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Neighborhood, Crime, and Incarceration in New York City

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NEIGHBORHOOD, CRIME, AND INCARCERATION IN NEW YORK CITY

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I. INTRODUCTION

Several new studies suggest that social and spatial incarceration of young males has become part of the developmental

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ecology of adolescence in the nation's poorest neighborhoods. This concentration began in the 1970s, and has grown steadily through the last quarter century.[1] The story of young men such as Cesar in *Random Family* illustrates the pervasive effects of both direct and vicarious prison experiences for young men and women in poor neighborhoods.[2] Studies of street life such as *Random Family, Code of the Streets,*[3] and *American Project*[4] show how these experiences are now internalized in the social and psychological fabric of neighborhood life, a constant reality in the background of childhood socialization, and an everyday contingency for young men as they navigate the transition from adolescence to adulthood. Some studies show that within neighborhoods, incarceration leads to more incarceration over time in a spiraling dynamic.[5] Other recent studies show that the risks of going to jail or prison grow over time for persons living in poor neighborhoods, contributing to the accumulation of social and economic adversity for people living in these areas, and depreciating the overall well being of the neighborhood itself.[6]

Accordingly, there are several reasons to consider incarceration as part of an ecological dynamic of crime in neighborhoods. High rates of incarceration can adversely affect the ability of returning prisoners to re-enter labor markets, thus aggravating social and economic disadvantages within areas where

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1. *See* Bruce Western et al., *The Labor Market Consequences of Incarceration*, 47 Crime & Delinq. 410 (2001).

2. Adrian Nicole LeBlanc, Random Family: Love, Drugs, Trouble, and Coming of Age in the Bronx (2003) (following an extended family's interaction with the criminal justice system).

3. Elijah Anderson, Code of the Street: Decency, Violence, and the Moral Life of the Inner City (1999) (studying interpersonal violence among inner-city youth).

4. Sudhir Aladi Venkatesh, American Project: The Rise and Fall of a Modern Ghetto (2000) (discussing field research conducted in Chicago's Robert Taylor Homes projects regarding life on the streets).

5. *See, e.g.*, Dina A. Rose & Todd R. Clear, *Incarceration, Social Capital, and Crime: Implications for Social Disorganization Theory*, 36 Criminology 441 (1998).

6. *See, e.g.*, James P. Lynch & William J. Sabol, *Assessing the Effects of Mass Incarceration on Informal Social Control in Communities*, 3 Criminology & Pub. Pol'y 267 (2004).

former inmates are concentrated.[7] Incarceration may also disrupt family ties and ties to conventional social networks, worsening vulnerabilities to crime by compromising the social resources available to returning inmates.[8] Additionally, incarceration can destabilize crime networks in neighborhoods, creating churning effects that introduce the potential for violence between crime groups competing for territory and market share in vacuums created by aggressive police tactics.[9] High rates of incarceration may also reduce incentives for law-abiding citizens to participate in informal social control by reducing the communicative value of sanctions, de-legitimizing law and legal actors, further inviting crime and intensifying the crime–enforcement–incarceration–crime cycle.[10] Incarceration potentially stigmatizes entire neighborhoods, complicating the ability of residents to access job hiring networks and to enter and compete in labor markets, as well as deterring businesses from locating in those areas.

These dynamics suggest that incarceration is not simply a consequence of neighborhood crime. Rather, high rates of incarceration may be internalized as a part of the ecological dynamic of neighborhoods, becoming part of a cycle that may actually elevate crime within neighborhoods.

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7. Bruce Western et al., *The Labor Market Consequences of Incarceration, 47 Crime & Delinq.* 410, 424 (2001).

8. John Hagan & Ronit Dinovitzer, *Collateral Consequences of Imprisonment for Children, Communities, and Prisoners*, *in* Prisons 121, 121-22 (Michael Tonry & Joan Petersilia eds., 1999); Joan Moore, *Bearing the Burden: How Incarceration Policies Weaken Inner-City Communities*, *in* The Unintended Consequences of Incarceration 67, 72-75 (Vera Inst. of Justice ed., 1996). *See generally* Invisible Punishment: Collateral Consequences of Mass Imprisonment (Marc Mauer & Meda Chesney-Lind eds., 2002).

9. *See, e.g.*, Patrick J. Bayer et al., *Building Criminal Capital Behind Bars: Peer Effects in Juvenile Corrections* (2004) (Yale University Economic Growth Center Discussion Paper No. 864), *at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=441882.

10. Tom R. Tyler & Yuen J. Huo, Trust in the Law: Encouraging Public Cooperation with the Police and Courts 108-11 (2002); Jeffrey Fagan & Tracey L. Meares, *Punishment, Deterrence, and Social Control: The Paradox of Punishment in Minority Communities*, *in* Punishment & Soc'y (forthcoming 2005); Robert J. Sampson & Dawn Jeglum Bartusch, *Legal Cynicism and (Subcultural?) Tolerance of Deviance: The Neighborhood Context of Racial Differences*, 32 Law & Soc'y Rev. 777, 799 (1998).

Identifying and estimating these dynamics is the focus of this article. The article illustrates this process using data from New York City on neighborhood rates of incarceration in jail or prison in five waves over a twelve-year period beginning in 1985. We show that rates of incarceration grew slowly in the early 1980s, and spiked sharply after 1985 as crime rates rose. Incarceration rates persisted at a high level through the 1990s, declining far more slowly than did the sharply falling crime rates. These analyses show that the use of incarceration, especially prison, varies across the City's neighborhoods and police precincts, but that the overall excess of incarceration rates over crime rates seems to be concentrated among non-white males living in the City's poorest neighborhoods.

Thus, the first task of the article is to illustrate and explain the growth of incarceration and estimate its effects. We show that neighborhoods with high rates of incarceration invite closer police surveillance, especially drug enforcement, contributing to the growing number of repeat admissions and the resilience of incarceration rates even as crime rates fall. We also show that incarceration may contribute to increases in some crimes, a counterintuitive empirical fact we find when we analyze neighborhood change over time and control statistically for neighborhood differences. Thus, we find that incarceration begets more incarceration, and incarceration also begets more crime, which in turn invites more aggressive enforcement, which then re-supplies incarceration. It is, quite literally, a vicious cycle. The constant rearrangement of social networks through removal and return of prisoners becomes a routine part of neighborhood life and disrupts its capacity for social control. In other words, incarceration creates a supply of both crime and more incarceration.

Next, we discuss social, economic, legal, and political mechanisms through which spatial concentration transforms a spike in incarceration from an acute external shock into an enduring internal feature of the neighborhood fabric, a dynamic process that then persists regardless of law or policy, and well in excess of the supply of criminals. When high incarceration rates are internalized into the social ecology of small, homogeneous neighborhoods, it adversely affects the economic fortunes, political participation, family life, and normative orientation of people living in the social context of imprisonment and its aftermath. We conclude with a discussion of how this concentration distorts the relationships between citizens and the law.

A. Crime and Incarceration Trends Over Time

Beginning in the 1980s, the prison population in the United States increased sharply, and the population continued to rise through 2002. The Bureau of Justice Statistics of the U.S. Department of Justice reports that the state prison population more than doubled in the decade from 1980 to 1990, from 295,819 to 684,544.[11] It continued to rise by nearly 50 percent from 1990 to 1995, to 989,004.[12] According to the Bureau of Justice Statistics, overall incarceration in the United States rose 3.6 percent from 1995 to 2002, to 2,033,331 inmates in jails and prisons.[13] The number of inmates in state prisons rose 2.9 percent to 1,209,640 during this time, and jail populations rose 4 percent to 665,475. Jail populations rose 5.4 percent in 2002 alone. The total incarceration rate per 100,000 citizens in the United States rose from 601 in 1995 to 701 in 2002, an increase of 16.6 percent.[14]

Incarceration rates in New York City and State followed similar trends. New York State's prison population was 66,786 inmates in 2002, up from 55,000 in 1990 and 27,000 in 1985.[15] Over the past fifteen years, approximately 70 percent of the State's prison inmates came from New York City.[16] New York City's average daily jail inmate population was 17,897 in 1999, only slightly lower than the 1990 population of 19,643.[17]

Table 1 shows the dynamics of crime, enforcement, prosecution, and sentencing that have contributed to incarceration

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11. *See* U.S. Dep't of Justice, Bureau of Justice Statistics, National Corrections Reporting Program, *at* http://www.ojp.usdoj.gov/bjs/abstract/ncrp92.htm (Sept. 2000) (compiling data, in spreadsheet format, on prisoners in the custody of state and federal correctional authorities from 1977-98).

12. *See id.*

13. *See* Paige M. Harrison & Allen J. Beck, *Prisoners in 2002*, Bureau of Justice Statistics Bulletin 2, tbl.1 (July 2003), http://www.ojp.usdoj.gov/bjs/pub/pdf/p02.pdf.

14. *Id.*

15. New York State, Division of Criminal Justice Services, Selection for Criminal Justice Indicators, *at* http://criminaljustice.state.ny.us/crimnet/ojsa/areastat/areast.htm (last visited Nov. 4, 2004) [hereinafter Division of Criminal Justice Services].

16. *Id.*

17. *See* Jeffrey Fagan et al., *Reciprocal Effects of Crime and Incarceration in New York City Neighborhoods*, 30 Fordham Urb. L.J. 1551, 1555 (2003).

Table 1. Crime, Arrest and Punishment New York City, 1985-1997

	1985	1990	1995	1997	% Change 1985-1990	% Change 1985-1997	% Change 1990-1997
Reported Crime							
Total Index Crimes	602,945	711,556	442,532	356,573	18.0	(40.9)	(49.9)
Violent Crimes	135,305	174,689	114,180	92,866	29.1	(31.4)	(46.8)
% Violent Crimes	22.4	24.6	25.9	26	9.8	16.1	5.7
Arrests							
Felony Arrests	106,530	148,171	135,128	130,309	39.1	22.3	(12.1)
Felony Drug Arrests	21,008	47,838	43,697	41,728	127.7	98.6	(12.8)
% Felony Drug Arrests	19.7	32.3	32.3	32	64.0	62.4	(0.9)
Felony Arrests per Index Crime	0.177	0.208	0.305	0.365	17.5	106.2	75.5
Misdemeanor Arrests	127,222	118,634	181,565	204,979	(6.8)	61.1	72.8
Misdemeanor Drug Arrests	34,899	33,056	52,892	63,879	(5.3)	83.0	93.2
% Misdemeanor Drug Arrests	27.4	27.9	29.1	31.2	1.8	13.9	11.8
Prosecution							
Felony Prosecution -- Indictments	30,416	54,837	42,758	37,041	80.3	21.8	(32.5)
Violent	15,745	19,714	13,064	11,239	25.2	(28.6)	(43.0)
% Violent Crime Prosecutions	51.8	36	30.6	30.3	(30.5)	(41.5)	(15.8)
Drug	7,702	27,071	22,377	18,964	251.5	146.2	(29.9)
% Felony Drug Prosecutions	25.3	49.4	52.3	51.2	95.3	102.4	3.6
Convictions	150,080	159,411	175,203	203,797	6.2	35.8	27.8
Convictions per 100 Felony Arrests	140.88	107.58	129.66	156.39	(23.6)	11.0	45.4

Table 1. Crime, Arrest and Punishment New York City, 1985-1997 (continued)

	1985	1990	1995	1997	% Change 1985-1990	% Change 1985-1997	% Change 1990-1997
Sentences	75,264	92,261	79,845	93,141	22.6	23.8	1.0
Prison	10,802	20,420	18,353	16,490	89.0	52.7	(19.2)
Jail	61,839	66,035	55,957	71,508	6.8	15.6	8.3
Jail + Probation	2,623	5,806	5,535	5,143	121.3	96.1	(11.4)
Incarceration Ratios							
Prison Sentences per 100 Index Crimes	1.79	2.86	4.15	4.62	59.8	158.1	61.5
Prison Sentences per 100 Felony Prosecutions	35.5	37.2	42.9	44.5	4.8	25.4	19.6
Prison Sentences per 100 Convictions	7.2	12.8	10.5	8.8	77.8	22.2	(31.3)
Jail Sentences per 100 Misdemeanor Arrests	50.7	60.6	33.9	37.4	19.5	(26.2)	(38.3)

growth beginning in 1985, the year before the onset of the crack epidemic in New York, and continuing through 1997, when crime had declined sharply in the City. Table 1 shows that the number and rate of prison sentences (per arrest and per conviction) rose at a faster pace than did crime from 1985 through 1990, and then declined far more slowly than did crime from 1991 through 1997. Reported index crimes, including violent felonies and major property crimes, rose by nearly 18 percent from 1985 through 1990, but felony arrests rose by nearly 40 percent and felony prosecutions grew by 80 percent in this period.

Prosecutions rose, too, perhaps motivated by the increased opportunities for incarceration created by legislation lowering the thresholds for felony drug convictions[18] and mandating prison

18. *See, e.g.*, Act of May 8, 1973, ch. 276, §§ 220.21, 220.42, 1973 N.Y. Laws 371, 380-81 (codified as amended in N.Y. Penal Law) (explaining that criminal possession of two or more ounces of a controlled substance and criminal sale of one or more ounces of a controlled substance are Class A-I felonies). The 1973 Act distinguished between degrees of possession and sale by weight of the prohibited substance. This was a departure from previous laws that classified only certain

sentences for "predicate" felony offenders with prior felony convictions.[19] Convictions, however, rose far more slowly, increasing by less than 10 percent. Even while convictions remained relatively stable, prison sentences nearly doubled during that time, from 10,802 to 20,420. Jail sentences remained stable, a reflection of the stable rate of misdemeanor arrests during this time. It appears, then, that the legislature's narrowing of sentencing discretion accounted for the growth in imprisonment during this time, with prison sentences growing at a faster rate than the crime rate, the felony arrest rate, and the rate of convictions.

The effects of the predicate felony laws also resulted in increases in the percentage of new prison admissions who had served prior prison terms. Our analyses show that the percent of new admissions with prior arrests, prior convictions, and prior jail sentences rose slightly from 1985 to 1996.[20] For example, Table 2 shows that 48 percent of the prison admissions in 1985 had prior jail sentences; by 1996, 55 percent had prior jail sentences. The largest increase was in admissions with prior prison sentences. In 1985, 26

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drugs such as heroin, morphine, and cocaine into degrees, which were differentiated by the quantity of the preparation, compound, mixture, or substance containing the drug. Under this system, drug offenses are graded according to the dangerousness and the quantity of the drug involved. Dangerousness of a drug is determined by consulting detailed schedules of controlled substances, with the drugs considered most harmful listed in schedule I, and those classified as the least harmful in schedule V. The 1973 Act made it a felony to possess or sell a specified amount of a broader variety of drugs. Thus, three categories of drug possession and three categories of sale required mandatory imprisonment carrying minimum ranges of one year to life (A-III), six years to life (A-II), or fifteen years to life (A-I). *See generally* Susan N. Herman, *Measuring Culpability by Measuring Drugs? Three Reasons to Re-evaluate the Rockefeller Drug Laws*, 63 Alb. L. Rev. 777, 788 (2000) (discussing the grading of drug sentences based on the dangerousness and quantity of the given drug).

19. *See infra* notes 28-29. *See generally* Michael Z. Letwin, *Report from the Front Line: The Bennett Plan, Street-Level Drug Enforcement in New York City, and the Legalization Debate*, 18 Hofstra L. Rev. 795, 821 (1990) (discussing how street-level drug enforcement tactics plus harsh predicate felon laws have increased the number of individuals in New York City who face mandatory incarceration for narcotics offenses); Lisa R. Nakdai, Note, *Are New York's Rockefeller Drug Laws Killing the Messenger for the Sake of the Message?*, 30 Hofstra L. Rev. 557, 560 (2001) (categorizing the Rockefeller drug laws as leading to increased drug felonies and largely contributing to the growth of New York's prison population).

20. *See infra* Part III.

percent of the new admissions to prison had served prior prison sentences; by 1993, the proportion had risen to 38 percent, and then to 39 percent in 1996. Thus, over time, the prison admissions increasingly were drawn from the ranks of previously incarcerated individuals. This recycling of prisoners was a driving force in maintaining high prison populations even in an era of sharply declining crime rates.

Table 2. Proportion of Prison Admissions by Prior Criminal Justice Involvement, 1985-96

Year	Prior Arrests	Prior Convictions	Prior Jail Sentences	Prior Prison Sentences
1985	.77	.67	.48	.26
1987	.77	.68	.51	.24
1990	.78	.68	.53	.26
1993	.80	.71	.55	.38
1996	.80	.72	.55	.39

Source: Source: New York State Division of Criminal Justice Services, 20% Sample of Prison Admissions over Five Waves, 1985-96

Several features of drug law and policy contributed to the disproportionate share of drug offenders among new prison admissions, illustrated in Figure 1. First, New York implemented a series of intensive street-level enforcement initiatives during this time, each focusing on aggressive buy-and-bust tactics to snare drug sellers and some buyers. One such initiative was Operation Pressure Point, launched in the mid-1980s,[21] another was the Tactical Narcotic Teams (TNT).[22] These and similar tactics, including a dramatic expansion of the police department's Narcotics Division, produced a nearly 50 percent increase in drug arrests from 1985-1990.[23] By 1997,

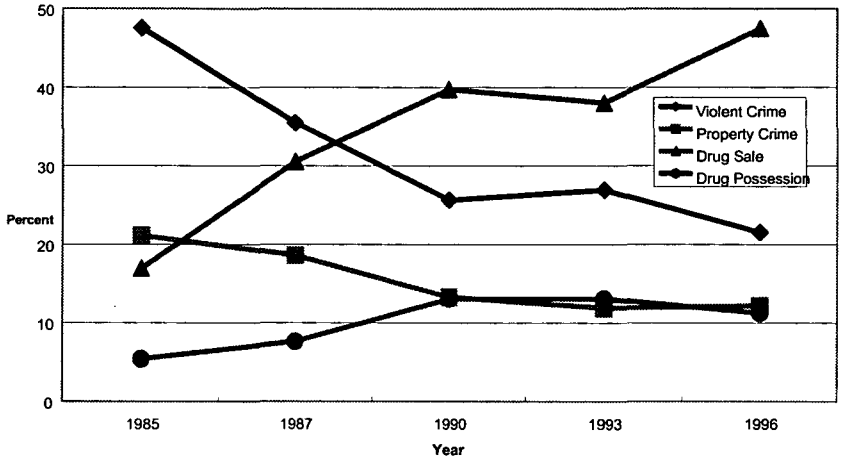
21. *See* Lynn Zimmer, Operation Pressure Point (1987).

22. *See generally* Michele Sviridoff et al., The Vera Institute for Justice, The Neighborhood Effects of Street-Level Drug Enforcement: Tactical Narcotics Teams in New York (1992) (researching the efforts and impact of the Tactical Narcotics Teams in Brooklyn, New York).

23. *See* Division of Criminal Justice Services, *supra* note 15 (demonstrating that felony and misdemeanor drug arrests in New York city increased from 55,906 in 1985 to 80,896 in 1990). *See generally* Letwin, *supra* note 19, at 803 n.56 (discussing the increase in citywide drug arrests between 1987 and 1990).

drug arrests had declined by 12.8 percent from the 1990 peak, but remained over 98 percent higher than the 1985 levels.[24] Second, programs such as Operation Condor, launched in 1999, sustained the high rates of drug arrests even as non-drug crime was falling sharply. Operation Condor used overtime pay to motivate police officers to use both buy-and-bust tactics and reverse stings to make tens of thousands of drug arrests across the City.[25] However, these

Figure 1. Percent of Prison Admissions by Offense Type New York City, 1985-1996[26]



strategies raised complaints from minority citizens about the racial disproportionality of drug law enforcement and the excessive use of a full criminal justice process (including the use of pretrial detention rather than summons) for low-level drug offenders, whose crimes were mostly non-violent and who posed a minimal threat to public safety.[27] Third, drug sentencing laws were again amended during

24. *See* Division of Criminal Justice Services, *supra* note 15; *see also* Fagan, *supra* note 17, at 1558 tbl.1.

25. William Rashbaum, *Police Suspend Extra Patrols for 10 Days*, N.Y. Times, Oct. 12, 2000, at B1.

26 New York State, Division of Criminal Justice Services, 20% Sample of Prison Admissions, various years.

27. *See, e.g.*, Christopher Ketcham, *Roach Motel*, *at* http://archive.salon.com /mwt/feature/2002/10/17/jail_time/index.html (Oct. 17, 2002); Civil Rights Bureau, Office of the Attorney Generan of the State of New York, The New York

this time to mandate longer sentences for possession of even small amounts of cocaine. Specifically, by 1988, the New York State Legislature had enacted broad changes in sentencing for many drug offenses, including mandatory incarceration and lengthened sentences for even small amounts of drugs.[28] Predicate felony laws also contributed to the rise in imprisonment by mandating prison sentences for felony offenders with any prior felony conviction.[29]

City Police Department's "Stop-and-Frisk" Practices: A Report to the People of the State of New York from the Office of the Attorney General (1999), *available at* http://www.oag.state.ny.us/press/reports/stop_frisk/stop_frisk.html (last visited Dec. 9, 2004).

28. *See* N.Y. Penal Law § 220 (McKinney 2000 & Supp. 2004). The comments to section 220 of New York's penal laws note that:

> With respect to cocaine, in 1988, "criminal possession of a controlled substance in the fifth degree" was amended to add the knowing and unlawful possession of "five hundred milligrams or more of cocaine" [L. 1988, c. 178; Penal Law § 220.05(5)]. The purpose of the amendment was to take into account the widely-used form of cocaine known as "crack." Crack is a concentrated form of cocaine which is exceptionally potent and addictive. The desired effect from the use of the crack may be obtained by the use of a substantially smaller quantity than would be required to obtain the same effect from the traditional form of cocaine. Thus, crack is generally sold to users in vials containing a small quantity of the drug. To the extent the distinction between misdemeanor and felony possession rests philosophically on a distinction between minor use, and either significant use or the likelihood that the possessor was selling or sharing the drug, the aggregate weight standard for cocaine was deemed unrealistically high as the threshold for liability for felony possession of crack. Thus, criminal possession of a controlled substance in the fifth degree, a class D felony, was amended to encompass the possession of 500 milligrams or more of cocaine.

In part because of the chemical properties of crack, and because of a growing belief that liability for possession of a controlled substance should be based solely on the quantity of the drug possessed, liability for the possession of the 500 milligrams of cocaine is premised on the "pure" or actual weight of the drug, not the aggregate weight of the substance containing the drug. The remaining crimes of criminal possession and sale of cocaine, however, utilize the aggregate standard [*see and compare* Penal Law §§ 220.06(5); 220.09(1); 220.16(12); 220.18(1); 220.21(1)].

N.Y. Penal Law § 220 practice cmt. (McKinney 2000).

29. *See* N.Y. Penal Law §§ 70.06, .10 (McKinney 2004) (authorizing increased sentencing for repeat felony offenders). Although these laws were enacted prior to the 1980s, their existence, in conjunction with increased drug

Coming on top of the already harsh, deterministic Rockefeller Drug Laws,[30] the predicate felony statutes in practice elevated the prison population by denying judicial discretion in sentencing repeat offenders, thus indexing the incarceration rate to the arrest rate. The effects of the predicate felony statutes landed most heavily on both drug offenders and violent offenders. The intersection of drug sentencing laws and drug enforcement policies, fueled by calls for ever tougher enforcement against drug dealers, was the engine behind New York's historic expansion of its prison population from 1985-1997.[31]

B. This Study

In this article, we assess the dynamics that contributed to the differential growth and concentration of incarceration within neighborhoods over time. Incarceration affects neighborhoods by both removing and returning individuals to the community. In some neighborhoods, it is not uncommon for certain residents to cycle between the jail or prison systems and their communities several times within a period of a few years. Their constant exit and return creates a churning effect that disrupts networks of social control, increasing the neighborhood's vulnerability to crime. Accordingly, we show the reciprocal effects of crime and incarceration over time, estimate the effects of factors such as drug enforcement that produce the supply of persons for incarceration, and estimate whether incarceration rates reflect or exceed what we might expect from the local crime rate. We also ask how drug enforcement interacts with neighborhood social ecology, in order to assess whether these dynamics are more pronounced under conditions of social and economic disadvantage.

We examine the impact of incarceration on crime and subsequent incarceration at two levels of aggregation: police precinct and neighborhood. Neighborhood is important in the social regulation

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enforcement and heightened penalties for drug crimes, contributed to the increase in incarceration during the 1980s. Prior felony convictions which resulted in a suspended sentence, a probation sentence, a sentence of conditional or unconditional discharge, or any other sentence, were considered eligible for predicate felony sentencing upon a second felony conviction.

30. *See* statutes cited *supra* note 18.

31. *See* Table 1 *supra* and Table 4, *infra*.

of both legal and illegal behavior,[32] and also because it is the locus at which criminogenic factors exert their influence on the everyday lives of neighborhood residents.[33] Police precinct also is relevant and important because the social organization of law enforcement functions at this level, policies are implemented and managed within precincts, and citizens interact with police assigned to specific precincts.

II. RESEARCH METHODS

We constructed a time series of incarceration and crime in New York City for the period from 1985 to 1996. We obtained a 20 percent sample of all individuals sentenced to prison and a 5 percent sample of all jail sentences for cases with dispositions in New York City for the years 1985, 1987, 1990, 1993, and 1996. For each of these years, this procedure yielded samples of 2,000 to 4,000 individuals who received prison sentences, and samples of 3,000 to 4,000 individuals who received jail sentences.

The addresses of persons admitted to prisons or jails were geo-coded into three hierarchical spatial units: police precinct, neighborhood, and census tract. There are 75 police precincts in New York City, 295 neighborhoods, and approximately 2200 census tracts. The neighborhood boundaries were drawn from a schema developed by Kenneth L. Jackson and John Manbeck, who defined neighborhoods based on interviews with local residents and physical examination of naturally occurring neighborhood boundaries.[34] These

32. *See generally* Robert J. Sampson et al., *Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy*, 277 Sci. 918 (1997) (showing that social interactions that promote close ties among neighbors also inhibit crimes within neighborhoods by encouraging citizens to actively sanction crimes that they observe, and cooperate with police); Sampson & Bartusch, *supra* note 10 (showing that when citizens view the law and legal actors as responsive, fair and legitimate, they are more likely to engage in social control activities that can reduce crime).

33. *See generally* Ralph B. Taylor & Jeanette Covington, *Neighborhood Changes in Ecology and Violence*, 26 Criminology 553 (1988) (showing that crime rates vary across small neighborhoods consisting of only a few blocks).

34. *See* Kenneth L. Jackson & John Manbeck, The Neighborhoods of Brooklyn (1998). Boundaries for each neighborhood are shown in each chapter. Computerized census boundary maps are also available at New York City, Department of City Planning, Population Division downloadable data, http://www.nyc.gov/html/neighbor/neigh.html (last visited Nov. 4, 2004). *See*

neighborhood units thus reflect small areas where local social and economic contexts are influential both on social control and crime opportunities. After eliminating areas with no population, such as parks and heavily industrialized areas, the final number of neighborhood units was 274.

Measures of crime were then constructed for both neighborhoods and precincts, to estimate the supply of individuals available for incarceration, and also to serve as contextual factors that moderate the relationship between neighborhood and incarceration. Measures of crime include felony arrests at the level of police precincts and injury assaults and homicides at both the precinct and neighborhood levels. Unfortunately, spatially disaggregated data on a broader range of felony crimes and arrests in smaller units such as neighborhoods were not available from the police department in New York City until 1994. Accordingly, we relied on homicide fatalities, obtained from the New York City Department of Health, to estimate overall crime rates in neighborhoods.

To address the specific and theoretically significant contribution of drug enforcement on incarceration, we constructed a time series on drug arrests as a measure of the intensity of drug enforcement. This time series was created by obtaining a 10 percent sample of drug arrests from 1985 to 1996 from the New York State Division of Criminal Justice Services.[35] Each arrest record was then geo-coded to geographical coordinates for assignment to census tract, neighborhood, and police precinct.

We also included in these models measures of the social and economic makeup of each precinct and neighborhood. This allowed us to estimate both the effects of incarceration on crime and then crime on incarceration, net of the effects of social and economic factors that may be associated with crime itself, and adjusted for the prior year's

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generally http://www.infoshare.org (last visited Nov. 4, 2004) (providing demographic profiles of areas that may be defined by various measures, including census tract, neighborhood, and police precinct).

35. *See* Jeffrey Fagan & Garth Davies, The Effects of Drug Enforcement on the Rise and Fall of Homicides in New York City, 1985–95 (2002) (final report on Grant No. 031675 to the Substance Abuse Policy Research Program, Robert Wood Johnson Foundation) [hereinafter Fagan, *Drug Enforcement*], *available at* http://www2.law.columbia.edu/fagan/Drug_Enforcement_and_Homicde/Drug_Enforcement_and_Homicide.pdf (last visited Dec. 9, 2004).

crime and incarceration rates. In other words, these models allowed us to test whether incarceration was a function of the supply of criminals, or if it was influenced by other factors unrelated to crime.

Table 3 summarizes the data sources and measures used to construct indicia of neighborhood social organization.[36] The dimensions of social organization and social ecology reflect an integration of several theories of crime between cities and within neighborhoods in cities.[37] We developed the social structural indicators of neighborhoods from 1990 census data, since 1990 is the mid-point of the time series for analysis of incarceration trends, and treat these factors as fixed effects when analyzing incarceration trends and effects. Variables were computed at the census tract level, and then aggregated or recomputed for both the neighborhood and police precinct boundaries. We then used principle components factor analyses to reduce multiple indicators of neighborhoods to a set of predictors consistent with theory.[38]

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36. Additional information on data sources and measures is available from the authors at http://www2.law.columbia.edu/fagan/papers/CHRLR_Neighborhood_Incarceration/Tables_and_Figures.doc (last visited Dec. 1, 2004).

37. *See, e.g.*, Eric Baumer, *Poverty, Crack, and Crime: A Cross-City Analysis*, 31 J. Res. in Crime & Delinq. 311 (1994); Graham C. Ousey & Matthew R. Lee, *Examining the Conditional Nature of the Illicit Drug Market-Homicide Relationship*, 40 Criminology 73 (2002). *See generally* Robert J. Bursik, Jr. & Harold G. Grasmick, Neighborhoods and Crime: The Dimensions of Effective Community Control (1993) (constructing and validating a theory of social control that integrates public, private, and parochial influences on social behavior and social development of adolescents during their peak years of risk for criminal activity); Lauren J. Krivo & Ruth D. Peterson, *The Structural Context of Homicide: Accounting for Racial Differences in Process*, 65 Am. Soc. Rev. 547 (2000) (showing that homicide rates are highest in cities where the concentration of economic deprivation and social disadvantage are most acute); Robert J. Sampson et al., *Neighborhoods and Violent Crime*, *supra* note 32; Robert J. Sampson & William Julius Wilson, *Toward a Theory of Race, Crime and Urban Inequality*, *in* Crime and Inequality 37 (John Hagan & Ruth D. Peterson eds., 1995) (showing that neighborhoods' capacity for social control is influenced by their political economy, which in turn reflects racially disproportionate patterns of economic and social resources); Ralph B. Taylor & Jeanette Covington, *Neighborhood Changes in Ecology and Violence*, 26 Criminology 553 (1988) (showing that poor neighborhoods have higher crime rates when they are adjacent to rapidly developing and improving neighborhoods).

38. The factor scores, means, standard deviations, and zero-order correlation matrices for both neighborhoods and precincts are available from the authors at http://www2.law.columbia.edu/fagan/papers/CHRLR_Neighborhood_Incarceration/Tables_and_Figures.doc (last visited Dec. 1, 2004).

Table 3. Data Domains and Sources

Variable	Data Source	Description
Jail and Prison Admissions	New York State Division of Criminal Justice Services, TRENDS file	5% Sample of jail admissions, 20% sample of prison admissions, five periods from 1985-96. Defendant residential address geocoded to census tract, neighborhood and police precinct
Drug Arrests	New York State Division of Criminal Justice Services, TRENDS file	10% Sample of felony drug arrestees from 1985-96, charged with any of five drug charges: sale or possession of controlled substances, sale or possession of marijuana, or possession of drug paraphernalia. Defendant residential address geocoded to census tract, neighborhood and police precinct
Homicide Victimization Rate	New York City Department of Health, Vital Statistics	Case level data from Vital Statistics records on homicide victimizations from 1985-96. Place of residence recorded, and geocoded to census tract, police precinct, or neighborhood.
Felony Complaint Rates	New York City Police Department, Office of Management, Analysis and Planning	UCR felony complaints by type of crime by precinct, 1985-97
Population, Housing and Economic Variables	New York City Department of City Planning	New York City Department of City Planning Population Division downloadable data, http://www.nyc.gov/html/dcp/html/census/popdiv.html; Also, http://www.infoshare.org, New York City files
Population and Social Characteristics	1990 Census Data	U.S. Bureau of the Census, Summery Tape File 3A.

Finally, endogeneity is a common issue in panel data, as a reflection of the propensities of neighborhoods or individuals that contribute to their differences in the measures of interest at the outset of the time series. Endogeneity reflects the fact that many processes, such as crime and punishment, are the result of reciprocal, mutual, or reverse causation over time.[39] Both neighborhoods and precincts varied at the outset of the study period in their rates of incarceration and crime, and the trajectories of neighborhoods were obviously influenced by their starting points. Failing to account for these propensities would bias estimates of the effects of incarceration over time. Accordingly, an initial analytic step was to develop parameters that would account for these differences and to control for such differences in explaining trajectories of incarceration over time. We used Ordinary Least Squares (OLS) regression models on the baseline (1985) panel to estimate the incarceration propensities of neighborhoods and precincts based on their crime and social structural indicators, and included these propensities in later models of the effects of incarceration over time.[40] We used the standardized residuals from these models as the measure of incarceration propensity, and included the residuals in the subsequent analyses. We also included interactions of each predictor by time to further specify the role of time in the series.[41]

Next, we pooled the data over time and across spatial units to establish neighborhood-year and precinct-year data points. Pooling the data for each aggregation unit across years has the advantage of increasing the sample size for each model to N(T-1) cases, where N represents the total number of neighborhoods (or precincts) and T represents the number of years of data in the model. With N=75 police precincts, pooling the data over years greatly increases the sample size. This method assumes, however, that the variance over

39. *See* John J. Donohue, *Understanding the Time Path of Crime*, 88 J. Crim. L. & Criminology 1423 (1998); Edward Glaeser, *An Overview of Crime and Punishment*, *in* The Economics of Civil Wars, Crime and Violence, The World Bank Group, *at* http://www.worldbank.org/research/conflict/papers/crimex1.htm (last visited Sept. 27, 2004).

40. For a description of the relevant regression models, *see* Eric Hanushek et al., Statistical Methods for Social Scientists (1977); William Greene, Econometric Analysis (5th ed. 2003).

41. This data is available from the authors at http://www2.law.columbia.edu/fagan/papers/CHRLR_Neighbors_Incarceration/Tables_and_Figures.doc (last visited Dec. 1, 2004).

the pool, in this case across waves, is constant for the incarceration rates in each neighborhood. This is likely not the case here. In order to account for variation over time, we treat time as both a fixed effect for each year to represent the variance unique to each cross-section, or year, and also as a random effect to estimate specific year-by-year changes. We used an autoregressive covariance structure to account for the yearly serial correlation in both crime and incarceration.

We estimated multivariate models to assess the effects of incarceration on crime and subsequent incarceration over a twelve-year period beginning in 1985. To determine whether there is a statistically significant trend in incarceration, after controlling for crime, arrests, and neighborhood social structure, we estimated models of the number of incarceration sentences in each neighborhood or precinct using Poisson regression models. Poisson regressions generally are appropriate for identifying the number of occurrences of a discrete event within a specific observation period.[42] These models try to predict why these events occur in some locales or to some persons and not others, and how often they occur if they occur at least once. These models offer a better understanding of how crime contributed to the stability or growth in incarceration. If incarceration rises and falls in a metric animated by crime rates, we would expect that incarceration rates would be predicted by crime rates, net of arrests. That is, arrests should rise and fall with crime, and the effects of arrest on incarceration after controlling for crime rates would not be statistically significant. If arrests predict incarceration after controlling for crime, we might conclude that enforcement at some tipping point becomes an endogenous process that intensifies punishment beyond what we would predict from the crime rate. In this dynamic, law enforcement produces the supply of persons for incarceration in a process independent of crime. Incarceration thus is grown from within, not imposed from the outside.

42. *See, e.g.*, William Greene, Econometric Analysis (5th ed. 2000); Peter Kennedy, A Guide to Econometrics (1995).

III. RESULTS

A. The Growth of Incarceration and Crime

Figures 2a-2c and 3a-3c, printed in the appendix to this article, show the growth of incarceration over time for police precincts and neighborhoods.[43] Both sets of maps show that incarceration rates spread outward from a small number of precincts or neighborhoods from 1985 to 1990. The rates also intensified in the areas with the highest incarceration rates five years earlier. By 1996, when crime rates had generally declined across neighborhoods and police precincts in the City, incarceration remained very high in most of the areas where it was highest in 1990, and declined only slightly in a few others. There were virtually no places that had high incarceration rates in 1990 that became low incarceration areas by 1996. In some areas, such as southeastern Queens and the Washington Heights area in the northwest part of Manhattan, incarceration rates rose during this period of general crime decline, even as crime rates in these areas fell. Overall, both sets of figures show the stability of incarceration from 1990 to 1996, at the same time that felony crimes had declined by nearly 50%.

B. Reciprocal Effects of Crime and Incarceration

A story describing the reciprocal effects of crime and incarceration can be told from Tables 5 through 8. The first two analyses estimate the effects of crime on incarceration over time, controlling for neighborhood social structure and drug enforcement. We included models predicting both jail and prison rates, and included jail incarcerations (lagged by one year) as an additional predictor of prison incarceration over time. As mentioned in the methods section, each model also includes the residuals, or the area's propensity for incarceration, at the outset of the time series. The second two models estimate the effects of incarceration on crime, controlling for both social structure and police enforcement.

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43. Figures 2 and 3 are also available from the authors in color format and arranged for comparative viewing. *See* http://www2.law.columbia.edu/fagan/papers/CHRLR_Neighborhood_Incarceration/Tables_and_Figures.doc (last visited Dec. 1, 2004).

Table 5. Poisson Regression of Incarceration by Precinct Crime and Social Structure, New York City, 1985-1996

	Jail				Prison			
	Estimate	t	p(t)	Exp(B)	Estimate	t	p(t)	Exp(B)
Intercept	-13.798	-2.29	a	0.000	-13.840	-1.97		0.000
Time	0.068	1.03		1.070	0.0538	0.70		1.055
Residual (1985)	1.703	3.61		5.492	0.760	2.06	c	2.139
Jail One Year Lag					-0.001	-0.98		0.999
(Log) Felony Complaint Rate*	2.185	1.72		4.548	2.749	1.95	c	6.723
(Log) Homicide Rate	-3.751	-0.70		0.024	0.594	0.12		1.811
(Log) Drug Arrest Rate*	1.225	1.03		3.404	-1.967	-1.74		0.140
Poverty/Inequality	0.2891	0.12		1.335	-1.940	-0.85		0.144
Segregation	0.303	0.39		1.353	1.392	1.98	c	4.024
Social Control I	0.660	0.60		1.935	3.676	3.63	c	39.467
Housing Structure	-0.251	-0.18		0.778	-1.350	-1.03		0.259
Social Control II	-0.315	-0.40		0.730	-0.836	-1.07		0.434
Immigration/Cultural Isolation	-0.047	-0.06		0.954	-0.118	-0.16		0.890
Human Capital II	0.824	0.52		2.279	-0.771	-0.49		0.463
Interactions with Time								
Residual (1985)	-0.017	-3.24	a	0.983	-0.008	-1.91		0.992
Jail One Year Lag					0.1E4	1.09		1.000
(Log) Felony Complaint Rate*	-0.021	-1.48		0.979	-0.026	-1.70		0.974
(Log) Homicide Rate	0.046	0.79		1.048	-0.004	-0.08		0.996
(Log) Drug Arrest Rate*	-0.008	-0.60		0.992	0.061	2.10	c	1.027
Poverty/Inequality	0.001	0.03		1.000	0.025	1.02		1.026
Segregation	-0.002	-0.21		0.998	-0.013	-1.65		0.987
Social Control I	-0.009	-0.75		0.991	-0.037	-3.37	a	0.964
Housing Structure	0.004	0.28		1.004	0.013	0.89		1.013
Social Control II	0.003	0.37		1.003	0.009	1.02		1.009
Immigration/Cultural Isolation	-0.002	-0.19		0.998	0.001	0.16		1.001
Human Capital II	-0.008	-0.45		0.992	0.010	0.59		1.010
2 Log Likelihood		256.6				261.5		
N=296								

a = p<001, b = p<.01, c = p<.05
* per 1000 population 15 and above

In these four models, we test not only for differences between precincts or neighborhoods over time, but also for differences in trajectories of incarceration or crime within these areas over time. The latter is the central focus of the analysis: whether incarceration grows or slows over time, and what factors predict those changes. We identify these effects by examining the parameter estimates for the interactions of time with each predictor, which are shown in the lower half of each table. Accordingly, we estimate whether the growth in incarceration exceeds what would be expected from the "supply" of offenders, or whether there are other factors that are contributing to incarceration dynamics. That is, a significant interaction of time with incarceration would indicate a meaningful effect of incarceration on crime rates; the direction of the effect is determined from the sign of the coefficient,[44] and the size of the effect is estimated from the exponentiated coefficient. Similarly, in Tables 7 and 8, we estimate the extent to which incarceration contributes over time to increases or declines in crime.

Social and Legal Sources of Incarceration

Precincts. Table 5 shows the results for models of precinct-level effects. Jail and prison share no predictors, neither in differences between precincts (the upper portion of each table), or in changes over time within precincts (the lower portion). Also, jail incarceration rates do not predict prison incarcerations.

The jail models show that neither crime nor social structure predicts jail admission rates in police precincts. The absence of significant predictors might suggest that the use of jail may be a random process that is unaffected by crime, social structure, or law enforcement. Jail might also be explained by factors other than those estimated in these models, unmeasured variables such as rates of "disorder" crimes.

In contrast, prison admissions are predicted by both crime and social structure. The felony crime rates predict variation between precincts in prison admission rates, as do two social structural factors: segregation and the first of the two social control factors. It is no surprise that prison admission rates are higher in police precincts

44. For example, a negative sign for a regression coefficient means that an increase in the value of the variable predicts a lower crime rate, and a positive coefficient means that an increase in the value of the variable would predict an increase in crime.

Table 6. Poisson Regression of Incarceration by Neighborhood Crime and Social Structure, New York City, 1985-1996

	Jail				Prison			
	Estimate	t	p(t)	Exp(B)	Estimate	t	p(t)	Exp(B)
Intercept	-4.014	-1.26		0.18	-1.329	-0.34		0.265
Time	-0.025	-0.72		0.975	-0.066	-1.56		0.936
Residual (1985)	2.445	4..15	a	11.524	1.674	3.60	a	5.332
Jail Lagged One Year					-0.002	-2.29	c	0.998
(Log) Homicide Rate	-4.589	-1.12		0.010	1.977	0.56		7.221
(Log) Drug Arrest Rate*	1.314	1.46		3.721	-2.151	-2.85	b	0.116
Poverty/Inequality	3.531	2.00	c	34.144	0.420	0.28		1.522
Social Control I	-0.570	-0.65		0.566	1.526	1.95	c	4.601
Segregation	0.153	0.17		1.166	2.101	2.85	b	8.174
Housing Structure	-0.929	-0.67		0.395	-1.078	-0.99		0.340
Social Control II	-0.163	-0.47		0.850	-0.148	-0.42		0.862
Immigration/Cultural Isolation	0.362	0.63		1.436	-0.608	-1.28		0.545
Human Capital II	2.225	1.80		9.253	0.0823	0.08		1.085
Interactions with Time								
Residual (1985)	-0.024	-3.78	a	0.976	-0.0168	-3.31	a	0.983
Jail Lagged One Year					0.2*E*4	2.53	b	1.000
(Log)Homicide Rate	0.052	1.17		1.053	-0.021	-0.54		0.979
(Log) Drug Arrest Rate*	-0.010	-0.99		0.990	0.028	3.33	a	1.028
Poverty/Inequality	-0.031	-1.59		0.970	0.1*E*3	0.01		1.000
Social Control I	0.004	0.47		1.005	-0.014	-1.66	c	0.986
Segregation	0.001	0.12		1.001	-0.019	-2.34		0.981
Housing Structure	0.011	0.72		1.011	0.010	0.83		1.010
Social Control II	0.002	0.45		1.001	0.001	0.23		1.001
Immigration/Cultural Isolation	-0.006	-0.92		0.994	0.006	1.24		1.006
Human Capital II	-0.021	-1.56		0.979	0.013	0.11		1.001
2 Log Likelihood	2807.0				2333.0			
N=1096								

a = p<001, b = p<.01, c = p<.05
* per 1000 population 15 and above

that have higher crime rates and are more racially segregated, and also in areas where social control (of children and teenagers) is weaker.

However, changes over time in prison admissions within precincts suggest that incarceration is unaffected by the crime rate, and instead is influenced by drug enforcement. The drug arrest rate is a significant predictor of incarceration over time, contributing to prison admissions beyond what would be predicted by the crime rate alone. Neither the crime rate, the homicide rate, nor the jail admission rate predicts the increase over time in incarceration within precincts.

Neighborhoods. The results in Table 6 for the neighborhood models show similar but not identical results. Variations between neighborhoods in jail admissions are predicted only by poverty and inequality—poorer neighborhoods have higher jail admission rates. None of the predictors explain changes in jail admission rates over time.

For neighborhoods, prison admissions are predicted by the jail admission rate and the drug arrest rate. Unlike the precinct analysis, here we find that the jail admission rate is tied to the imprisonment rate at this spatially smaller and more socially homogeneous unit of resolution. In this model, the drug arrest rate predicts lower incarceration rates. Neighborhoods with lower drug arrest rates have higher imprisonment rates, controlling for differences in their rates at the outset of the time series. This finding may be an artifact of measurement limitations or omitted variables, especially the absence in this model of a measure of the crime rate or measures of other types of arrest.[45]

Once again, we find that drug arrests affect the trajectory of prison admissions within neighborhoods, and again this relationship is independent of the crime (homicide) rate. Drug arrests have a significant positive effect on prison admissions, contributing to new admissions even as the homicide rate within neighborhoods has fallen over time. Here, the jail admission rate also contributes to the prison admission rate. Since jail is a proxy for aggressive misdemeanor enforcement,[46] jail admissions in this context may

45. Recall that for neighborhoods, disaggregated crime complaint rates were not available until 1994.

46. Robert J. Sampson & Jacqueline Cohen, *Deterrent Effects of the Police on*

serve as a proxy for overall law enforcement, consistent with the City's strategy of order maintenance policing.[47]

Summary. These models converge to tell a story of the persistent application of drug enforcement to produce consistently elevated rates of prison admissions, well above what might be expected given the overall decline in crime and homicide since 1993. Neighborhoods that are more racially segregated and that have weaker forms of social control are more likely to have higher incarceration rates over time, and are also the places where drug enforcement and order maintenance policing strategies are most likely to be aggressively pursued.[48] The convergence of findings in these two analyses at different units of social and spatial resolution lends confidence to these findings.

Effects of Incarceration on Crime

Precincts. Here we examine the influence of incarceration rates on crime. Table 7 shows that both jail and prison admission rates are higher in precincts with more crime, even when lagged off by one period. This is not surprising, since enforcement is likely to be targeted in areas where crime rates generally are elevated. Crime rates also are higher in precincts with lower rates of drug arrests. Over time, we observe two contradictory trends. First, in both the jail and prison models, higher incarceration predicts lower crime rates.

Crime: A Replication and Theoretical Extension, 22 Law & Soc'y Rev. 163, 169 (1988).

47. *See* George Kelling & Susan Cole, Fixing Broken Windows (1996); Eli Silverman, NYPD Battles Crime: Innovative Strategies in Policing 153–54 (1999); Jeffrey Fagan & Garth Davies, *Street Stops and Broken Windows: Terry, Race and Disorder in New York City*, 28 Fordham Urb. L.J. 457 (2000) [hereinafter Fagan, *Street Stops*]. *See generally* Judith Greene, *Zero-Tolerance: A Case Study of Police Policies and Practices in New York City*, 45 Crime & Delinq. 171, 173 (1999) (noting that Bratton "introduced new management tools, techniques, and technology at lightning speed and moved quickly to decentralize authority and to wrest decision-making power away from headquarters brass and move it out to the precinct and borough commands. He broke down a maze of bureaucratic barriers—pushing, prodding, and (when necessary) replacing personnel. He was able to integrate many of the police functions previously held by specialized units to empower patrol officers to move directly to address drug and gun crimes in the neighborhoods they serve.").

48. Jeffrey Fagan & Garth Davies, *Policing Guns: Order Maintenance and Crime Control in New York*, *in* Guns, Crime, and Punishment in America 191, 207–10 (Bernard Harcourt ed., 2003); Fagan, *Street Stops*, *supra* note 47, at 461-63; Fagan & Davies, *Drug Enforcement*, *supra* note 35, at 37–38.

Table 7. Poisson Regression of Non-Drug Felony Complaints by Jail and Prison Admissions Within Police Precincts, New York City, 1985-1996

	Jail				Prison			
	Estimate	t	p(t)	Exp(B)	Estimate	t	p(t)	Exp(B)
Intercept	5.023	1.89		151.8	5.091	2.28		162
Time	-0.084	-2.90	b	0.919	-0.085	-3.46	a	0.919
Residual (1985)	0.450	3.07	b	1.568	0.410	2.75	b	1.506
(Log) Jail Rate*	1.516	2.72	b	4.553				
(Log) Prison Rate*					1.613	2.13	c	3.059
(Log) Homicide Rate	-1.302	-0.54		0.406	-0.078	-0.03		0.925
(Log) Drug Arrest Rate*	-1.713	-2.91	b	0.180	-1.330	-2.28	c	0.364
Poverty/Inequality	1.398	1.85		4.047	1.342	1.74		3.828
Segregation	-0.319	-1.19		0.727	-1.306	-1.14		0.737
Social Control I	-0.356	-0.81		0.701	-1.052	-2.57	b	0.349
Housing Structure	0.690	1.47		1.993	1.183	2.55	b	3.263
Social Control II	-0.140	-0.55		0.869	-0.105	-0.41		0.901
Immigration/Cultural Isolation	-0.062	-0.21		0.940	-0.321	-1.15		0.725
Human Capital II	0.741	1.37		2.098	0.645	1.20		1.915
Interactions with Time								
Residual (1985)	-0.002	-120		0.998	-0.001	-0.77		0.999
(Log) Jail Rate*	-0.161	2.62	b	0.984				
(Log) Prison Rate*					-0.017	-2.00	c	0.983
(Log) Homicide Rate	0.015	0.59		1.016	0.002	0.07		1.002
(Log) Drug Arrest Rate*	0.019	2.90	b	1.019	0.014	2.25	c	1.015
Poverty/Inequality	-0.018	-1.12	c	0.983	-0.017	-2.01	c	0.983
Social Control I	0.003	0.53		1.003	0.010	2.20	c	1.010
Segregation	0.004	1.31		1.004	0.004	1.27		1.004
Housing Structure	-0.004	-0.81		0.996	-0.009	-1.85		0.991
Social Control II	-0.001	-0.31		0.999	-0.001	-0.44		0.999
Immigration/Cultural Isolation	-0.001	-0.32		0.999	0.002	0.57		1.002
Human Capital II	-0.010	-1.65		0.990	-0.009	-1.48		0.991
2 Log Likelihood		-235.3				-257.3		
N=296								

a = p<001, b = p<.01, c = p<.05
* per 1000 population 15 and above

Table 8. Poisson Regression of Non-Drug Felony Complaints by Jail and Prison Admissions Within Neighborhoods, New York City, 1985-1996

	Jail				Prison			
	Estimate	t	p(t)	Exp(B)	Estimate	t	p(t)	Exp(B)
Intercept	-1.579	-0.39		0.206	-1.430	-.035		0.239
Time	-0.084	-1.89		0.920	-0.085	-1.89		0.920
Residual (1985)	0.137	0.26		1.147	0.103	0.19		1.108
Jail Rate*	2.134	0.83		8.448				
Prison Rate*					4.332	1.10		76.090
(Log) Drug Arrest Rate*	-0.876	-0.31		0.417	-0.979	-0.33		0.376
Poverty/Inequality	0.232	0.10		1.261	0.657	0.28		1.929
Social Control I	1.084	1.04		2.956	0.696	0.66		2.006
Segregation	-0.717	-0.67		0.488	-0.814	-0.77		0.443
Housing Structure	1.460	0.92		4.306	1.568	0.98		4.797
Social Control II	0.621	1.54		1.860	0.641	1.59		1.899
Immigration/Cultural Isolation	-0.577	-0.84		0.562	-0.575	-0.86		0.563
Human Capital II	0.925	0.56		2.523	1.249	0.77		3.486
Interactions with Time								
Residual (1985)	-0.2*E*4	-0.00		1.000	0.4*E*3	0.07		1.000
Jail Rate*	-0.020	-0.71		0.980				
Prison Rate*					-0.045	-1.03		0.956
(Log) Drug Arrest Rate*	0.012	0.37		1.012	0.013	0.40		1.013
Poverty/Inequality	-0.4*E*3	-0.01		1.000	-0.004	-0.17		0.996
Social Control I	-0.007	-0.62		0.993	-0.003	-0.28		0.997
Segregation	0.012	0.99		1.012	0.013	1.10		1.013
Housing Structure	-0.017	-0.96		0.983	-0.018	-1.01		0.982
Social Control II	-0.006	-1.44		0.994	-0.007	-1.48		0.994
Immigration/Cultural Isolation	0.006	0.77		1.006	0.006	0.77		1.006
Human Capital II	-0.010	-0.49		0.991	-0.012	-0.68		0.988
2 Log Likelihood		2896.3				2887.3		
N=1096								

a = p<001, b = p<.01, c = p<.05
* per 1000 population 15 and above

Whether incarceration serves a deterrent or incapacitative effect, we observe that crime is lower over time within precincts as the incarceration admission rate grows. Second, the crime rate seems to increase over time within precincts as the rate of drug arrests increases, in separate models with jail and prison admissions as the measure of incarceration effects. The conjunction of higher drug arrests and lower incarceration rates to produce higher crime rates suggests the perverse effects of policies that confound drug crimes with other types of felony crimes. If incarceration is having a salutary effect on crime in precincts, drug enforcement is exerting a quite opposite and unhealthy effect, perhaps by diverting police attention from felony crimes such as robbery or assault.

Neighborhoods. We find no significant predictors of homicide victimization rates within neighborhoods. Recall that the crime measure for neighborhoods is limited to homicide victimizations. Accordingly, we are reluctant to conclude that these non-findings are accurate, but are more likely a casualty of data limitations.

C. Summary: The Endogeneity of Incarceration

Bursik and Grasmick's systemic theory of neighborhood and crime regards social control as essential to regulating crime rates.[49] They carefully structured a dynamic theory of social control, incorporating social ties and interactions among neighborhood residents.[50] They view social control as the product of social interactions among area residents, interactions that communicate and enforce their collective social norms. In this framework, social control is exerted not only by police and local residents, but also by temporary residents including those entering neighborhoods for work or visits. The latter group shares liability for their community, though theirs is far more limited.

Bursik and Grasmick showed the interdependence of social structure and social control, illustrating how the strains of everyday life could compromise the participation of local residents in social regulation.[51] Like many other social control theorists, however, Bursik and Grasmick never envisioned that incarceration would be

49. Bursik & Grasmick, *supra* note 37, at 12–18.

50. *Id.* at 16–18.

51. *Id.*

an endogenous factor in social control, a factor that actually compromised rather than strengthened the ability of neighbors to form social ties and regulate social norms. Other commentators, however, have done so, both empirically and theoretically.[52] For example, Morenoff, Sampson, and Raudenbush show that social organization and social control are spatially embedded processes that influence neighborhood-level variations in violence.[53] Thus, rising and concentrated rates of incarceration not only become a part of the fabric of poor communities, already susceptible to crime, but they compromise the limited forms of social control that poor communities can mount and enhance their vulnerability to crime. These dynamics are discussed below.

IV. CONCLUSION: THE RECIPROCITY OF CRIME, LAW AND INCARCERATION

The racial-spatial concentration of incarceration in disadvantaged urban neighborhoods in New York accrued rapidly in the late 1980s, and was sustained through the decade of the 1990s even as crime rates fell by one half or more. As local incarceration rates increased and concentrated spatially, incarceration and crime became embedded in the social organization of neighborhoods like Cesar's, the Bronx neighborhood described in *Random Family*.[54] Thus, the persistence and concentration of incarceration seem to be products not of crime, but of the internalization of incarceration in the ecology of many neighborhoods, and the endogeneity of drug enforcement in the social organization and political economy of the City's legal institutions. The effects of concentrated imprisonment can be observed in the everyday lives of those directly affected—the children and relatives of inmates, for example—but also vicariously in the lives of their neighbors who intersect with the families of inmates and parolees. When high incarceration rates are internalized into the ecology of small, homogeneous neighborhoods, it adversely affects their economic fortunes, political participation, family life, and normative orientation.

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52. *See, e.g.*, Rose & Clear, *supra* note 5.

53. Jeffrey D. Morenoff et al., *Neighborhood Equality, Collective Efficacy, and the Spatial Dynamics of Urban Violence*, 39 Criminology 517 (2001).

54. *See* LeBlanc, *supra* note 2.

The spatial concentration of incarceration has grown more acute in neighborhoods that already were socially and economically disadvantaged, areas where non-whites were the dominant population group. Analyses of incarceration trends in New York City by neighborhood and police precinct suggest that the risks of going to jail or prison seem to grow over time for persons living in these areas, and their ability to address the social and economic dimensions that contribute to incarceration diminishes as the size of the ex-inmate population grows. Changes in law that narrowed judicial discretion and structured sentencing toward mandated imprisonment ensured that even a drastically smaller crime rate would produce a stable flow of prison admissions.

The spatial concentration of incarceration distorts neighborhood social ecology and attenuates the neighborhood's economic fortunes. The initial shock of spiking incarceration rates transforms over time into an endogenous or internal neighborhood characteristic that endures in defiance of a declining supply of offenders. In fact, incarceration seems to provide a steady supply of offenders for more incarceration through four mechanisms. The interactions of these four mechanisms produce a multiplier effect that further embeds incarceration into neighborhood life.

First, higher rates of incarceration invite heightened levels of surveillance and policing, making detection of wrongdoing more likely. By transforming neighborhoods into the subjects of enforcement, the likelihood of incarcerative punishment increases as a result of living in a stigmatized place.[55] Second, the declining economic fortunes of residents further concentrate economic disadvantage within persons and discourages local businesses from locating in these areas. Beyond material deficits, the absence of local economic activity deprives these areas of everyday economic interactions that help regulate social interactions. Third, social control is not sustainable when kinship networks are strained materially to support children whose fathers are incarcerated, and when marriage rates decline due to the absence of marriageable males. Social control is compromised, and prospects for marriage or

55. Bernard E. Harcourt, Illusion of Order: The False Promise of Broken Windows Policing 88-89 (2001) (showing how elevated arrest rates are interpreted by police and government officials as indicia of higher crime rates, inviting more police surveillance that reifies the perception of higher crime rates).

earning a living wage diminish, as neighborhood incarceration rates rise.

Voter disenfranchisement of convicted felons creates a fourth dynamic that adversely affects the political economy of neighborhoods with high incarceration rates.[56] The inability to influence political processes weakens leverage and access to important services that can moderate the risks of crime, from educational resources to trash removal and recreation. It is no secret that incarceration policy is embedded in a political process that benefits both corrections professionals and lawmakers.[57] While lawmakers derive political benefits from sustaining high rates of incarceration, the accumulation of disenfranchised voters in their districts defangs putative re-election challenges. In this way, disenfranchisement weakens political leverage over both state law and local policies that might moderate the practices that intensify incarceration patterns. These burdens weigh most heavily in minority neighborhoods, where rates of excess incarceration are highest.[58] Disenfranchisement further deprives residents of opportunities to engage in law through activities such as jury duty. Citizens excluded from such basic elements of democracy as voting and jury service may generalize their resentment toward resistance to more common, everyday citizen-law interactions such as cooperation in police investigations.[59] Finally, the racial-spatial concentration of incarceration intensifies racial residential segregation, depressing real estate values and frustrating residents' efforts to build capital through home ownership.

The social exclusion of America's correctional population poses a challenge to democracy that demands political and social

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56. *See* Thomas J. Miles, *Felon Disenfranchisement and Voter Turnout*, 33 J. Legal Stud. 85 (2004) (showing that the large numbers of disenfranchised African-American males biases estimates of their voting participation); *see also* Christopher Uggen & Jeff Manza, *Democratic Contraction? The Political Consequences of Felon Disenfranchisement in the United States*, 67 Am. Soc. Rev. 777, 794-96 (2002) (demonstrating that felon disenfranchisement has altered the outcomes of past U.S. Senate and presidential elections).

57. *See, e.g.*, Marc Mauer, Race to Incarcerate (1999).

58. *See, e.g.*, Ryan S. King & Marc Maurer, The Vanishing Black Electorate: Felony Disenfranchisement in Atlanta, Georgia (2004), *available at* http://www.sentencingproject.org/pdfs/atlanta-report.pdf (last visited Nov. 30, 2004).

59. Fagan & Meares, *supra* note 10.

attention. There has been no civic debate on the political and social consequences of the production of incarceration, nor has there been reflection on the laws and policies that sustain incarceration over time and detach it from the social problems it was meant to address. With nearly two million Americans under criminal justice supervision, such a debate is long overdue and critical to the moral and political health of the nation.

APPENDIX

Figure 2a. Incarceration Rates by Police Precinct New York City, 1985

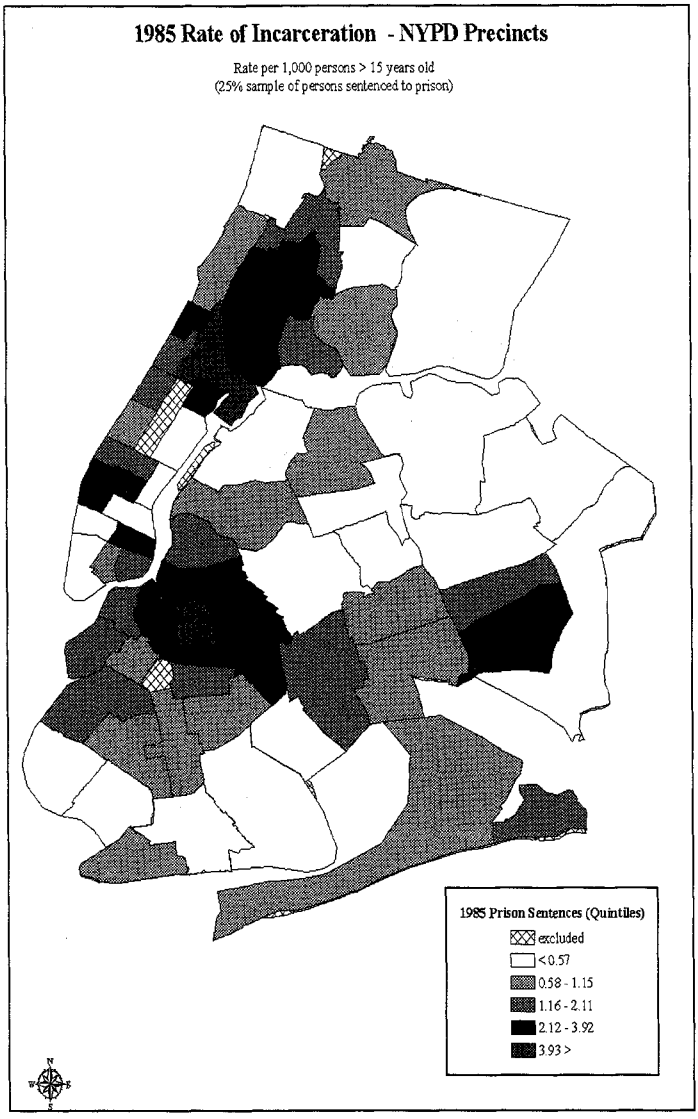

Figure 2b. Incarceration Rates by Police Precinct New York City, 1990

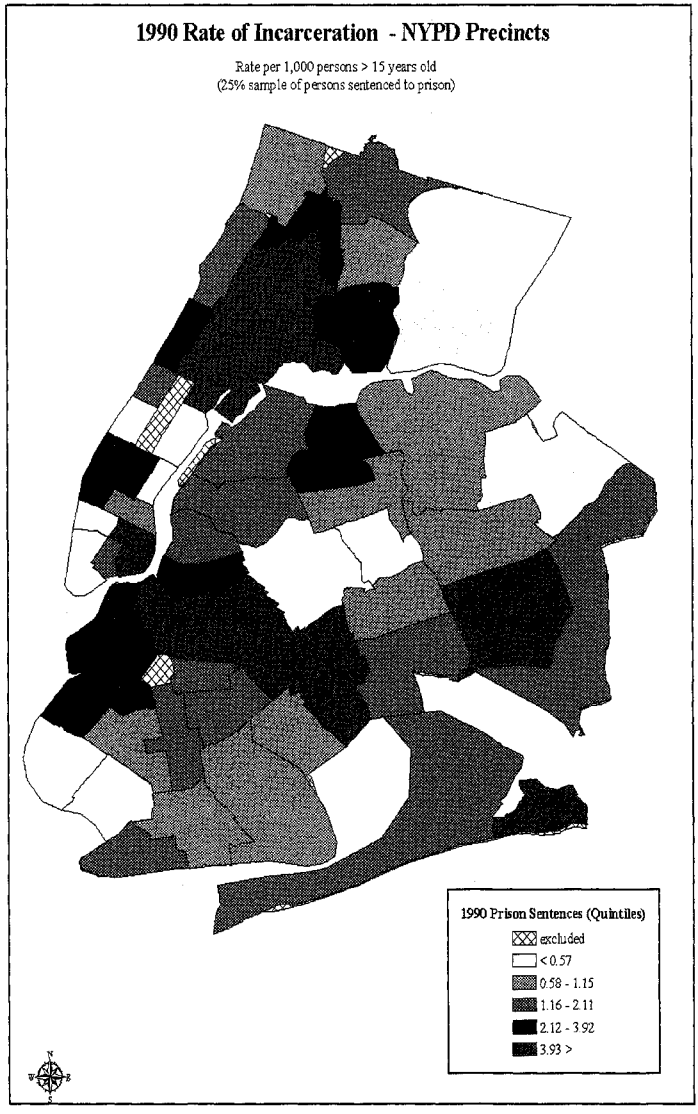

Figure 2c. Incarceration Rates by Police Precinct New York City, 1996

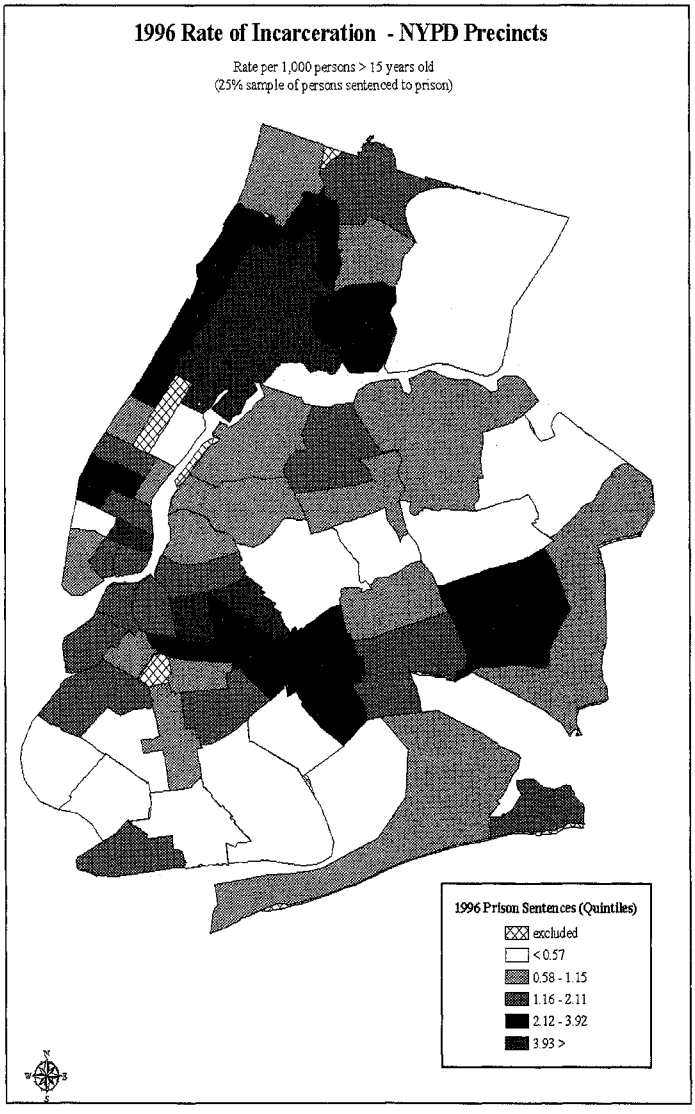

Figure 3a. Incarceration Rates by Neighborhood New York City, 1985

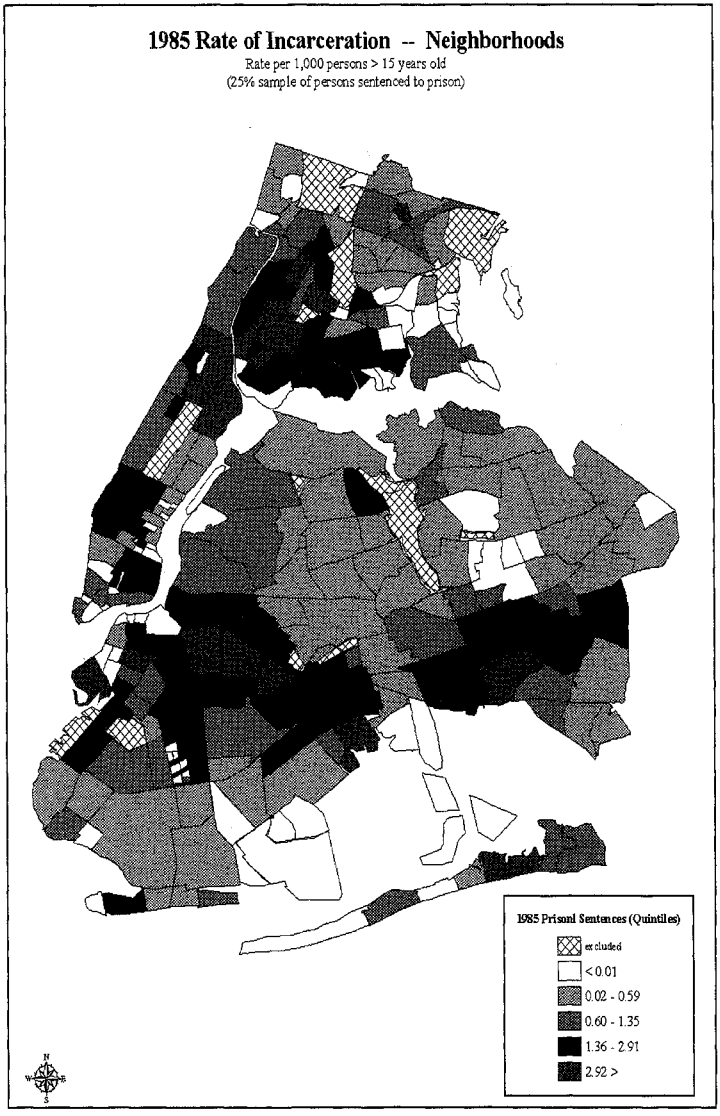

Figure 3b. Incarceration Rates by Neighborhood New York City, 1990

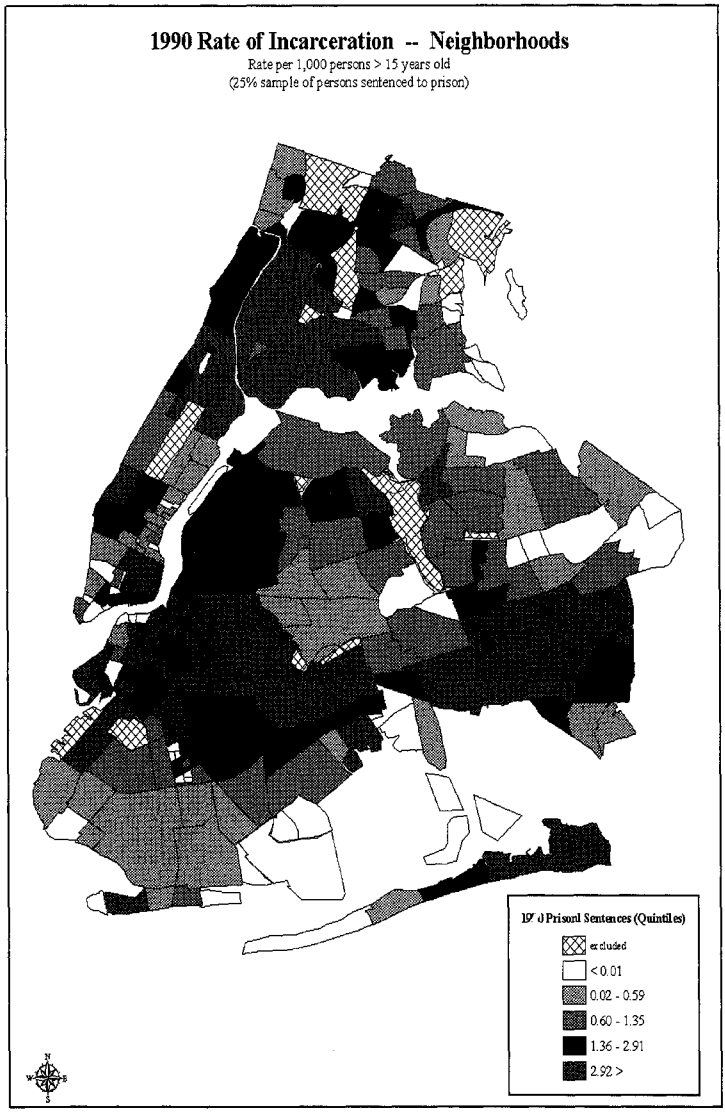

Figure 3c. Incarceration Rates by Neighborhood New York City, 1996