

# RACE MATTERS: DISPROPORTIONALITY OF INCARCERATION FOR DRUG DEALING IN MASSACHUSETTS

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*Many observers have recognized and decried the disproportionate impact on young minority males of harsh sentencing policies for drug dealing. Nationwide, African-Americans and Hispanics constituted 78.2 percent of incarcerated drug offenders in 1996. Their incarceration rates for drug offenses were respectively 17 and 8 times greater than non-Hispanic white rates. The disproportionalities for drug offenses were over twice as wide as the disproportionalities for other types of offenses.<sup>1</sup> Scholars have noted the lack of hard data about neighborhood dynamics of arrest and incarceration for drug dealing, but they have nonetheless tended to explain the disproportionate impact on minorities with reference to neighborhood phenomena. This paper uses a mapping of the pre-incarceration residences of drug-dealers incarcerated in state prison in Massachusetts to systematically explore neighborhood and certain other explanations for disproportionate impact.*

## LITERATURE REVIEW

The especially high overrepresentation of minorities among those incarcerated for drug offenses could occur as a result of factors at any or all of five levels. The five levels are (a) underlying offending; (b) neighborhood enforcement targeting; (c) arrest; (d) prosecutorial and judicial decision making; and (e) sentencing policy choices. We review literature regarding these levels of explanation in reverse order.

Tonry (1995) documents a series of policy choices (level (e)) over the last two decades that have differentially affected minorities. Most jurisdictions have instituted new harsher sentencing policies for cocaine dealers as opposed to

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marijuana dealers. Arrested cocaine dealers are more likely to be black than are arrested marijuana dealers,<sup>2</sup> and there can be no serious dispute as to the differential impact of recent sentencing policy choices. One is left with the question of why minority males are so heavily represented among persons incarcerated for dealing of cocaine and heroin – the drugs our policies respond to as most serious.

The literature, extensively reviewed by Tonry (1995), suggests that factors at level (d) – that is, disproportionate prosecutorial or judicial decision-making – are unlikely to account for the disproportionalities. The literature, although in some respects ambiguous (Free 1995; Mann 1993), generally indicates that while post-arrest racism probably does distort incarceration rates, the effects of bias are probably modest in comparison to the effects of underlying differences in arrest rates. Blumstein (1993b) has suggested that drug offenses may be an exception to this general finding. He notes that blacks are more heavily represented among the population incarcerated for drug offenses than among drug arrestees, suggesting bias in charging or sentencing. However, he makes no effort to correct for the seriousness of the drug offenses in question (dealing or possession, cocaine/heroin or marijuana), and such an adjustment tends to negate prosecutorial or judicial bias.<sup>3</sup> Moreover it is incongruous to believe that prosecutorial and judicial bias would have a larger effect on drug sentences than on other sentences, because prosecutors and judges often have relatively limited discretion in imposing mandatory sentences for drug offenses.<sup>4</sup>

At the arrest stage (level (c)), it has been suggested that some police officers use racial profiling to target persons for interrogation. Randall Kennedy (1995) explains the social damage this practice does. By definition, the practice leads to a higher probability of arrest for minority dealers than for white dealers and must contribute to arrest rate disparities (Blumstein 1993b). There is no hard basis for quantifying the effect of this practice, but it probably accounts for only a small portion of the dealing arrests that in turn account for most long-term incarcerations.<sup>5</sup> Most dealing arrests follow an investigation involving controlled purchases of substances by informants or undercover officers.<sup>6</sup> Thus, if substantial disproportionality is introduced at the arrest stage, it is most likely to be in the context of relatively thorough investigative targeting decisions as opposed to racial profiling in the road-stop context. Tonry's review of the literature on arrests (1995) concludes generally for non-drug offenses that underlying offense rates, as opposed to racism at the arrest stage, account for differences in arrest rates.

Tonry does suggest that drug enforcement practices are different and have an overall impact that falls disproportionately on minorities. Tonry does not emphasize racism at the arrest or prosecution/adjudication stages (levels (c) and (d)); such an emphasis would be hard to reconcile with the evidence in the general literature about the limited impact of enforcement racism on non-drug incarcerations. Instead, Tonry (1995) explains high minority incarceration rates

for drug offenses with a cluster of hypotheses at the neighborhood targeting level (b). Minority group members are overrepresented in poverty areas. Limited indoor space in poverty areas may push more dealers out to the streets. Dealers in socially disorganized poverty areas may sell more readily to strangers. The relative ease of making arrests in poverty areas may lead police officers seeking to establish track records of success to focus on these areas (see also Blumstein 1993a, 1993b; Mauer and Huling 1995). Only anecdotes substantiate the existence of these possible dynamics, and these anecdotes can easily be controverted by competing anecdotes.<sup>7</sup> The data presented in this paper do not test these hypotheses directly. Rather, the data test the power of these hypotheses about level (b) neighborhood targeting to explain racial/ethnic disproportionality in drug incarcerations.

Some observers accept the possibility that much disproportionality is introduced at level (a), that is, that there are significant underlying racial/ethnic variations in drug offending rates. Drug dealing may be a part of a constellation of behaviors that flow from socioeconomic deprivation (which disproportionately affects minorities). Two kinds of causation are identified: neighborhood-level and individual-level. Wilson (1996) has offered the most complete and elegant exposition of neighborhood-level causation. Economic transformations that create sustained and widespread unemployment in a neighborhood weaken family structure and larger social organization and create cultural dynamics that make drug dealing a more acceptable choice for young men (Wilson 1996).

At the individual level, the theory is that need impels especially disadvantaged individuals to deal drugs. With licit employment hard to find, poor, undereducated inner city residents perceive little choice but to seek illicit income. Reuter (1990) has shown that, for lower-income young men in the Washington, D.C. area, even if licit employment is available it is likely to be much less lucrative than drug dealing, at least in the short run. In fact, as noted further below, prisoners tend to have no high-school diploma and report very modest legal income.

Both these types of explanation of disproportionality at level (a) – neighborhood-level and individual-level causation – are consistent with multiple competing theories of crime causation offered by criminology.<sup>8</sup> Similarly, many readily measurable variables can be viewed as operationalizing more than one criminological theory or dimension of socioeconomic argument.<sup>9</sup> The analysis below of relationships between drug incarceration rates and socioeconomic variables is not presented as assisting in the choice among alternative general theories of crime. Rather, the data indicate that, to the extent these theories can be operationalized through basic combinations of non-racial individual or neighborhood-level socioeconomic variables, they lack the power to explain racial/ethnic disproportionality in drug incarceration rates.

In summary, the data presented below shed light on two kinds of questions unresolved in the literature: At what level is racial/ethnic disproportionality

introduced? In particular, is disproportionality created at the neighborhood targeting level (b)? And, could neighborhood and individual level socioeconomic deprivation adequately explain possible disproportionality at level (a), the underlying offense level?

## **METHODOLOGY**

### *OVERVIEW*

We first tested neighborhood-level explanations for racial/ethnic disproportionality. These include both hypotheses about the role of level (b) neighborhood targeting and hypotheses about neighborhood causation of level (a) underlying offending rate differences. These hypotheses have the same general form: Risk of incarceration for drug dealing does not depend on race or ethnicity but rather on residence in a neighborhood meeting criterion X (for example targeted by police or socially disorganized). Blacks and Hispanics are concentrated in neighborhoods meeting criterion X. As a result, blacks and Hispanics are overrepresented among those incarcerated for drug dealing.

To test this family of hypotheses, we selected a sample of state prisoners in Massachusetts and geocoded their pre-incarceration addresses so that we could assign them to neighborhoods. We then computed race-specific incarceration risks within groups of neighborhoods (for example prison commitments of white males from high-poverty neighborhoods divided by number of white males in those neighborhoods). We tested alternative groups of neighborhoods meeting alternative criteria reflecting the hypotheses discussed in the literature review. The key questions discussed in the literature review translate into questions of whether racial/ethnic commitment risks continue to differ substantially even when neighborhood risk variations are factored out by computing risk within neighborhood groups.

We then tested individual-level explanations for disparities. These are hypotheses about causation of underlying offense rates of the following form: Risk of incarceration does not depend on race or ethnicity, but rather on individual disadvantage criterion Y (e.g. poverty). Blacks and Hispanics are overrepresented among those meeting criterion Y. As a result, blacks and Hispanics are overrepresented among those incarcerated for drug dealing. Although there is really only one individual-level hypothesis in the literature – that economic need impels drug dealing – there are many alternative ways of defining economic need and no good theoretical basis for choosing among them. We computed incarceration risks adjusted for variations in need levels for the state as a whole and within disadvantaged neighborhoods under several alternative definitions suggested by the literature.

We computed these adjusted incarceration risks by using, as the denominator of the risk fraction, the number of disadvantaged males (as opposed to the number of all males) from the selected neighborhoods. Because all indicators of socioeconomic disadvantage are more prevalent in the populations classified

## RACE MATTERS

Black or Hispanic, using disadvantaged males in the denominator of commitment rate computations means using relatively larger denominators for Black and Hispanic rates and so reduces Black and Hispanic rates relative to White rates. In exploring alternative indicators of individual need or disadvantage, we tested basic poverty indicators and also created composite indicators that maximize intergroup disproportionality of disadvantage, for these would, in turn, minimize intergroup disproportionality of adjusted drug-dealing commitment rates. In so using composite indicators, we were seeking to determine whether we could construct a model that would explain away intergroup disproportionality in commitment rates by combining indicators of individual disadvantage with indicators of neighborhood disadvantage.

We should note an approximation in this set of computations. For a meaningful commitment rate in which the denominator includes only disadvantaged males, the numerator should similarly include only disadvantaged male prisoners. Our data on state prisoners do not include individual indicators of disadvantage, so we do not adjust the numerators. We do know from national studies that state prisoners tend to be individually disadvantaged. See further discussion under Sensitivity/Error Effects below.

### *BASIC SAMPLE DEFINITION*

Our universe of analysis is derived from the 1990 decennial census<sup>10</sup> and from a complete database of prisoners committed to the state prison system in Massachusetts between July 1, 1994 and June 30, 1996.<sup>11</sup> The state prison population includes approximately half of those incarcerated in Massachusetts, consisting generally of the more serious offenders serving longer terms. Females at the state prison level include some less serious offenders who could not be housed in all-male county houses of correction. For consistency, we have omitted females from our analysis of drug offenders.

For all commitment rate comparisons, we have further selected males aged between 20 and 39 at the time of their commitment; 79.5 percent of drug offenders are in this age range, and narrowing the age range simplifies the interpretation of many demographic indicators – for example, a "poor work history" over the past year for an older man may indicate economic success rather than deviance. Our analysis was necessarily limited to prisoners listing a pre-incarceration residential address that we could successfully interpret and geocode. Finally, we omitted racial/ethnic groups other than Blacks, Whites and Hispanics because their limited representation in both the prison population and the general population in Massachusetts prevents meaningful statistical analysis at many levels.

Table 1 details the effect of these design selections and data limitations. The major design decision is the limitation of analysis to those aged 20 to 39. Only 5.4 percent of state drug prisoners are under 20 at commitment, but 15.1 percent are over 39. Of those over 39, 87.6 percent are White or Hispanic prisoners. The

White population is older than the Black or Hispanic populations, so that for Whites, the corresponding adjustment in the denominator is relatively large. Overall, as Table 1 indicates, the age exclusion elevates Black and White commitment rates equally, making no relative change, but reduces Hispanic relative rates. The effects of the several data limitations differ across the three major racial/ethnic groups, but the effects are each modest in size and, as shown in the last line of Table 1, offset each other across racial/ethnic groups.<sup>12</sup>

**TABLE 1**  
**UNIVERSE OF ANALYSIS – EFFECTS OF DESIGN SELECTIONS AND DATA LIMITATIONS**

	Race/Ethnicity				Total
	B	H	W	Other	
All State Prisoners Committed 7/1/94 to 6/30/96	1,258	1,236	1,856	136	4,486
Male Prisoners	1,190	1,166	1,712	134	4,202
Drug Prisoners	335	639	178	23	1,175
Age 20-39	289	500	128	18	935
With Addresses	275	473	117	17	882
In State	240	431	108	16	795
<b>Geocodable (primary universe of analysis)</b>	232	386	100	14	732
All Massachusetts Residents (no Hispanic overlap)	274,269	275,859	5,291,918	174,379	6,016,425
All Massachusetts Residents (BW Hispanic overlap)	297,006	275,859	5,411,774		
Males 16 and Over	101,643	87,789	2,062,750		
Males 20-39	54,788	53,840	920,096		
Numerator Change Due to Age Selection	-14%	-22%	-28%		
Denominator Change Due to Age Selection	-46%	-39%	-55%		
<b>Net Commitment Rate Change Due to Age Selection</b>	60%	28%	61%		
Numerator Change Due to Address Lack	-5%	-5%	-9%		
Numerator Change Due to In-state Selection	-13%	-9%	-8%		
Numerator Change Due to Geocodability	-3%	-10%	-7%		
Denominator Change Due to Hispanic Overlap	8%	0%	2%		
<b>Net Commitment Rate Change Due to Data Limitations</b>	-26%	-23%	-24%		

## RACE MATTERS

### NEIGHBORHOOD SELECTION APPROACHES

Table 2 summarizes the alternative hypotheses that we tested as explanations for racial-ethnic disproportionality. The second column defines the selections of neighborhoods. The third column identifies the alternative hypotheses that the selections operationalize. It is important to emphasize that we are not testing the hypotheses themselves. It may or may not be the case that the police target high-poverty neighborhoods for drug enforcement. Similarly, it may or may not be the case that residence in a high-poverty neighborhood creates special pressures to engage in drug dealing. Rather we are testing whether that targeting or those special pressures are adequate to explain bottom-line racial/ethnic disparities in drug-dealing incarceration rates.

**TABLE 2**  
**DEFINITIONS OF ALTERNATIVE NEIGHBORHOOD SELECTION CRITERIA**

Neighborhood Selection Criterion	Criterion Definition	Hypotheses Tested as Explanation of Racial/Ethnic Disproportionality
Poverty Rate Cutoffs <sup>13</sup>		Drug dealing thrives in poverty neighborhoods and/or enforcement targets poverty neighborhoods Possible "tipping" – especially high dealing rates in very high poverty neighborhoods
Poverty	Poverty rate 20-40% (lower-income neighborhoods but may not be visibly distressed)	
Poverty (extreme)	Poverty rate over 40% (visibly distressed neighborhoods)	
Poverty Rate Deciles <sup>14</sup>	Rank tracts by poverty rates and group in ten equal groups	Same – decile measure provides more perspective on variations among more affluent neighborhoods.
Ricketts-Sawhill <sup>15</sup>	Composite criterion based on high prevalence of "underclass" behaviors in neighborhood – public assistance, school dropout, poor work history, single parenting	Similar – parallel to poverty hypothesis but does not use poverty per se as criterion
Top Drug Commitment Rate Decile	10% of neighborhoods with highest drug commitment rates	Sets upper bound on power of any criterion to select high drug dealing tracts (no hypothesis)
Top Drug Modeled Decile <sup>16</sup>	10% of neighborhoods with highest predicted drug dealing rates based on regression model including poverty rate, public assistance rate and single parent rate	Alternative potential forms of poverty hypothesis – no new theoretical basis, alternative measures of need and social disorganization
Top Public Assistance Decile	10% of neighborhoods with highest public assistance rate	
Top Single Parent Decile	10% of neighborhoods with highest single parent rate	
Minority neighborhoods	Minority greater than 2/3 of neighborhood population <sup>17</sup>	Police target minority neighborhoods
Top Density Decile	10% of neighborhoods with highest percentage of housing units in structures of 5 or more units <sup>18</sup>	Police target dense neighborhoods where dealing occurs on the street

Table 3 summarizes for background purposes the characteristics of the alternative selections of neighborhoods defined above. The table shows the population of each selection, the share of the state prison drug commitments that it represents, the overall drug commitment rate (per 100,000 males over 16 per year) in the selection and its demographic, socioeconomic and housing characteristics. The first numeric column shows the percentage of each selection falling within the poorest decile of census tracts. The most important point to be taken away from Table 3 is that there is a substantial overlap among all of the disadvantaged selections of census tracts – the various neighborhood disadvantage measures rank census tracts in similar orders.

#### *INDIVIDUAL DISADVANTAGE INDICATORS*

We present three approaches to defining individual disadvantage, as shown in Table 4: income below the poverty line, a composite need indicator combining poverty and lack of a high school diploma, and the Kasarda distressed household criterion. The basic poverty approach is the simplest operationalization of the need theory of drug dealing. There is only limited theoretical motivation for presenting the more complex approaches. They do represent more extreme concepts of disadvantage and are presented because they offer stronger adjustments to arguably explain intergroup disproportionality in commitment rates. The composite need indicator presented – poverty combined with lack of high-school diploma – factors out much more intergroup commitment disproportionality than does either variable alone. In fact, the indicator is more powerful than the Kasarda five-variable household criterion and more powerful than any other sub-combination of the five Kasarda variables.<sup>19</sup>

For the poverty/education and Kasarda indicators, we present results within the state's four largest cities. The four largest cities are fairly poor – 35.5 percent of their population resides in neighborhoods in the poorest statewide decile of neighborhoods, and another 21.4 percent resides in the second poorest decile. This selection is the closest we can come to selecting poverty neighborhoods while also combining multiple variables to create composite indicators of individual disadvantage.<sup>20</sup>

## **RESULTS**

### *NEIGHBORHOOD LEVEL RESULTS*

Table 5 presents the neighborhood level comparisons of commitment rates by race and Hispanic ethnicity. The neighborhood level selections are defined in Table 2, and their demographic characteristics are as detailed Table 3. The first column of Table 5 identifies the selected neighborhoods and the next column shows the share of all drug offenders (of all ages) included in the selections. The next three groups of columns show the denominators (numbers of males aged 20-39), the numerators (numbers of drug prisoners aged 20-39), and the actual



TABLE 3  
CHARACTERISTICS OF ALTERNATIVE SELECTIONS OF NEIGHBORHOODS

Neighborhood Selection Criteria*	Population		Racial/Ethnic Dist. of Pop.			Drug Commitments		Socioeconomic Characteristic Rates as Defined in Text					
	% in Poorest Decile	Total (000's)	% B	% H	% W	% of all Drug Com.'s	Annual Rate Per 100,000 Males	% Non-Famil-ism	% Poor Work Hist.	% Public Assis-tance	% Drop-Out	% Poor	% >5 Units
Massachusetts -- all tracts	10	6,016	5	5	88	100	20	23	32	8	9	9	20
Non-poverty	0	5,277	2	2	93	43	10	18	30	6	7	6	17
Poverty	78	630	20	16	57	42	83	50	43	19	12	26	43
Poverty (extreme)	100	109	20	42	33	15	196	66	58	37	24	48	58
Most affluent 5 deciles	0	3,008	1	1	96	9	4	13	27	4	5	3	12
5th poorest decile	0	604	2	2	93	5	10	19	31	6	7	6	17
4th poorest decile	0	602	3	3	91	6	13	23	33	7	8	8	21
3d poorest decile	0	603	5	4	87	9	18	29	33	8	12	11	25
2d poorest decile	0	600	8	8	79	21	42	39	38	13	13	17	31
Poorest decile	100	600	21	22	49	50	109	55	46	23	16	31	47
Ricketts-Sawhill	95	131	17	40	37	17	186	63	54	35	35	41	54
Top drug commitment rate decile	58	601	21	21	53	67	151	51	42	22	19	29	36
Top drug modeled decile	80	603	22	22	49	54	122	55	44	26	21	26	40
Top public assistance decile	77	602	22	22	50	53	122	54	44	26	21	29	38
Top single parent decile	73	603	25	22	48	54	120	58	43	23	19	28	41
Outside four largest cities	5	5,012	2	3	92	48	12	19	30	7	8	7	17
Four largest cities*	36	1,004	17	11	66	52	62	41	38	13	11	18	36
Minority lower poverty deciles	0	32	79	8	10	2	97	50	37	16	14	17	21
Minority highest poverty decile	100	156	53	34	12	20	195	67	50	32	19	36	39
Non-minority lower poverty deciles	0	5,384	2	3	93	48	11	19	30	6	7	6	17
Non-minority highest poverty decile	100	444	9	18	63	30	84	50	45	21	14	30	49
Top density decile	41	602	11	13	69	26	50	44	41	13	8	21	66

\*Criteria applied to universe of Massachusetts census tracts to derive alternative selections of neighborhoods  
 \*\*Boston, Worcester, Springfield, Lowell (selection presented here for use in individual characteristic analysis further below)

**TABLE 4**  
**INDIVIDUAL INDICATORS OF DISADVANTAGE**

Criterion	Criterion Definition/Notes
Poverty	Poverty – income below poverty line for males <sup>21</sup>
Composite need indicators	Variations and combinations of variables for males (data from Public Use Microdata Sample <sup>22</sup> )
Poor and no high school diploma	Maximizes inter-group disproportionality of disadvantage
Kasarda severely distressed households <sup>23</sup>	Distressed households (mostly female headed) as proxy for distressed male population. Severe distress defined as simultaneous low education, single parenting, public assistance, poor work history, and poverty

annual rate per 100,000 (scaled to reflect our two-year sample). The next group of columns shows the ratios of commitment rates – Black to White and Hispanic to White. The ratios are highlighted and are bracketed by the boundaries of their 95 percent confidence intervals.

Table 5 shows that racial/ethnic commitment rate disparities are wide at every level of poverty. The Black to White commitment rate ratio is greater than 17 in every decile of poverty, and Hispanic to White ratio greater than 26. By contrast, looking within each race/ethnicity column, while there are material contrasts between affluent areas and poverty areas, they are much weaker than the race/ethnicity differences. The ratios of commitment rates in the poorest decile to those in the five most affluent deciles are only approximately 4 to 1 (287/61 for Blacks, 487/125 for Hispanics, 9/3 for Whites). In Table 5, while all of the major row comparisons between Blacks or Hispanics and Whites<sup>24</sup> are significant, in many instances, the within-column differences in commitment rates are statistically insignificant.<sup>25</sup> The analysis presented in Table 5 offers modest support for the existence of neighborhood-based dynamics that may contribute to aggregate racial/ethnic disproportionalities in arrest rates or underlying drug dealing rates, but it shows that these dynamics are weak and inadequate to explain observed race and ethnic disproportionality.

#### *INDIVIDUAL DISADVANTAGE INDICATORS*

Table 6 presents neighborhood drug commitment rates adjusted by individual measures of disadvantage. The columns are as in Table 5 except that Table 6 does not repeat the counts of commitments, which are unchanged from Table 5. The first six rows of Table 6 show commitment rates by neighborhood poverty decile. The disadvantage adjustment is simply poverty – i.e., the denominator in the computation of commitment rates is poor males. The next six rows show commitment rates within the state's four largest cities with composite adjustments for simultaneous low income and lack of education. The last three rows show

TABLE 5  
RACIAL/ETHNIC COMPARISONS OF COMMITMENT RATES TO STATE PRISON FOR DRUG OFFENSES  
IN ALTERNATIVE SELECTIONS OF NEIGHBORHOODS

Neighborhood Selection Criteria*	% of Drug Comm. (all ages)		Males 20-39 (000's)						Drug Commitments of Males 20-39						Drug Commitments Rate per 100K Males 20-39						Relative Rates and 95% Confidence Intervals for Rates					
			B		H		W		B		H		W		B		H		W		B to W		H to W			
																					Relative Rate	Low	Hi	Relative Rate	Low	Hi
Massachusetts -- all tracts	100		55	54	920	232	386	100	212	358	5	31	39	49	53	66	82									
Non-poverty	43	28	828	86	140	82	156	252	5	23	32	43	39	51	67											
Poverty	42	23	84	119	168	16	239	438	9	16	27	46	28	46	77											
Poverty (extreme)	15	4	7	8	27	78	2	314	570	13	**	25	**	**	45	**										
Most affluent 5 deciles	9	8	8	460	10	19	28	61	125	3	10	20	41	23	41	74										
5th poorest decile	5	3	96	10	13	14	186	198	7	11	26	58	13	27	58											
4th poorest decile	6	4	99	17	20	9	205	247	5	20	45	102	25	55	120											
3d poorest decile	9	7	6	98	22	30	19	162	252	10	9	17	31	15	26	46										
2d poorest decile	21	10	10	97	41	79	18	205	401	9	13	22	38	26	43	72										
Poorest decile	50	23	23	69	132	225	12	287	487	9	18	33	60	31	56	100										
Rockets-Sawhill	17	4	8	10	27	88	5	328	530	25	**	13	**	**	22	**										
Top drug commitment rate decile	67	22	20	63	176	271	32	398	665	25	11	16	23	18	26	38										
Top drug modeled decile	54	24	22	59	145	222	19	305	502	16	12	19	31	20	31	50										
Top public assistance decile	53	23	22	59	144	223	17	314	510	14	13	22	36	21	35	58										
Top single parent decile	54	27	23	63	154	221	17	287	485	14	13	21	35	22	36	59										
Outside four largest cities	48	23	32	774	73	182	76	159	281	5	24	32	45	44	57	75										
Four largest cities	52	32	22	147	159	204	24	249	474	8	20	30	47	38	58	88										
Minority (>2/3) lower poverty deciles	2	4	0	1	12	4	1	141	583	88	**	2	**	**	7	**										
Minority (>2/3) highest poverty decile	20	13	8	5	80	67	1	303	425	9	**	32	**	**	45	**										
Non-minority lower poverty deciles	48	28	30	850	88	157	87	160	258	5	23	31	42	39	50	66										
Non-minority highest poverty decile	30	10	15	64	52	158	11	265	519	9	16	31	59	33	60	111										
Top density decile	26	14	16	101	62	118	12	226	375	6	21	38	71	35	63	114										

\*Criteria applied to universe of Massachusetts census tracts to derive alternative selections of neighborhoods  
 \*\*White offender count too low to allow normal statistical testing of the ratios in this row

TABLE 6  
 RACIAL/ETHNIC COMPARISONS OF COMMITMENT RATES TO STATE PRISON FOR DRUG OFFENSES IN ALTERNATIVE SELECTIONS  
 OF NEIGHBORHOODS WITH ADJUSTMENT BY MEASURES OF INDIVIDUAL DISADVANTAGE

Neighborhood/Individual Selection Criteria (criteria applied to universe of Massachusetts census tracts and/or males to derive alternative adjusted rates)	Males 20-39 (Households as estimator in last three rows)			Adjusted Drug Commitments Rate per 100K Males 20-39			Adjusted Relative Rates and 95% Confidence Intervals for Rates					
	B	H	W	B	H	W	B to W Relative Rate			H to W Relative Rate		
							Low	Est.	Hi	Low	Est.	Hi
Poor in most affluent 5 deciles (STF3A * data)	392	612	11964	1275	1553	117	5	11	22	7	13	24
Poor in 5 <sup>th</sup> poorest decile	182	526	4618	2745	1236	152	8	18	40	4	8	17
Poor in 4 <sup>th</sup> poorest decile	470	730	5969	1808	1370	75	11	24	54	8	18	40
Poor in 3 <sup>d</sup> poorest decile	863	1149	7965	1274	1305	119	6	11	20	6	11	19
Poor in 2 <sup>d</sup> poorest decile	1941	2909	11726	1056	1358	77	8	14	24	11	18	29
Poor in poorest decile	5824	9340	15820	1133	1205	38	17	30	54	18	32	57
Four Largest Cities (IPUMS** data)												
All (ex. Institutional group quarters)	29280	19788	138417	272	515	9	20	31	48	39	59	91
Poor	4124	4599	13264	1928	2218	90	14	21	33	16	25	37
No HS diploma	6688	8479	11779	1189	1203	102	8	12	18	8	12	18
Poor and no HS Diploma	1515	2423	1227	5248	4210	978	4	5	8	3	4	7
Poor (150%) and no HS diploma	2266	3765	1978	3508	2709	607	4	6	9	3	4	7
Poor (200%) and no HS diploma	3099	4720	3272	2565	2161	367	5	7	11	4	6	9
Poor (250%) and no HS diploma	3752	6018	4620	2119	1695	260	5	8	13	4	7	10
Poor (300%) and no HS diploma	4331	6759	5807	1836	1509	207	6	9	14	5	7	11
Kasarda severely distressed households	1403	3356	1921	5666	3039	625	6	9	14	3	5	7
Head 20-39	1189	2565	1583	6686	3977	758	6	9	13	3	5	8
Poor with poor work history, head 20- 39	5658	7256	12587	1405	1406	95	10	15	23	10	15	22

\*See Note 10.

\*\*See Note 22.

## RACE MATTERS

adjustments in which distressed households (as defined in the methodology section and at note 23) are used as proxy counts of the number of disadvantaged young men.

The purpose of Table 6 is to gauge the extent to which individual measures of disadvantage could, in combination with neighborhood variables, explain the observed disparities in commitment rates. Comparison of the first six rows of Table 6 to rows five through ten in Table 5 shows that adjustment for group specific poverty rates does reduce measured disparities at every neighborhood poverty level. This follows because at each neighborhood poverty level, Blacks and Hispanics are more likely to be poor than Whites. The effect of the adjustment in the most-affluent decile is to reduce the Black-White commitment rate ratio from 20 to 11, and the Hispanic-White commitment rate ratio from 41 to 13.

The disadvantage adjustments made possible through combinations of variables have a stronger equalizing effect. If one assumes, for example, both that all drug dealers have legal incomes below 150 percent of the poverty rate and that they lack a high school diploma, then the Black-White disparity drops to 6 in the largest cities and the Hispanic-White disparity to 4, as shown. No alternative combination of familiar socioeconomic variables offers a materially more powerful disparity reduction.<sup>26</sup> Even with these strong adjustments for individual disadvantage, one is left with considerable racial/ethnic disparities.

### *SENSITIVITY/ERROR EFFECTS*

Our method involves decisions and approximations in both the numerators and the denominators of our rate computations. In general, these potentially distorting factors are modest and offsetting as shown in Table 7. The net effect of the first three design factors is generally to depress computed Hispanic relative incarceration rates. The sampling error terms in the underlying census data are under 10 percent for computations based on the STF3A<sup>27</sup> data and under 17 percent for computations based on the IPUMS data.<sup>28</sup> These error terms slightly widen the true confidence intervals around the estimated relative ratios. The census undercount of minority males is the one factor that, by a modest estimated 15 percent in urban areas, might be expected to overstate the observed relative commitment rate ratios. Given the magnitude of the observed ratios, neither sampling nor non-sampling error is likely to affect our conclusions.

The last approximation noted in Table 7 merits further discussion. Lacking data on the socioeconomic characteristics of Massachusetts prisoners, we made no adjustment sub-selecting disadvantaged prisoners in the numerator of our commitment rates adjusted for individual factors – we adjusted only the denominators. We are implicitly assuming that most drug dealers in prison meet criteria for individual disadvantage so that no adjustment is necessary. The Bureau of Justice Statistics survey of state prison inmates in 1991 indicated that

**TABLE 7**  
**SUMMARY OF DESIGN AND ERROR EFFECTS**

Factor	Approximate Effect
Prisoner sample subselection	Depress Hispanic rates relative to black and white by 25% (see Table 1)
Inability to distinguish Hispanics from Non-Hispanics within race	Elevate Hispanic rates relative to white and black rates by 10% in high poverty decile, less in other deciles (see note 12)
Use of 1990 census counts	Varies by poverty level but less than 10% relative rate distortion at all levels (see note 12)
Sampling error in 1990 STF3A file	95% probability that error less than 10% for aggregates presented in text (much less for most) <sup>29</sup>
Sampling error in 1990 IPUMS file	95% probability that error less than 17% for aggregates presented <sup>30</sup>
Non-sampling Error in 1990 census	Undercount of minority males in urban areas may elevate minority commitment rates by 15% <sup>31</sup>
Non-adjustment to numerators in computation of commitment rates adjusted for individual disadvantage	Little effect for straight poverty adjustments; unknown effect on composite disadvantage computations

nationwide 65 percent of prisoners lacked a high school diploma, and 70 percent had annual incomes under \$15,000 (230 percent of the poverty line<sup>32</sup> for individuals living alone without dependents) (Bureau of Justice Statistics 1991). We also know that in the four largest cities, the relative (for Blacks vs. Whites and Hispanics vs. Whites) adjustment to the denominator varies little whether one chooses poverty, 200 percent of poverty or 250 percent of the poverty line as the "poverty" criterion.<sup>33</sup> Thus, if the census data offered more detail and we were able, for consistency with the numerators, to recompute the straight poverty adjustments (the first 6 rows of Table 6) using higher "poverty" thresholds, it is unlikely that the relative rates would materially change. We lack a reliable basis for estimating the effects of consistently applying the composite definitions of disadvantage (poverty combined with low education). Composite adjustments in the denominator do vary considerably according to the poverty level and education level chosen, so we would have to render the numerator consistent with the chosen denominator rather than vice versa. However, given the much higher prevalence of both education and income disadvantage among prisoners than among the general population, these numerator adjustments are likely to be modest.

The fact that our initial sample selection derives from state prison commitments may affect our findings. State prison inmates are those convicted of more serious drug charges. In the lower houses of corrections, the disproportionalities may differ. The underlying data presented in Brownsberger (1997b) allow a computation showing that the racial/ethnic disparities for drug dealing commitments to the house of corrections in Middlesex County are similar

## RACE MATTERS

to the statewide disparities (wider for blacks, narrower for Hispanics), but that for possessory offenses, the disparities are narrower. However, the universe is smaller, the offense coding is not completely reliable, and we lack data for other counties in the state, so we cannot be certain that the findings of a study including the lower-seriousness houses of corrections would be completely consistent with the present study.

## DISCUSSION

In the literature review we identified five levels of explanation for racial/ethnic disproportionalities in incarceration for drug offenses – differences in (a) underlying offending; (b) neighborhood enforcement targeting; (c) arrests; (d) prosecutorial and judicial decisions; and (e) sentencing policy decisions. The literature review noted that level (e) explanations beg the question of why minorities are overrepresented among drug dealing defendants. It noted that, in general, level (c) and (d) explanations are not strongly indicated by the literature, and level (b) explanations tend to be preferred by several leading authors.

The data in Table 5 confirm that level (b) neighborhood targeting explanations may contribute modestly to the disproportionalities but make clear that other, non-neighborhood oriented factors must account for the bulk of the disproportionality. The racial/ethnic disproportionalities within disadvantaged neighborhood selections (the rows of Table 5) are far wider than the neighborhood disproportionalities within race/ethnic categories (the columns). The same quantitative inferences limit neighborhood-level causal explanations of possible disproportionality originating at level (a) underlying offending rates. Individual measures of disadvantage can help to explain level (a) disparities, but basic adjustments for poverty, as in the first six rows of Table 6, leave wide racial/ethnic disparities at every neighborhood level of poverty. Even using the contrived composite adjustments for individual disadvantage, minority-to-white disparities of 4 to 1 remain, at least in the cities of Massachusetts. It does seem that we need to look beyond the existing families of explanations in order to understand racial/ethnic disproportionality of incarceration for drug dealing.

Drug dealing is special. As noted at the outset, national disparities in drug-dealing incarcerations are much wider than disparities for other types of crime. In our Massachusetts data, this is especially true for Hispanics. Drug offenses account for 54.8 percent of Hispanic state prison commitments as against 28.2 percent for Blacks and 10.4 percent for Whites.<sup>34</sup> Disadvantage adjustments like those in Table 6 applied to non-drug commitment rates result in Hispanic rates below White rates and Black rates only two times greater than White rates.<sup>35</sup> In attempting to understand the data, we should seek explanations that are specific to or apply with special force to drug dealing.

One line of possible future work should consider the possibility that there are unappreciated special dynamics creating disproportionate level (c) arrests. Narcotics investigations involve much more police discretion than other forms

of investigation. It is possible that racial factors influence the course of narcotics investigations in ways that disfavor minorities. Of course, racism and racial profiling may increase the targeting of minority men, but subtler factors may also intervene. White narcotics officers<sup>36</sup> may be more willing to perceive White dealers as low-level amateurs with a drug problem. They may bond more easily with them and turn them into informants more successfully. It may be that White informants are more ready to sell out minority dealers. At the same time, a personal bonding dynamic should favor police success in targeting White dealing organizations. We are without data that might shed light on these possibilities. For this author, with some experience in enforcement, it seems possible that these special level (c) dynamics contribute to the wide disparities in incarceration rates, but it is unlikely that they are principal contributors.

This leaves new explanations for disproportionalities in level (a) underlying offense rates as the other possible area for exploration. There is good evidence that cocaine abuse is relatively more prevalent in poverty areas than elsewhere (Brownsberger 1997a). Blacks and Hispanics are disproportionately concentrated in poverty areas and so may have disproportionately higher rates of use of cocaine and heroin. However, there is no evidence that, after adjustment for disadvantage, Blacks and Hispanics are more likely than Whites to use cocaine or heroin, and there is some evidence to the contrary.<sup>37</sup> Even in extreme poverty areas and among those meeting many definitions of disadvantage in Massachusetts, Whites are the largest of the three groups, so it is unlikely that market rapport accounts for the apparent overrepresentation of minorities among dealers.

The Latin origin of much of our drug supply may explain the prominence of Hispanic men among dealers. Narcotics officers in Massachusetts often report anecdotally that even some of their lower-level defendants have immigrated north from Caribbean or Latin American countries with the express purpose of making some money in the drug trade and returning home. The expansion of business relationships through ethnically homogeneous friendship networks could account for dramatic differences in ethnic drug-dealing rates, but we lack hard data to confirm this hypothesis.

This line of argument can be expanded to blacks in two ways. First, some primarily Black Caribbean nations may be competitively advantaged in the drug-dealing business because of their position in the transit zone from Colombia. They may export to the United States through ethnic friendship networks. Second, the co-residence of Blacks and Hispanics in many poverty areas may contribute to the expansion of the business among Blacks in poverty areas. However, in our sample, 81.6 percent of Hispanic drug offenders lived in neighborhoods that were at least one third White. Possibly at a secondary level, Black gangs originally involved in the drug trade in dealing centers like New York may expand their businesses through operations in poor disorganized neighborhoods elsewhere.<sup>38</sup> They may defend their monopoly franchise in these



## RACE MATTERS

neighborhoods and discourage potential White dealers.<sup>39</sup> Again, we are without data that might quantify these possibilities.

Racist acts by some in the criminal justice system have contributed to an abiding skepticism about the legitimacy of our legal regime among some of greater color (e.g., Mann 1993). Drug dealing is wrong in part because for a few short decades we have said it is wrong. Sales of cigarettes, alcohol, low-return lottery tickets and cars that use too much gasoline are also arguably wrong, but these sales are legal. Most Americans consciously break regulatory laws that they do not quite accept, at least on the highways. Historically rooted doubts about the legitimacy of the majority's law may contribute to elevated drug dealing rates among poor minorities, especially among African-Americans.<sup>40</sup>

The theories discussed above (both the existing theories shown to be limited by the state-specific data offered in this paper and the alternative theories suggested here for further study) may be true simultaneously and to varying degrees in different metropolitan areas. They are complex enough socially and historically that we are unlikely ever to fully disentangle them. But the data focus us once again on the reality that the war on drugs, as implemented through harsh sentencing laws, is in its effect a war on minorities. As our urban history has worked out, our offensive now targets those racial/ethnic groups that are the most disadvantaged and who identify themselves as the most disadvantaged in our society. We need to keep this reality squarely before the makers of sentencing policy.

## NOTES

- <sup>1</sup> Computations based on state prison population estimates from the Bureau of Justice Statistics 1998 and resident population estimates from Bureau of the Census 1997a (Table 19):

National Incarceration Rate Comparison	Non-Hispanic Black	Hispanic	Non-Hispanic White
United States resident population as of July 1, 1996	31,912	28,269	193,978
Sentenced State Prison Drug Offenders (1996 year-end estimate)	133,400	52,300	46,300
Sentenced State Prison Non-Drug Offenders (1996 year-end estimate)	357,100	123,200	304,400
Drug Incarceration Rate per 100,000 population	418	185	24
Drug Incarceration Rate (ratio to non-Hispanic white)	17	8	1
Non-Drug Incarceration Rate per 100,000 population	1,119	436	157
Non-Drug Incarceration Rate (ratio to non-Hispanic White)	7	3	1

Data by race/ethnicity for federal prisoners are not published at the level of detail needed to include them in this computation. A personal communication from the Federal Bureau of Prisons Office of Research and Evaluation indicates that the population of federal drug prisoners (55,194 in September 1996) is somewhat more heavily Hispanic and White than the much larger population of drug offenders in state prisons (237,600 in 1996). Blacks (Hispanic and non-Hispanic) constituted 44.6 percent of federal drug prisoners in September 1998, while non-Hispanic blacks constituted 56.1 percent of state drug prisoners in 1996.

- <sup>2</sup> Nationwide in 1996, 57.6 percent of adult arrestees for cocaine and heroin dealing and 44.5 percent of arrestees for cocaine and heroin possession were black, as against only 35.0 percent of marijuana dealing arrestees and 27.6 percent of marijuana possession arrestees (Federal Bureau of Investigation 1998). Laws targeting crack have an especially heavy impact on Blacks. In 1993, Blacks accounted for 88.3 percent of federal crack cocaine convictions but only 33.9 percent of federal drug convictions overall (United States Sentencing Commission 1995).
- <sup>3</sup> Offenses involving the dealing of cocaine or heroin are the most serious drug offenses. In Massachusetts, for example, 98.9 percent of state prison level drug offenders are committed for dealing cocaine or heroin (Brownsberger 1997b). A parallel breakdown by type of offense is not available on a national basis, and the Massachusetts numbers exclude some less serious county level prisoners that might be reflected as state prisoners in other states. However, nationwide, the Black share of sentenced state drug prisoners in 1996, 56.1 percent (computation based on Bureau of Justice Statistics 1998), is very close to the Black share of cocaine and heroin dealing arrestees, 57.6 percent in 1996 (Federal Bureau of Investigations 1998). This comparability tends to negate a major role for bias in post-arrest processing.
- <sup>4</sup> In Massachusetts, 64.9 percent of drug offenders committed to state prison in Fiscal 1995 and 1996 were committed under mandatory sentences (Brownsberger 1997b). The mandatory share of Black and Hispanic commitments was slightly higher (65.7 percent). This share must, of course, vary considerably across jurisdictions. Prosecutors often have and exercise some discretion in the charging of drug offenses, but anecdotal evidence indicates they are politically constrained in the exercise of this discretion. Prosecutors who consistently "break-down" drug charges are often subject to criticism from police officers.
- <sup>5</sup> See note 3.
- <sup>6</sup> This is an impression based on the author's own experience as a narcotics prosecutor and confirmed by conversations with experienced Massachusetts state police officers.
- <sup>7</sup> Through many conversations with enforcement colleagues, this author has become convinced that drug dealers' risks of arrest and their risks of

incarceration given arrest are actually higher in suburban areas than in urban areas. High crime rates in poverty areas swamp enforcement resources leading to diminished attention to non-violent drug offenses. See Brownsberger 1997b for data showing that police officers in the poorer cities in Massachusetts handle more serious crimes per officer than do officers in more affluent communities. High concern about drug dealing surfacing in middle-class areas leads to far more intense responses in these areas.

- <sup>8</sup> Rational choice theory argues that offenders make a rational computation of the costs and benefits of crime (e.g., Horney and Marshall 1992). Strain theory emphasizes inability to achieve expectations as leading to emotional willingness to offend (Agnew 1992; Agnew and White 1992). Peer group analysis emphasizes the role of delinquent peers in delinquency (Warr 1993). Social control theory emphasizes the role of social bonds, at multiple levels from the family to larger community institutions, in controlling crime (Laub and Sampson 1993; Petee et al. 1994). Bursik and others have emphasized the consistency of social control theory with approaches to understanding crime that emphasize neighborhood level economic deprivation and social disorganization (Bursik 1988; Bursik and Grasmick 1993; Warner and Pierce 1993). Neighborhood/community analysis offers a middle ground between individualistic models and social-theoretical models of criminality (Sampson 1993; Sampson and Lauritsen 1993; Sullivan 1989; Warner and Pierce 1993).
- <sup>9</sup> For example, the neighborhood poverty rate, if shown to be positively associated with drug dealing incarceration rates, may readily support either an economic necessity argument for drug dealing or a neighborhood or individual strain/alienation theory (as in Phillips 1998).
- <sup>10</sup> Our population data for neighborhood level analysis derive from the 1990 census via the summary tape file, STF3A (Bureau of the Census 1995). STF3A provides data at the census tract level. Census tracts are defined to correspond loosely to neighborhoods. There are 1,331 census tracts in Massachusetts with an average of 4,520 persons per tract. STF3A does not include estimates crossing age, sex, racial category and Hispanic ethnic category, so our counts of Black and White males in specific age ranges include some males of Hispanic origin.
- <sup>11</sup> For more detail on the acquisition and processing of this database, see Brownsberger 1997b: 49-52.
- <sup>12</sup> For more analysis of the issues raised in geocoding of the prisoners' addresses, see Brownsberger 1997b: 63-68, 74-75. The overlap between Hispanic ethnicity as a census category and Black and White as census racial categories varies by poverty level of census tract. As the table below indicates, the overlap is greater in the poorest areas.

Overlap between Ethnic and Racial Census Categories by Neighborhood Poverty Level

Neighborhoods	Share of Total Massachusetts Population	Hispanics among Whites	Hispanics among Blacks
Poverty Rate <20%	87.7%	1.5%	5.3%
Poverty Rate 20-40%	10.5%	8.9%	8.9%
Poverty Rate >40%	1.8%	23.7%	13.6%

An additional source of modest distortion derives from the date mismatch between our study period (1994 to 1996) and the date of the 1990 census. Each racial/ethnic group has a different share of persons at each age level. The effect of simply rolling the age structure forward five years is shown in the table below.

Effects of Estimating 1995 Population of Males 20-39 with No Adjustment for Mortality and Migration

Neighborhood	Males 20-39 in 1990			Males 15-34 in 1990 as estimator for 1995 Males 20-39 - increment over 1990 Males 20-39		
	B	H	W	B	H	W
Poverty Rate <20%	27,535	27,807	827,955	-0.9%	3.5%	-4.7%
Poverty Rate 20-40%	22,960	19,193	84,235	5.1%	7.8%	4.0%
Poverty Rate >40%	4,293	6,840	7,906	10.8%	16.3%	14.4%
All	56,164	57,439	885,325	2.5%	6.7%	-3.8%

As the table shows, the likely potential distortion from the date mismatch itself is modest. In this instance, the relative distortion by race/ethnicity is less when neighborhood poverty levels are isolated. Five-year mortality rates for young men in the 15 to 39 age range vary by race and presumably poverty level but are on the order of 1-2 percent. Bureau of the Census 1997a, Table 119, "Expectation of Life and Expected Deaths by Race, Sex and Age: 1994," indicates expected annual deaths ranging from .77 for White 15 year old males to 2.66 for White 38 year old males and from 1.57 for Black 15-year-old males to 6.60 for Black 39 year old males. These rates must vary considerably by locale and poverty level. Net migration for Massachusetts was only 0.05 percent (Massachusetts Institute for Social and Economic Research 1995), although this may vary across racial, ethnic and socioeconomic groups.

<sup>13</sup> The basic poverty line cutoff approach classifies "poverty" tracts as those with poverty rates greater than 20 percent and "extreme poverty" tracts as

those with poverty rates greater than 40 percent. This is the approach used by the Census Bureau in its analyses of poverty (Bureau of the Census, 1994). It is also (with some variations) the approach used by Wilson (1996). Jargowsky (1997:10-11), based on field work with Mary Jo Bane, believes that the 40 percent cutoff effectively identifies neighborhoods that are considered slums by experienced observers such as city planners and public officials. Massey and Eggers (1990) have criticized the poverty rate cutoff approach as ad hoc. Jargowsky (1997) points out, in response, that it captures the concept of a possible tipping point beyond which neighborhood disorganization substantially worsens. In Massachusetts, the tracts selected by a simple poverty rate cutoff approach do conform geographically to the concept of an inner city – essentially all poverty tracts are clustered in the cores of the larger, poorer cities in Massachusetts, and the extreme poverty tracts are in turn clustered among the poverty tracts (see Brownsberger 1997b).

- <sup>14</sup> To group by "deciles," we rank the tracts by poverty rate and then divide them into progressively lower poverty-rate groups with each group containing 10 percent of the state's population. In Massachusetts, the poorest decile of tracts corresponds fairly closely to the census bureau 20 percent cutoff for poverty tracts. It includes those tracts with poverty rate greater than 21.55 percent. A decile approach provides less differentiation for the highest poverty tracts (and so taken alone might hide a high poverty tipping point) but exposes variation among the more affluent tracts. In the analysis presented, the five most affluent deciles of tracts are grouped together because drug commitment rates are too low in those deciles for valid statistical comparisons.
- <sup>15</sup> Ricketts and Sawhill (1988) created a definition of "underclass" census tracts by reference to deviant behaviors attributed to the "underclass." They defined underclass tracts as those in which each of four deviant behaviors is more than one standard deviation above national averages. We refer to Ricketts-Sawhill tracts as those in which the following variables are more than one standard deviation above the unweighted Massachusetts mean: (1) non-familism – share of families (with children under 18) headed by single parents (Ricketts and Sawhill refer only to female heads); (2) welfare dependence – share of households receiving public assistance; (3) poor work history – share of males over 16 working less than 27 weeks per year or less than 15 hours per week in the past year (Ricketts and Sawhill do not include males who work 27 weeks or more but under 15 hours per week); (4) dropouts – share of civilians aged 16 to 19 not high school graduates and not enrolled in school (Ricketts and Sawhill may have included those enrolled in the military).

The Ricketts-Sawhill definition, for all its complexity, is highly arbitrary, but it represents another serious attempt to characterize disadvantaged

neighborhoods. It has the value in the present analysis of providing a selection of disadvantaged tracts intermediate in size between poverty and extreme poverty tracts. Nationwide, the Ricketts-Sawhill definition is less inclusive than the extreme poverty concept, but as we have implemented it in Massachusetts, it turns out to be more inclusive (see results). Massachusetts has both a high per-capita income and a high cost of living, with the result that its poverty rates based on national standards are artificially depressed (Sum et al. 1998).

- 16 To explore the possibility that some alternative balance of basic socioeconomic variables would identify census tracts with a high rate of drug dealing, we regressed tract-level drug-commitment rates against the Ricketts-Sawhill variables (as defined above) and the poverty rate. As detailed in the table below, a five-variable ordinary least squares regression model explains 45.2 percent of the variance in the state prison commitment rate for drug offenses for males over 16. In the five variable model, the contributions of the poor work history rate and the dropout rate are negative and not statistically significant. A model using the other three variables explains only slightly less of the variance. As the table shows, the poverty rate, the public assistance rate, and the non-familism rates are highly collinear, and neither model improves much over the public assistance rate alone.

Regression Modeling of Census Tract Drug Commitment Rates for Males over 16

Variables/Models	Independent Variable Intercorrelations					Dependent		Regression Coefficients		
	Pub Assist	Poverty	Non-Familism	Drop Out	Poor Work History	Drug Comm. (R)	Drug Comm (R <sup>2</sup> )	Five Variable Model		Three Variable Model
								Beta	Beta	Unstandardized
Public Assistance Rate	1.000					0.658	0.433	0.450	0.445	0.006847
Poverty Rate	0.777	1.000				0.579	0.335	0.174	0.140	0.001663
Single Parent Rate	0.808	0.719	1.000			0.589	0.347	0.132	0.129	0.000992
Dropout Rate	0.514	0.502	0.473	1.000		0.343	0.118	-0.021		
Poor Work History Rate	0.496	0.637	0.463	0.372	1.000	0.342	0.117	-0.046		
All Five Variable Model						0.672	0.452			
Top Three Variable Model						0.671	0.450			

NOTE All correlations/coefficients significant at .001 level, except for Dropout rate and Poor History rate as coefficients in five variable model

Using the predicted drug-dealing commitment rates from the three variable model as a ranking variable for census tracts, we selected the highest decile of census tracts.

- 17 The two-thirds cutoff is arbitrary, but we are following Jargowsky (1997) in using this level.
- 18 Following Warner and Pierce 1993.

## RACE MATTERS

- <sup>19</sup> Computations of effects of using other composite need indicators based on the relevant variables available in the IPUMS (poverty, single parenthood, education, work history, and receipt of public assistance) are available from author upon request. These alternative combinations add no explanatory power to the combination presented here. Contact William N. Brownsberger at (617) 489-2612 or [wbrownsb@bellatlantic.net](mailto:wbrownsb@bellatlantic.net).
- <sup>20</sup> On the one hand, the STF3A data do not include the necessary cross-tabulations. On the other hand, the IPUMS data do not include census tract designators. The smallest geographic unit is the city, and city is identified only for certain key cities which happen to be fully sampled – in Massachusetts, these are the four largest cities.
- <sup>21</sup> In Table 6, we estimated the decile-specific poverty rate for poor males for each racial/ethnic group in the 20-39 age range as the decile-specific racial/ethnic poverty rate for persons aged 18 to 64. This procedure mixes varying poverty rates by age and sex, but is the closest estimator available in the STF3A file, and we have no reason to believe that it skews relative poverty rates.
- <sup>22</sup> The Integrated Public Use Microdata Sample ("IPUMS" – Ruggles and Sobek 1997) is a standardized weighted sample of 5 percent of all of individual census questionnaires. It allowed us to derive counts for combinations of variables that are not included in standard census tabulations. IPUMS allows us to distinguish non-Hispanic Blacks and Whites from Hispanic Blacks and Whites so that the possible distortion from definitional overlap noted above (note 12) is eliminated.
- <sup>23</sup> Kasarda (1993) defined severely distressed households as households simultaneously possessing each of the following attributes: (1) low education – head of household does not have a high school diploma; (2) single parenthood – the householder is single, divorced, widowed or separated and young persons under 18 live in the householder's family (our computation may differ slightly from Kasarda's in that we counted persons who had the relationship of child to the head of household, but not grandchild); (3) the householder worked less than 26 weeks or usually worked less than 20 hours a week in the preceding year; (4) at least one member of the household received public assistance in the preceding year; (5) the householder's family income was below the poverty level in the preceding year. Kasarda's definition of an individual distressed household operationalizes the same four concepts as the Ricketts-Sawhill underclass neighborhood definition, but adds poverty. We classified Kasarda households based on the race/ethnicity of the head of household. Counts of Kasarda households are based on IPUMS. See note 22.

There is no theoretical reason that all of the Kasarda variables must simultaneously be present to indicate distress. Moreover, education, income

and work history are not simple categorical variables. One could justify definitional thresholds for these variables at higher or lower levels. We have experimented with the full universe of 32 alternative combinations of the Kasarda variables and with some of the alternative threshold definitions. In general, modest relaxations of the Kasarda definition result in somewhat larger population selections without substantially varying the intergroup disparities documented in the results section. Going the other direction and tightening the Kasarda definition is possible but not reasonable, given that there were only 17,421 Kasarda households in Massachusetts, as against a population of approximately 20,000 state and house of correction prisoners.

In Massachusetts in 1990, 97.2 percent of the heads of severely distressed households were females. We present this group as possibly relevant to male commitment rates on two theories. First, the racial/ethnic contrasts among households with children may roughly represent the racial/ethnic contrasts in the developmental environments of our sample young men. Second, for each severely distressed household headed by a woman with children there is at least one male who is likely to be in a similarly distressed socioeconomic position (and who, in practice, may be a member of the household hidden from the welfare bureaucracy). To implement both of these concepts, we present two counts – all Kasarda households and all those with heads aged between 20 and 39.

- <sup>24</sup> Black to Hispanic comparisons are also significant in many but not all instances.
- <sup>25</sup> The average length of one side of the 95 percent confidence interval for commitment rates in the five lower poverty deciles is 86 for Blacks, 103 for Hispanics, and four for Whites; thus many of the entries in each column are not significantly different from each other.
- <sup>26</sup> See note 19.
- <sup>27</sup> See note 10.
- <sup>28</sup> See note 22.
- <sup>29</sup> For most of the larger aggregates presented in the text, the confidence intervals are much narrower. For example, for white males (age 20-39) in the four largest cities, the 95 percent confidence window is approximately 1 percent to either side of the estimate. For the smaller groups of minority males in lower poverty rate deciles, the 95 percent confidence window is approximately 9 percent to either side of the estimate. These computations are based on Bureau of the Census 1995, Appendix C. The counts of males in the very small non-poverty minority (>2/3) neighborhoods are subject to greater error, and confidence intervals for ratios are not estimated for them in Table 5.
- <sup>30</sup> The IPUMS data are based on a sample of 5 percent of all census questionnaires. The sampling universe for which we present IPUMS data is



the four largest cities in Massachusetts, having a population in total of 1.0 million. The aggregates in Table 6 (with a couple of exceptions) are greater than 2,500. For aggregates of 2,500 within samples of areas having a population of 1.0 million, unadjusted standard error is estimated at 220. ( $1.96 * 220 / 2,500$  is the 17 percent error magnitude asserted in the text.) The IPUMS is a sample clustered by household so that person counts that may select multiple persons in the same household are subject to positive design error adjustment. Our study counts men 20 to 39, unlikely to be duplicated in a single household, so that generally our aggregates can be expected to have lower error than the 17 percent quoted (Bureau of the Census 1993; Ruggles and Sobek 1997).

<sup>31</sup> Personal communication from Alan Zalavsky of Harvard Medical School of unpublished Census memoranda: Undercount for non-home-owning black males aged 18 to 29 in urbanized areas in the Northeast is 15.83 percent. Overall undercount of black males, including those aged 30 to 39 and homeowners, is probably smaller. The undercount for Hispanic males may be greater due to citizenship concerns among some, but we lack good estimates of this.

<sup>32</sup> See Bureau of the Census 1995 (documentation).

<sup>33</sup> The ratio of the adjustments in the commitment rate denominator for males 20 to 39 in the four largest Massachusetts cities is 1.5 black to white and 2.4 Hispanic to white by selecting those with incomes under poverty, 1.5 and 2.1 using 200 percent of poverty and 1.5 and 2.3 using 250 percent of poverty.

<sup>34</sup> Computations from Table 1.

<sup>35</sup> In the poorest decile, computing as in Table 5, the black-to-white commitment rate ratio for non-drug offenses is 5.3. The Hispanic-to-white ratio is 3.6. The black-to-white ratio widens to 9.0 in the most affluent five deciles. In the four largest cities, limiting the denominator to males with income below 200 percent of poverty and lacking a high school diploma, and computing as in Table 6, the adjusted non-drug commitment ratios are 2.1 (Black-to-White – 95 percent C.I. 1.8 to 2.4) and 0.5 (Hispanic-to-White – 95 percent C.I. – 0.5 to 0.7). For the offense of robbery alone, in the same selection, the ratios are 2.9 (Black-to-White – 95 percent C.I. 2.1 to 3.9) and 0.6 (Hispanic-to-White – 95 percent C.I. – 0.4 to 0.8).

<sup>36</sup> We lack good data on the racial breakdown of narcotics officers in Massachusetts, but nationwide in 1993, 80.9 percent of local police officers were non-Hispanic Whites (Bureau of Justice Statistics 1996). Massachusetts being a state with proportionally fewer blacks and Hispanics than the nation, it is safe to guess that 90 percent or more of local police officers in Massachusetts are non-Hispanic whites.

<sup>37</sup> See Brownsberger 1997b for a limited finding that on a statewide basis, blacks and Hispanics are admitted to treatment for cocaine and heroin problems at a rate 1.7 to 7 times greater than whites. Even the high end of

this range can easily be factored away by the socioeconomic contrasts studied in this paper. This author is unaware of any study analyzing data on the neighborhood poverty and race of drug users. See Brownsberger 1997a for a critique of the national survey data as they apply to frequent cocaine and heroin use.

- <sup>38</sup> Compare the stories about the "New York Boys" in Simon and Burns 1997.  
<sup>39</sup> One senior Massachusetts prosecutor's explanation of racial disparities was, in effect, "Of course - if any white boy tried to deal cocaine in this city, they'd be killed."  
<sup>40</sup> See, for example, Sampson and Bartusch 1999.

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