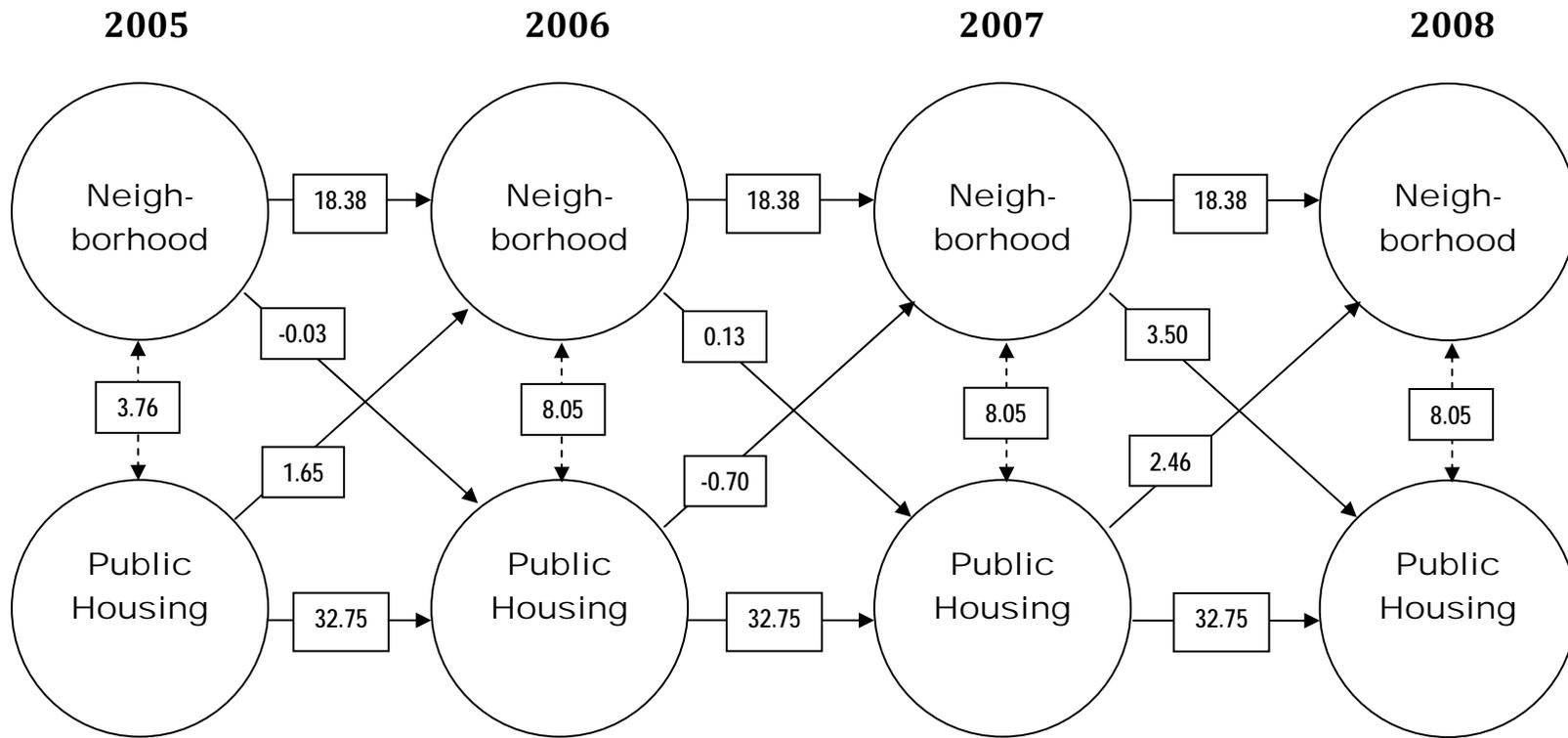
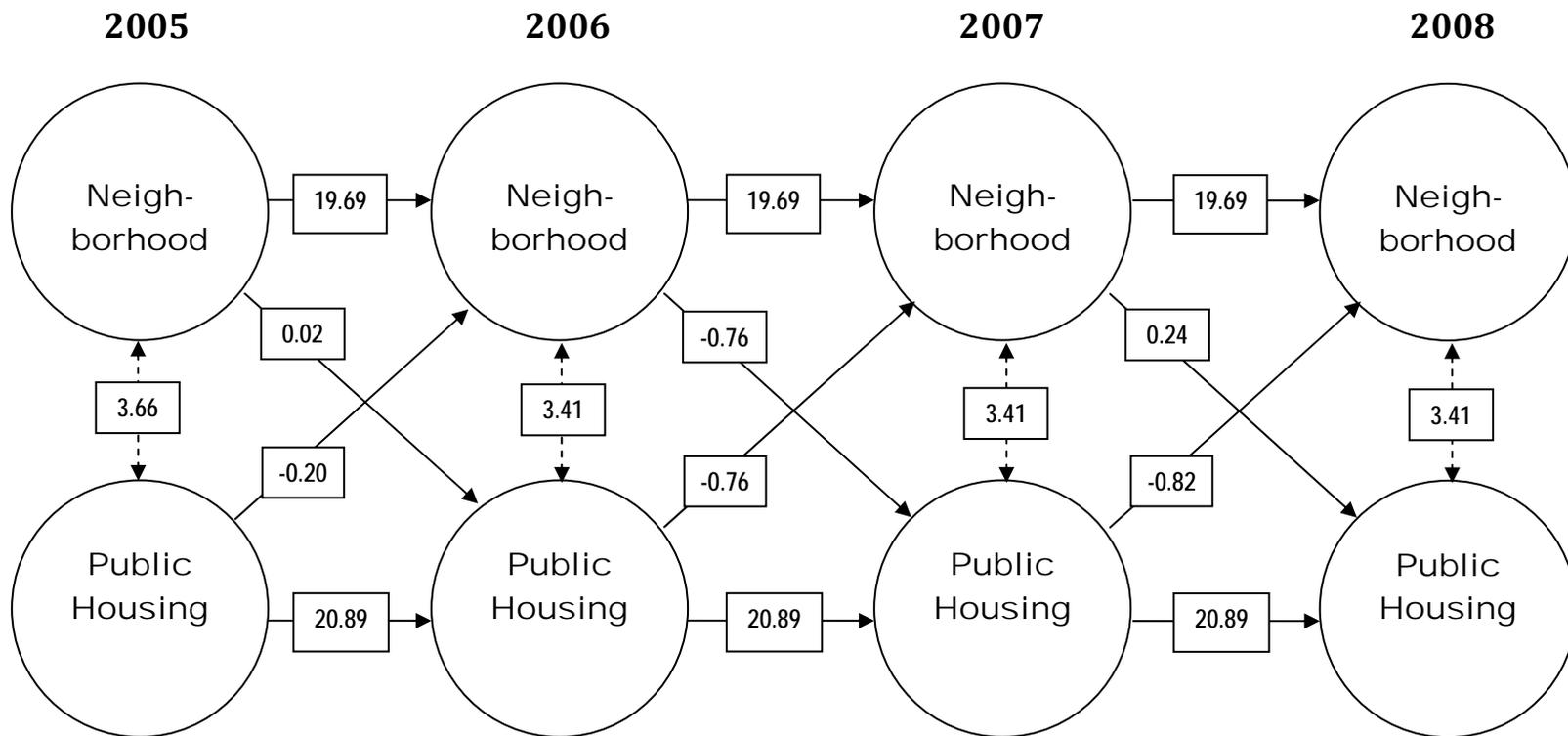


Figure 6a. Cross-Lag Regression of Trespass Stops, 2005-8, Controlling for Lagged (t-1) Demography, Building Density, Population, and Drug and Weapons Crimes (B/SE)



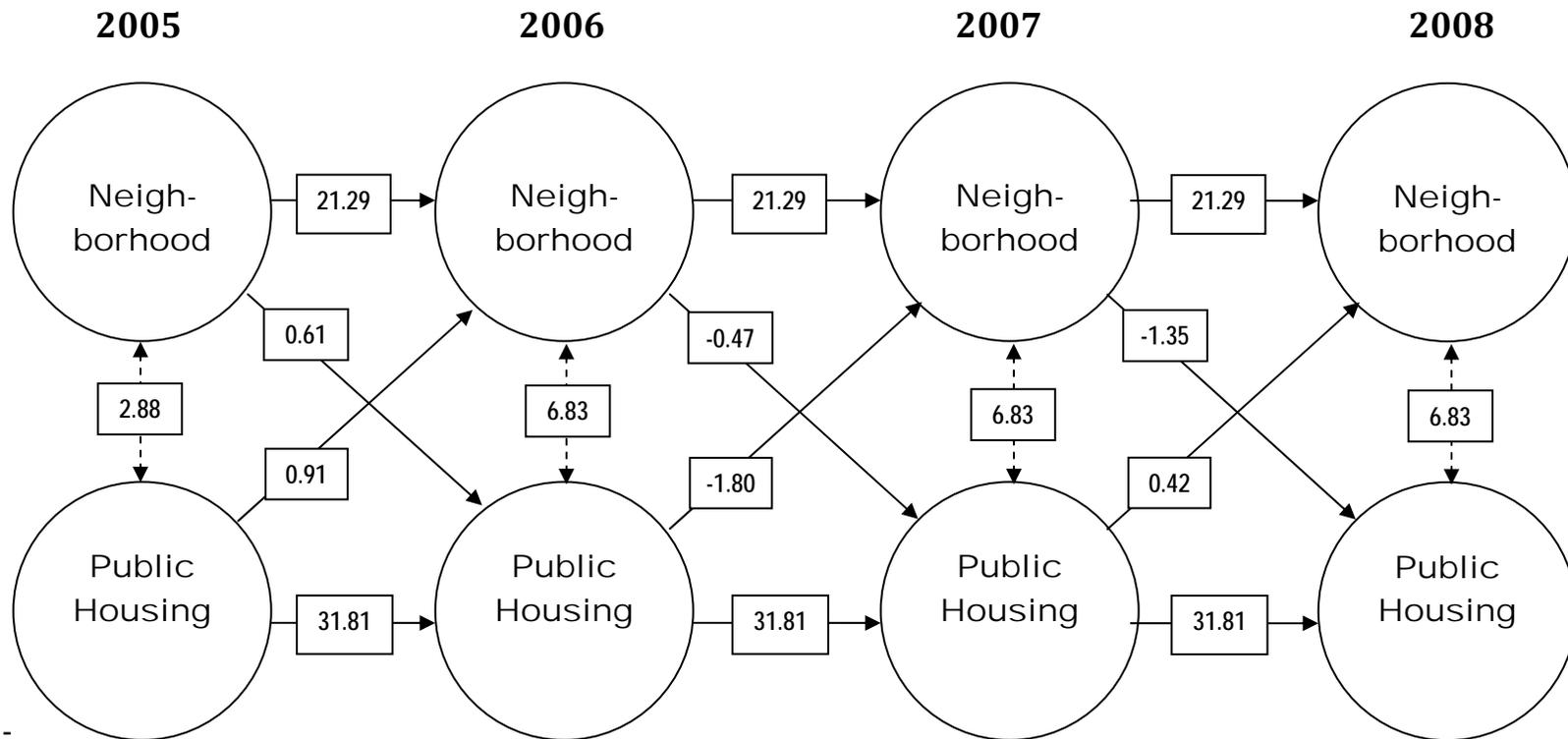
a. Chi-square=1386.21, p=.000; CFI=.697; RMSEA=.093, p=.000; SRMSR=.073

Figure 6b. Cross-Lag Regression of Trespass Arrests, 2005-8, Controlling for Lagged (t-1) Demography, Building Density, Population, and Drug and Weapons Crimes (B/SE)



a. Chi-square=1271.64, p=.000; CFI=.721; RMSEA=.088, p=.000; SRMSR=.054

Figure 6c. Cross-Lag Regression of Total Trespass Enforcement, 2005-8, Controlling for Lagged (t-1) Demography, Building Density, Population, and Drug and Weapons Crimes (B/SE)



a. Chi-square=1397.22, p=.000; CFI=.714; RMSEA=.094, p=.000; SRMSR=.070