Economic Inequality, Family Disruption, and Urban Black Violence: Cities as Units of Stratification and Social Control*

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Abstract

We examine the city-level relationship between income inequality, family disruption, and rates of violent crime among blacks by viewing communities as units of both stratification and social control. The former emphasizes socioeconomic variables, such as inequality, while the latter stresses social disorganization variables such as family disruption as determinants of violent crime. We find that income stratification within black communities (black-to-black inequality) has a strong positive effect on the rates of black violence, but the effect is indirect; income inequality increases family disruption, which elevates the rates of black violence. We argue that using a racially bounded indicator of income inequality has greater theoretical parsimony than using a measure of racial inequality (white-to-black) or overall (total) inequality. The failure in previous research both to employ theoretically appropriate measures of income inequality and to consider indirect as well as direct effects of inequality may explain why the evidence of a relationship between inequality and crime has been weak in previous studies.

A central yet neglected issue facing sociology concerns the rise of inner-city dislocations, that is, urban ghettos characterized by chronic joblessness, pervasive welfare dependence, disrupted families, widespread teenage parenthood, and other indicators of social malaise (Wilson 1991). Most troublesome, perhaps, is the unusually high level of violent crime in black communities. Homicide is the leading cause of death among urban black males, and black robbery rates are roughly ten times higher than white rates (U.S. Department of Justice 1985). Although blacks represent only 12% of the population, they account for more than one-half of all robbery and homicide arrests (U.S. Department of Justice 1990: Table 43).

Despite the gravity of the problem, there is a shortage of racially disaggregated empirical research that examines structural conditions contributing to

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urban black violence; there also are shortcomings in the research that has been done. First, many social scientists apparently avoid race-related research on such potentially stigmatizing behavior as crime for fear of being misunderstood or labeled racist. Second, the data needed to conduct an aggregate analysis that links black violence rates to structural conditions is limited because violent-crime statistics that provide race-specific counts by city or other macrosocial units are not readily available. Numerical ecological-level studies have used reported offense rates per population, but few have identified the race of the offender (e.g., Harer & Steffensmeier 1992; Huff-Corzine, Corzine & Moore 1986; LaFree, Drass & O'Day 1992; Messner & Golden 1992; Peterson & Krivo 1993; Sampson 1987). Third, researchers typically use global measures of structural indicators (e.g., of income inequality, poverty) when race-specific measures are more appropriate. Very little research has been done that combines race-specific measures of crime with race-specific measures of structural conditions of theoretical importance. Fourth, past research has been limited by assumptions of direct causation by structural conditions when indirect causal links are more plausible theoretically. Finally, most ecological research on crime has viewed communities solely from a stratification perspective, ignoring the equally important sociological tradition which views communities also as units of social control.

In the present study we extend previous research in the area by examining the relationships among urban black violence, economic inequality, and family disruption in U.S. cities that vary considerably along these dimensions. We probe for direct and indirect effects of structural determinants of urban black violence using race-disaggregated rates of violent offending.

Conceptual Framework: Communities as Units of Stratification and Social Control

In contrast to the criminological tradition that seeks to distinguish offenders from nonoffenders or to explain individual involvement in criminal behavior, the macrosocial or community-level explanation of crime seeks to determine the elements of community structures that produce differential rates of crime (Byrne & Sampson 1986). Macrolevel research has been used in attempts to isolate characteristics of communities, cities, or even societies that lead to high rates of crime. As such, the ecological fallacy of inferring individual-level relations based on aggregate data is not at issue because the unit of explanation and analysis is the community.

The study of communities and crime can be approached by viewing the community as either a unit of stratification or a unit of social control. The stratification framework considers the effects on aggregate crime rates of socioeconomic status variables such as poverty, unemployment, and income inequality (e.g., Allan & Steffensmeier 1989; Blau & Blau 1982), whereas the social control perspective focuses on social-disorganization variables such as formal and informal community controls, family disruption, and residential mobility (e.g., Bursik & Webb 1982; Skogan & Maxfield 1981). Despite criminologists' disenchantment with the ability of socioeconomic variables (e.g.,
income inequality, unemployment) to account for aggregate variations in crime rates, the stratification approach continues to dominate research in the area.

In the present research we employ a model of community structure and crime that links key variables from both perspectives (i.e., stratification and social control) and apply that framework toward an explanation of high rates of black urban violence.

**STRATIFICATION: ECONOMIC INEQUALITY**

Unequal distribution of wealth or income is often thought to generate high crime rates in general and high crime rates among blacks in the U.S. in particular (Harer & Steffensmeier 1992). For example, Blau and Blau (1982) argue that the societal injustices engendered by income inequality lead to hostile sentiments and weakened support for social norms that restrain such sentiments (i.e., anomie), which in turn leads to criminal behavior. Where egalitarian principles prevail, the expression of hostility or frustration through violence is particularly pronounced when deprivation results from "inborn" inequalities based on ascriptive characteristics such as race (Blau & Blau 1982:118).

Consistent with this hypothesis, Blau and Blau (1982) report that urban areas characterized by inequality in the total population and especially by extreme economic inequality between race groups are areas with high rates of violent crime. Subsequent studies, however, suggest that the relationship between inequality and violent crime rates is far from clear. Although some researchers report results consistent with the Blaus' original thesis (Blau & Golden 1986; Blau & Schwartz 1984) and others report partial support (Balkwell 1990; Messner & Golden 1992; Williams 1984), most studies fail to support Blau and Blau's conclusions (Balkwell 1983; Carroll & Jackson 1983; Harer & Steffensmeier 1992; Messner & Golden 1985; Messner & South 1986; Patterson 1991; Rosenfeld 1986; Sampson 1985b). In fact, Rosenfeld (1986) concludes that "the dollar gap between blacks and whites has no independent influence on crime rates" (127).

Harer and Steffensmeier (1992) recently tested the Blaus' thesis that the criminogenic effects of inequality should be greater for blacks by analyzing race-specific violent crime rates for large metropolitan areas using a within-race inequality measure. Drawing on reference group theory, Harer and Steffensmeier reasoned that within-race inequality is likely to be a better predictor of violence than either between-race or societal inequality because neither blacks nor whites use the other group as a standard of comparison. They write: "People assess how well, or badly, they are faring economically not by comparing themselves with the population as a whole, but with particular reference groups with whom they share some status attribute" (1036). Particularly relevant here are the studies which show that blacks do not use whites as referents for feelings about themselves and that the "significant others" of blacks, especially those living in segregated urban communities, are likely to be black (Hughes & Demo 1989; Yancey, Rigsby & McCarthy 1972).

Interestingly, Harer and Steffensmeier's results show that income inequality — regardless of how it was measured — was generally not an important
explanatory factor in black violence but was for whites. Their study, however, considered only direct effects and did not address whether the effects of income inequality on violence rates among blacks is mediated by other factors such as family structure.

SOCIAL CONTROL: FAMILY DISRUPTION

Family disruption may contribute to higher crime levels in a number of ways. The traditional focus in criminology has been at the individual level and concerns whether broken homes produce delinquents. Despite the intuitive nature of such a relationship, the evidence of an individual-level link between family structure and crime is weak and inconsistent (Ensminger, Kellam & Rubin 1983; LaFree, Drass & O'Day 1992; Ross & Sawhill 1975; Wilkinson 1980). The relationship appears to hold mainly for minor crimes, particularly status offenses (Johnson 1986; Rankin 1983), with children from single-parent families more prone to involvement in truancy and running away from home.

Reiss (1986) and Sampson (1987) have proposed an aggregate-level link between family structure and crime that extends the systemic theory of Kasarda and Janowitz (1974). The systemic model views a community as "a structure which has ecological, institutional, and normative dimensions. The local community is viewed as a complex system of . . . formal and informal associational ties rooted in family life and on-going socialization processes" (328). Formal networks are the links between formal community groups such as volunteer, business, political, sports, and youth organizations, as well as churches, schools, and libraries. These formal institutions are the main conduit by which communities channel younger members into the wider society. The stronger these formal networks, the greater the capacity to route members toward conventional lines of action (Kornhauser 1978). But in the context of community disorder, these links become weakened and the socialization and control capacity of the community is diminished. Skogan (1992) finds that the level of disorder in a community is positively related to both fear of crime and actual victimization (robbery). Sampson (1987) speculates that in areas where single-parent families are the norm, formal social controls will be weaker. Indeed, rates of participation in these formal organizations are lower among single-parent families than among dual-parent families (Bloom 1966; Kellam et al. 1982). This implies that high levels of family instability reduce the collective capacity of communities to control those behaviors that pose a threat, such as criminal acts.

Communities also are linked through informal networks, which include friendship ties or other associational links not maintained through formal organizations (Felson 1986; Sampson 1986). The control capacity of informal networks is evident in the supervision of community property and neighborhood children. Additionally, because delinquency is primarily a group activity (Zimring 1981), the opportunity for delinquent behavior is lowered by a network that supervises youth and gang activities (Felson 1986).

Those areas with high numbers of single-parent families simply have fewer parents or guardians for links to informal control. An added factor is that nonmarried and divorced mothers have less contact with neighbors than
married mothers (Alwin, Converse & Martin 1985) and are less likely to monitor the social activities and associations of their children (McLanahan & Booth 1989; McLanahan & Bumpass 1988). Lower contact with neighbors is partly due to higher rates of residential mobility among single-parent families, which lower their stakes in the neighborhood. But lower levels of community involvement by single parents also reflect a role-overload produced by the simultaneous burdens of employment and child care. Single mothers, a group that is particularly vulnerable to poverty, have higher rates of labor force participation than married women (Waite 1981) despite the fact that child care for single mothers remains costly (Bianchi & Spain 1986; Presser 1989).

The disproportionate involvement of blacks in violent crime may be linked to high rates of nontraditional family structures. More than one-half (55%) of black children were born to unwed mothers in 1980, as compared to only one-fifth of all children born among whites (Espenshade 1985). The large majority of black children (86%) will spend some time in a single-parent family and, overall, black adults spend only half the time in marriage that white adults do (Jaynes & Williams 1989). At the individual level, the role played by family stability in stemming violence may be particularly salient for blacks because of the objectively harsh conditions and delinquent organization of the inner cities. At the aggregate level, the prevalence of nontraditional family structures among blacks may reduce the capacity of their communities and neighborhoods to exert effective control, particularly over young males. Although some black families have strong kinship ties, fieldwork by Furstenberg and colleagues (1990) suggests that black single mothers who reside in very poor, crime-ridden neighborhoods typically do not have extensive kin nearby and tend to retreat into their dwellings and isolate themselves from the community. Moreover, by the time their sons and daughters are teenagers, most single mothers do not live with their mothers or kin (Hogan, Hao & Parish 1990).

Thus, there is evidence that an aggregate-level relationship between family structure and violent crime exists. Areas with high rates of family disruption are likely to have fewer formal as well as informal networks that can be invoked for social control. When this collective capacity is diminished, rates of serious crime (including violence) are likely to increase. A macrotheoretical link between family structure and crime is particularly salient to urban black communities where rates of both family disruption and violence are high.

ECONOMIC INEQUALITY AND FAMILY STRUCTURE

A common theme in the sociological writings on the relationship between socioeconomic variables and family structure is that traditional family structures are undermined by the economic disadvantages experienced by one group relative to another. Income comparisons have been made across gender categories (Oppenheimer 1988) and race groups (Ross & Sawhill 1975), across a combination of both gender and race groups (Becker 1981), and across cohorts (Easterlin 1980). Moreover, a number of factors, especially the growing economic marginality among black males, have been especially disruptive for black families by contributing to out-of-wedlock childbearing (including the man’s propensity to marry the mother of his child after the birth) and to marital

In various ways, inequality and economic disadvantage contribute to family instability. At the individual level, economic inequality causes bitterness, resentment, and a sense of exclusion on the part of those unable to participate on an equal basis. Those at the bottom end of a highly stratified income distribution may judge their financial position as insecure and their prospects for the future as uncertain, and thus may be less willing to shoulder the financial responsibilities associated with married life. This situation appears to be highly applicable to the plight of urban black males, many of whom are experiencing declining employability (Tienda & Donato 1993) in highly polarized environments (Wilson 1987). In addition, black females, living in the same environment, also may be inclined to delay marriage because they are likely to harbor a high degree of uncertainty regarding the economic attributes of potential partners (Oppenheimer 1988).

At the aggregate level, inequality weakens family stability by promoting widespread delegitimization of conventional norms or institutions and by lessening the effectiveness of social controls that channel community members (especially youth) into conventional roles. In reviewing Merton’s theory of social disorganization, Messner (1988) notes that a high degree of inequality is essentially a system disjuncture produced by the contradiction between what should and what can be achieved. The result is a widespread ambiguity or cynicism regarding the conventional social system and a weakened attachment to it. Thus, highly visible inequities undermine the power of communities to cultivate allegiance to the conventional order and to produce “successful” adults who are motivated to assume work and family roles.

Expectations

The above review suggests that structural links exist between economic inequality and family disruption and that these links have important consequences for controlling crime and delinquency (especially serious crime) among urban blacks. From a sociological perspective, these structural links are theoretically important but have not been explored systematically. Previous research has not probed these links using racially disaggregated crime data, which may help to explain the unexpected finding that economic inequality has weak or insignificant effects on aggregated crime rates and may underestimate the relevance of economic deprivation to explaining black criminality (see earlier review).

Two major hypotheses guide the research reported below. The first is that variations in rates of black family disruption in urban areas will be positively related to rates of black violence, net of other factors. Since family disruption is linked primarily to the social control of juveniles and their peer groups, the effect of community family structure should be strongest for juveniles. But family disruption also is expected to be related significantly to adult violence, since disproportionate numbers of those who are divorced or separated in a pop-
ulation indicate social disorganization and instability in adult personal relations (Sampson 1987).

The second major hypothesis is that economic inequality will have an indirect positive effect on black violence, mediated by family disruption. This prediction is derived in part from the expectation that economic inequality will have a direct positive effect on black family disruption. We also anticipate that black-to-black inequality will have strong direct effects on black family disruption and stronger indirect effects on black violence than the traditional white-to-black and overall measures of inequality. Additionally, we expect that the direct effects of economic inequality on black violence will be trivial, regardless of how it is measured.

Thus, the present study goes beyond prior research on “communities and crime” in several important ways: by viewing communities not only as units of stratification but as units of social control; incorporating race-specific measures of inequality, family structure, and violent crime that are more theoretically relevant than societal or between-race measures; and considering indirect as well as direct effects of economic inequality on violent crime rates. We conclude by discussing the implications of our findings for theory and research on structural or community-level explanations of urban black violence and on the relation between community structure and crime more broadly.

Data and Methods

The units of analysis for this study are the 158 cities in the U.S. in 1980 that contain more than 100,000 residents and more than 1,000 black residents. The city-level population counts and socioeconomic data were taken from the Summary Tape Files of the U.S. Bureau of the Census. In those instances where the required information was not available in tape form at the city level, additional data were obtained from the published volumes of the 1980 census. To the census extracts, we added FBI city arrest data, disaggregated by race and age (juvenile vs. adult). The dependent variable is race-specific arrest rates for homicide and robbery. These rates were averaged across 1980-82 in order to avoid any year-to-year fluctuations and were logarithmically transformed (natural log) to induce homoskedasticity and to counteract the floor effect of these positively skewed distributions (see Steffensmeier 1980 for a discussion of the calculation of demographically adjusted arrest rates). Finally, to correct for possible jurisdictional bias that could affect comparison of race-specific rates across ecological units, the rates were multiplied by the local offense/arrest ratio (see Sampson 1987). Though Uniform Crime Report (UCR) arrest data have been subject to numerous criticisms, it is widely recognized that homicide arrest rates, and to a lesser extent robbery rates, are unbiased and accurately reflect levels of black and white offending (Hindelang 1978; Sampson 1987).

MEASUREMENT OF INCOME INEQUALITY AND FAMILY DISRUPTION

Three measures of income inequality are used, each based on the distribution of family income. First, overall inequality measures the total income distribution and is defined as the level of inequality (Gini coefficient) for all families in each city. Second, racial inequality (or white-to-black inequality) is a measure of the race gap
in family income and is measured as the white minus the black mean of the log of family income. Third, we include a black-to-black measure of inequality because blacks may use other same-race members as a comparison to assess economic well-being. This is a racially bounded measure (Gini coefficient) that is based on the income distribution of black families in the city. Family disruption is defined as the percentage of black households with female heads in the city. It has been widely used in previous research and is intended to reflect the extent of nontraditional households within a specific geographic area.

MEASUREMENT OF CONTROL VARIABLES

We selected control variables on theoretical grounds and from previous empirical research: The male marriage pool index (MMPI) for blacks (see Sampson 1987 and Wilson 1987) is a marriage market indicator of the number of employed 16- to 64-year-old black males per 100 similarly aged black females. We also include the mean public assistance payment (welfare) to blacks because these payments vary across cities and may influence family formation (Murray 1984). For selected models we included per capita family income (income) to control for variations in black income levels across cities (see results section). Given the age-dependent nature of crime, we also control for the median age (age) of black males.

For some variables, race disaggregation was not applicable or was not theoretically justified. The log of the city population controls for the variation in the size of urban areas. Percent black of the city population and a north (south) indicator are included as crude but often-used controls for contextual cultural effects (Curtis 1975; Huff-Corzine, Corzine & Moore 1986; Liska & Chamlin 1984). A west dummy variable controls for East-West variations in the rates of family disruption. Finally, because prior research (Sampson 1983 and Wilson 1984) has shown that a high structural density of housing units can lower guardianship behavior and thereby increase the opportunity to perform criminal acts, we control for the percentage of housing units in a city that are located in attached units of five or more.

We employed standard ordinary least squares (OLS) multiple regression as the chief analytical tool. However, we also estimated several two-stage simultaneous least squares models (2SLS) to examine the issue of reverse causation (see separate section below). The OLS model that predicts the percentage of female-headed households is represented as follows:

\[ r = a + \beta_1(MMPI) + \beta_2(welfare) + \beta_3(age) + \beta_4(percent\ black) + \beta_5(north) \\
+ \beta_6(west) + \beta_7(structural\ density) + \beta_8(pop.) + \beta_9(white-black\ ineq.) \\
+ \beta_{10}(black-black\ ineq.) + \beta_{11}(overall\ ineq.) \\
+ \beta_{12}(income[selected\ model\ s,\ see\ Results\ section]) \]

where \( r \) is the percentage of female-headed households. The model predicting the juvenile and adult crime rates is
\[ \lambda = a + \beta_1(\text{MMPI}) + \beta_2(\text{welfare}) + \beta_3(\text{age}) + \beta_4(\text{percent black}) + \beta_5(\text{north}) + \beta_6(\text{west}) \\
+ \beta_7(\text{structural density}) + \beta_8(\text{pop.}) + \beta_9(\text{white-black ineq.}) + \beta_{10}(\text{black-black ineq.}) \\
+ \beta_{11}(\text{overall ineq.}) + \beta_{12}(\text{percent fem.-head. households}) \\
+ \beta_{13}(\text{income[selected models, see Results section]}) \]

where \( \lambda \) is the natural log of the city juvenile/adult crime rate. The indirect effect of a given predictor on the rate of crime is \( \beta_1(\beta_{12}) \), where \( \beta_1 \) is any standardized regression parameter from the first equation.\(^9\)

**Results**

We present descriptive statistics in Table 1. The mean for overall inequality (0.19) is much smaller than the mean for black-to-black inequality (0.34), suggesting that inequality in U.S. cities is considerably greater among blacks than in the overall city population. This critical feature of the income distribution in black urban communities is not discernible with the more commonly used global indicator.

A notable feature of Table 1 is the high levels of economic hardship, family disruption, and violent crime experienced by blacks in U.S. cities. In addition to having greater income stratification, black communities are distinctly poorer, revealing a per capita family income that is about one-half of the per capita family income of nonblack populations ($3,893 vs. $6,206). Black women also face an undersupply of marriageable partners (male marriage pool index). For every 100 black females, there are 16 fewer employed males (59.2) than among their nonblack counterparts (75.9). These marriage-market differences apparently contribute to the race differentials in family headship. Across the 158 U.S. cities in the sample, the mean percentage of black female-headed households is nearly three times that of nonblacks (26.7% vs. 9.3%). In black communities, nearly one-half of households with children are headed by females (43.9%) compared to just over one-sixth (17.7%) among nonblacks.

Table 1 also reveals the magnitude of urban black violence. For example, the mean rate of black adult robbery is nearly ten times higher than the nonblack rate (2,553.1 vs. 278.3 per 100,000), and the average urban homicide rate among blacks (87.1) is roughly six times greater than the rate of nonblack homicide (13.7). Substantial race differences in rates of violence are evident for the younger age groups as well. In fact, the average rate of homicide among black juveniles ages 17 and younger (15.9) is not only higher than the observed rate for nonblack juveniles (5.4), but also is higher than the homicide rate for nonblack adults ages 18 and older (13.7).

These racial differentials conform to Wilson’s (1984) depiction of the black urban underclass; nonetheless, black communities are not homogeneous. While they do fare much worse than the total city population, there is still considerable variation among black communities in socioeconomic levels and in rates of family disruption and violence. Compared to the total city population, blacks show a high degree of economic polarization (black Gini of 0.34 vs. overall Gini of 0.19), more variability in the pool of economically viable males (MMPI for blacks is 18.8 vs. 6.3 for nonblacks), and greater differences across
TABLE 1: Descriptive Statistics of City-level Structural Variables for Blacks and Nonblacks in 158 U.S. Cities in 1980

<table>
<thead>
<tr>
<th>Category</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black homicide*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Juvenile homicide</td>
<td>15.9</td>
<td>24.2</td>
</tr>
<tr>
<td>Adult homicide</td>
<td>87.1</td>
<td>67.9</td>
</tr>
<tr>
<td>Black robbery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Juvenile robbery</td>
<td>2,013.1</td>
<td>3,432.6</td>
</tr>
<tr>
<td>Adult robbery</td>
<td>2,553.1</td>
<td>3,147.3</td>
</tr>
<tr>
<td>Nonblack homicide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Juvenile homicide</td>
<td>5.4</td>
<td>7.7</td>
</tr>
<tr>
<td>Adult homicide</td>
<td>13.7</td>
<td>11.0</td>
</tr>
<tr>
<td>Nonblack robbery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Juvenile robbery</td>
<td>317.1</td>
<td>279.2</td>
</tr>
<tr>
<td>Adult robbery</td>
<td>278.3</td>
<td>231.0</td>
</tr>
<tr>
<td>Percent black households female-headed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>With own children female-headed</td>
<td>26.7</td>
<td>5.9</td>
</tr>
<tr>
<td>Percent nonblack households female-headed</td>
<td>43.9</td>
<td>9.3</td>
</tr>
<tr>
<td>Employed black males/100 females (MMPI)</td>
<td>59.2</td>
<td>18.8</td>
</tr>
<tr>
<td>Employed nonblack males/100 females (MMPI)</td>
<td>75.9</td>
<td>6.3</td>
</tr>
<tr>
<td>Black mean public assistance</td>
<td>2,622.8</td>
<td>790.4</td>
</tr>
<tr>
<td>Nonblack mean public assistance</td>
<td>2,424.8</td>
<td>366.7</td>
</tr>
<tr>
<td>Black per capita income</td>
<td>3,893.6</td>
<td>820.1</td>
</tr>
<tr>
<td>Nonblack per capita income</td>
<td>6,206.3</td>
<td>942.3</td>
</tr>
<tr>
<td>Overall inequality (Gini)</td>
<td>0.19</td>
<td>0.08</td>
</tr>
<tr>
<td>Racial inequality (white-black [mean fam inc.])</td>
<td>1,631.0</td>
<td>291.0</td>
</tr>
<tr>
<td>Black-to-black inequality (Gini)</td>
<td>0.34</td>
<td>0.08</td>
</tr>
<tr>
<td>Black male median age</td>
<td>23.6</td>
<td>2.0</td>
</tr>
<tr>
<td>Nonblack male median age</td>
<td>30.1</td>
<td>2.8</td>
</tr>
<tr>
<td>Percent black</td>
<td>19.2</td>
<td>16.7</td>
</tr>
</tbody>
</table>

| Structural density                               |        |           |
| (Percent rental housing 5+ units)                | 25.6   | 10.4      |
| Population size (cities ≥ 100,000)               | 335,468| 642,411   |
| Percent cities North                             | 53.2   | —         |

* Original metric shown. Natural log of the offense rates used in the analysis.

b Original metric of family incomes shown. However, analysis uses difference in the mean of the natural log of family income.
cities in the level of family disruption (5.9 for blacks and only 1.7 for non-blacks). Black communities also exhibit strong variability in the rates of violent crime. In every age-offense category, the standard deviation across black communities is actually greater than the mean rate itself.

**INCOME INEQUALITY, FAMILY DISRUPTION AND BLACK VIOLENCE RATES**

Table 2 provides the OLS standardized estimates for the model predicting variations in the percentage of black female-headed households (first column). By far the strongest predictor in the model is *black-to-black income inequality*. A one standard deviation increase in black-to-black inequality in black communities is associated with a rise of nearly one-half a standard deviation in the rates of female-headed households ($\beta = 0.44$). The other two inequality measures, *white-to-black* (i.e., between-race or racial inequality) and *total inequality*, produce estimates that not only are not significant but also are in the opposite direction (-0.15, -0.12). These findings underscore the limitations inherent in traditionally employed inequality measures because contrary to our within-race predictor (black-to-black inequality), they fail to capture the uniqueness of the income distribution in black communities.

Also consistent with theoretical expectations, the rates of black family disruption are highest in both northern (0.07) and eastern (-0.16) cities that have large black concentrations (0.28), and in urban areas with higher proportions of young black males (-0.28), lower levels of male employment (MMPI -0.27), and higher levels of public assistance (0.21). Taken together, the results show that embedded structural features such as economic hardship and labor-market marginality are major determinants of black family disruption.¹⁰

Table 2 also presents the results on the relation between inequality and black violent crime, with the latter subdivided into juvenile and adult homicide, and juvenile and adult robbery. Three findings stand out. First, none of the inequality measures has a direct effect on black violence. The coefficients for white-to-black and total inequality are not significant across all four combinations of age and violence, and black-to-black inequality is nonsignificant for three of the four categories (the exception is adult robbery). These findings cast doubt on the traditional view that economic inequalities, including racial inequality, have *direct* criminogenic effects on black violence by fostering feelings of resentment and relative deprivation (Blau & Blau 1982).

Second, family disruption is the strongest predictor of juvenile violence, whether homicide (0.43) or robbery (0.47). A one standard deviation rise in family disruption levels is associated with approximately a one-half standard deviation increase in juvenile violence. Family disruption is also associated with black adult violence, but to a lesser degree. The effect of family disruption on adult homicide is 0.25, but the corresponding value for adult robbery is not significant.

Third, although *black-to-black inequality* has no direct effect on black violence, it has a substantial indirect effect, mediated by family disruption. The indirect effects of *black-to-black inequality* on juvenile violence are especially strong,
### TABLE 2: OLS Standardized Regression Estimates Predicting the Rate of Black Female-headed Households and the Log Rate of Black Homicide and Robbery in the U.S. Cities, 1980

<table>
<thead>
<tr>
<th>Structural variables</th>
<th>Black Homicide</th>
<th></th>
<th></th>
<th>Black Robbery</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Black Female-headed Households</td>
<td>Juveniles</td>
<td>Adults</td>
<td>Juveniles</td>
<td>Adults</td>
<td>Juveniles</td>
</tr>
<tr>
<td></td>
<td>β</td>
<td>Dir.</td>
<td>Indir.</td>
<td>β</td>
<td>Dir.</td>
<td>Indir.</td>
</tr>
<tr>
<td>Employed black males per 100 black females (MMPI)</td>
<td>-0.27</td>
<td>0.05</td>
<td>-0.12</td>
<td>0.22</td>
<td>-0.07</td>
<td>0.22*</td>
</tr>
<tr>
<td>Mean black welfare payment</td>
<td>0.21*</td>
<td>-0.04</td>
<td>0.09</td>
<td>-0.07</td>
<td>0.05</td>
<td>0.37*</td>
</tr>
<tr>
<td>Black male median age</td>
<td>-0.28*</td>
<td>0.18+</td>
<td>-0.12</td>
<td>0.13</td>
<td>-0.07</td>
<td>0.16</td>
</tr>
<tr>
<td>Percentage black</td>
<td>0.28*</td>
<td>0.09</td>
<td>0.12</td>
<td>-0.10</td>
<td>0.07</td>
<td>-0.26*</td>
</tr>
<tr>
<td>North (South = 0)</td>
<td>0.07+</td>
<td>-0.10</td>
<td>0.03</td>
<td>-0.01</td>
<td>0.02</td>
<td>-0.04</td>
</tr>
<tr>
<td>West (East = 0)</td>
<td>-0.16*</td>
<td>0.27*</td>
<td>-0.07</td>
<td>0.39*</td>
<td>-0.04</td>
<td>-0.04</td>
</tr>
<tr>
<td>Structural density</td>
<td>0.00</td>
<td>0.08</td>
<td>0.00</td>
<td>0.05</td>
<td>0.00</td>
<td>0.24*</td>
</tr>
<tr>
<td>Population size (ln)</td>
<td>0.04</td>
<td>0.17*</td>
<td>0.02</td>
<td>0.13</td>
<td>0.01</td>
<td>0.11</td>
</tr>
<tr>
<td>Income inequality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White-to-black</td>
<td>-0.15</td>
<td>-0.13</td>
<td>-0.06</td>
<td>0.19</td>
<td>-0.04</td>
<td>-0.10</td>
</tr>
<tr>
<td>Black-to-black²</td>
<td>0.44*</td>
<td>0.29</td>
<td>0.19</td>
<td>-0.03</td>
<td>0.11</td>
<td>0.06</td>
</tr>
<tr>
<td>Overall</td>
<td>-0.12</td>
<td>-0.13</td>
<td>-0.05</td>
<td>0.32</td>
<td>-0.03</td>
<td>0.08</td>
</tr>
<tr>
<td>Black female-headed households</td>
<td></td>
<td>0.43*</td>
<td>—</td>
<td>0.25+</td>
<td>—</td>
<td>0.47*</td>
</tr>
<tr>
<td>R²</td>
<td>0.75</td>
<td>0.27</td>
<td>0.21</td>
<td>0.47</td>
<td>0.38</td>
<td></td>
</tr>
</tbody>
</table>

* Gini coefficient of income concentration
+ p < .10 * p < .05
pointing again to a differential effect of family structure on juvenile crime (indirect effect on juvenile homicide is 0.19 and for robbery, 0.21). In fact, no other variable in the model exhibits such a consistently strong association, either directly or indirectly, with juvenile violence.

That black-to-black inequality has strong positive effects on black violence which are mediated by family disruption indicates that the simple comparison of the direct effects of economic variables on black crime is misleading. Adverse economic conditions appear to influence black crime indirectly, especially juvenile black crime. These findings are consistent with the theoretical framework suggested earlier that communities are units of both stratification and social control. A high degree of stratification (e.g., income inequality) undermines community institutions (e.g., the family) whose main function is to socialize youth, regulate their behavior and misbehavior, and route them into conventional roles. As expected, the effects of weakened community controls have a greater bearing on juvenile than on adult behavior.\(^\text{11}\)

So far, our analysis has identified the complex interrelationship among structural characteristics such as income inequality and family structure that apparently contributes to high rates of black urban violence. Our analysis has also illuminated why recent studies have found that economic inequality has weak or insignificant effects on aggregate crime rates.

INCOME INEQUALITY AND FAMILY STRUCTURE IN BLACK COMMUNITIES: NONRECURSIVE CAUSATION

Our results support the hypothesis that black-to-black income inequality increases the rates of violent crime in black communities through an underlying pattern of family disruption that serves to diminish social controls. But the causal mechanism implied in our analysis may be too simplistic in its recursive assumptions. The strong association we found between black-to-black income inequality and family disruption leaves open the possibility of reverse (or reciprocal) causation. In formal terms, the empirical relationship between black-to-black inequality and family disruption can result from: (1) a one-way causation whereby black-to-black inequality increases family disruption; (2) a one-way causation whereby family disruption increases black-to-black inequality; or (3) a two-way causation whereby black-to-black inequality and family disruption are reciprocally related.

If causal mechanism 1 is true, then our results support the position that inequality increases the rates of violence indirectly by first increasing the rates of family disruption. The causal significance of inequality also holds if mechanism 3 applied, since reciprocal causation would still mean that black-to-black inequality increases family disruption in black communities. But if causal mechanism 2 is manifest, then our models are fundamentally misspecified and our inferences regarding the determinants of urban black violence are inappropriate. Thus, if causal mechanisms 1 and 3 are falsified, our assertion of an indirect effect of black-to-black inequality on violence would be undermined, while falsifying mechanism 2 would strengthen our inferences.

To address these issues, we relaxed the recursive assumptions in the previous regressions and estimated a simultaneous equation model that takes
into account the possible nonrecursive nature of the association between black-to-black income inequality and the rate of female-headed families. In contrast to the recursive model presented in Table 2, the model here treats black-to-black inequality as endogenous and simultaneously determined by family disruption.

Identifying a nonrecursive model requires a priori assumptions that are sufficiently restrictive to obtain a unique set of estimated parameters, since there exists no unique solution. Fortunately, these assumptions are available on the basis of the literature and the OLS analysis. First, there is little reason to believe that structural density and population size would have any impact upon family disruption, net of relevant controls (despite the standard practice of including these variables in ecological analyses of crime rates). Indeed, the results in Tables 1 and 2 show that neither predictor is related to family structure, irrespective of race group. These effects were constrained to zero in the nonrecursive model. Second, we are unaware of any research that suggests the median age of the black male population would affect the endogenous inequality measure. Indeed, the correlation between the two variables is very weak ($r = 0.05$). Similarly, the relationship between North-South and black-to-black inequality is small ($r = 0.05$), so this effect also was constrained to 0. The identification of the full simultaneous model is achieved, therefore, by invoking the assumption that structural density and population size have zero effects on family disruption and that age and region do not have direct effects on income inequality.

We estimated a two-stage least squares (2SLS) simultaneous model of black-to-black inequality and family disruption, chosen primarily because of its minimal small sample bias (Hanushek & Jackson 1977; Namboodiri, Carter & Blalock 1975). While the estimation is a two-stage procedure, a matrix algebra formula has been devised that can compute the estimates in a single step (e.g., SYSLIN procedure in SAS). This provides more than mere computational ease, since the single-step estimation produces standardized estimates, standard errors and $R^2$ that are more accurate than those produced by the two-step estimation (Berry 1984). The schematic representation of the model and the significant parameter estimates for exogenous factors are shown in Figure 1.

The 2SLS results show clearly that black-to-black inequality and family disruption are reciprocally linked. The effect coefficients in the reciprocal loop are both significant and nearly identical in value — 0.45 for black family disruption and 0.48 for black-to-black inequality. Thus, the effect of black-to-black income inequality on black family disruption comprises a nontrivial element of the empirical association between the two variables. Moreover, the associations between the exogenous variables and family disruption in the nonrecursive model are comparable to those reported for the recursive OLS model in Table 2. The virtually identical estimates for the prediction of family disruption in both models enhances our confidence that the estimates are unbiased and that the nonrecursive specification is appropriate. The substantial effect of black-to-black inequality on family disruption also increases our confidence that black-to-black inequality has an indirect effect on violent crime through family disruption.12

A final substantive problem concerns the causal relationship between family disruption and crime. As in the previous case, the empirical association between
FIGURE 1: Estimates of Two-staged Simultaneous Least Squares Model Predicting Black Family Disruption and Black-to-Black Income Inequality in U.S. Cities, 1980

* Significant effects are indicated by black lines, nonsignificant effects by grey lines.
¥ parameter effect on black-to-black income inequality constrained to 0. Values of T = HO: Parameter = 0 are less than 1.96.
† Parameter effect on family disruption constrained to 0. Values of T = HO:
   Parameter = 0 are less than 1.96.

* p < .10  ** p < .05

the two variables may result not only from a one-way association, as implied in the OLS analysis, but from a reciprocal causal relationship. Specifically, while family disruption may lead to increases in violent crime rates, violence itself may engender increases in family disruption. Sampson (1987) notes that “cities with high crime rates may have high incarceration rates for black males, which would tend to exacerbate marital and family disruption. Even if offenders are not caught or incarcerated, young women may not wish to marry into the criminal element, for males engaged in serious criminal activity in all likelihood make unstable and undesirable mates. Crime may also reflect general community disorganization not tapped by other control variables” (373). Sampson’s analysis suggests that family disruption and violent crime are indeed reciprocal-
ly related, but that the association is due overwhelmingly to a one-way association whereby family disruption increases violent crime rates.

In view of our results and since Sampson's analysis did not include controls for any type of income inequality, it is imperative to reexamine the causal relationship between family disruption and violence while controlling for the various forms of income inequality. The specification and results of our nonrecursive model are presented in Figure 2. Controlling for black-to-black income inequality, the relationship between family disruption and violent crime is no longer reciprocal. While the standardized effect parameter of family disruption on crime is quite substantial (2.04), the reverse effect disappears. Thus, in the presence of appropriate controls, the association between the two variables is not reciprocal, but due exclusively to the impact of family disruption on violent crime.

The model in Figure 2 serves another purpose. It reiterates a major conclusion of our analysis — that the effect of black-to-black inequality on violent crime is indirect, via family disruption. Our nonrecursive specification in Figure 2 permits the estimation of the indirect effect of black-to-black inequality on violent crime while simultaneously controlling for the direct effect, an estimation that was not possible in the previous OLS models. The results in Figure 2 confirm that racially bounded structural inequality does not affect violent crime rates directly, but rather indirectly by first increasing the rates of family disruption (0.37).

Summary and Implications

Building on recent writings on communities and crime, particularly the recent research of Sampson (1987) and Harer and Steffensmeier (1992), the present study examined the importance of community family structure and the direct and indirect effects of income inequality on rates of black urban violence. Our aggregate analysis reveals that among blacks, the independent (direct) effects of income inequality on violence rates are trivial, but the indirect positive effect of high inequality, specifically black-to-black inequality, on violence is quite substantial and is mediated by family disruption. As expected, the effects of family disruption were greater on juvenile violence than on adult violence. In contrast to what one would anticipate on the basis of the literature, racial inequality (i.e., white-to-black income inequality) does not appear to be related, either directly or indirectly, to high rates of black violent crime in urban areas.

We draw a number of implications from these findings. First, these results underscore the importance of disaggregating both the violence rates and their would-be community-level correlates because aggregate measures would have masked the structural sources of violent crime among urban blacks. For future investigators, an important implication is that race-specific studies of structural characteristics are both necessary and practicable.

Second, the fact that inequality has strong effects on black violence which are mediated by family disruption demonstrates the importance of considering not only direct effects but indirect effects of key sociological variables that are presumed to be robust predictors of crime rates. In view of these findings it is
somewhat surprising that the abundant research on the structural determinants of homicide has focused almost exclusively on direct effects. That focus has apparently contributed to misleading conclusions about the relevance of inequality and economic hardship to explaining black criminality.

Third, these findings help to explain the anomalous finding in the criminological literature that economic inequality has small or trivial effects on aggregate crime rates. The anomaly apparently stems from the failure of prior researchers both to racially disaggregate the data and to consider indirect as well as direct effects, thus confounding the true relationships between inequality...
and crime. Moreover, that inequality has indirect effects on black violence through family disruption leads us to disagree somewhat with Harer and Steffensmeier’s (1992) view that researchers should shift attention away from inequality or poverty as a source of black violence. We do agree, however, with their contention that more attention should be given to other structural or community sources of variation in black violence rates. Besides undermining family stability, economic inequality may have additional indirect effects on black violence by reducing other kinds of community controls such as the availability of proactive law enforcement and the availability of social support or resources to deal with neighborhood problems. Economic inequality may attenuate local networks and community involvement at the individual level, and decrease social cohesion and availability of community organizations at the neighborhood level (Greenberg 1986).

More than anything, our findings affirm the parsimony of viewing communities as a unit of stratification on the one hand and a unit of social control on the other. By focusing on the mediating dimensions of community social organization (e.g., family structure) to understand variations in black violence across cities, we advocate the value of a community-level perspective that leads away from a “kinds of people” analysis to a focus on how structural characteristics of collectivities foster violence. In this regard, many very important urban phenomena described by noncriminological sociologists (see Lee’s 1988 review) have yet to appear in community perspectives on crime. Taking such considerations into account offers much promise for advancing our understanding of the ecology of crime, especially the high rates of violence that plague many black communities.

Notes

1. Official statistics on violent crimes committed by blacks are published by the Uniform Crime Report (UCR) system only in the form of national estimates; race-specific counts by city or other macrosocial units are not publicly released by the FBI. Self-report data are limited because they provide information primarily on minor juvenile crimes and are available only for specific geographic locations (e.g., Hindelang, Hirschi & Weis 1981) or for the nation as a whole (Elliott & Age-ton 1980).

2. Two other studies (LaFree, Drass & O’Day 1992; Messner & Golden 1992) are relevant here because they also examine whether between-race inequality is more strongly associated with violence for blacks by analyzing race-specific violent crime rates. LaFree and colleagues report that increases in family income were related to increased (rather than decreased) rates of black violent crime in the U.S. from 1957-88. Messner and Golden, after finding that traditional measures of economic inequality were not associated with black violence, develop an “index of racial inequality” which is shown to be significantly associated with both black and white homicide rates for large U.S. cities. Both these studies, consistent with Harer and Steffensmeier (1992), found that decreasing levels of economic well-being increased white rates of violent crime.

3. We use the term communities in referring to the black urban population for each city. No claim is made that these urban communities comprise a single neighborhood.

4. Several of the variables used in this analysis were obtained from an already existing file extract of Summary Tape File 3C and the UCR city arrest rates. These were kindly provided to us by Robert J. Sampson (see Sampson 1990).

5. While robbery does contain elements in common with property crimes, by definition it also contains a violence component. The UCR explicitly defines robbery as one of the four serious
violent crimes (homicide, robbery, rape, aggravated assault). Our usage is consistent with other literature that regards robbery as violent predatory behavior (Harer & Steffensmeier 1992; Sampson 1987).

6. All Gini coefficients are calculated from grouped family income data using the method described in Shryock and Siegel (1976:98).

7. Such payments incorporate supplementary security income transfers to low-income persons, aid to families with dependent children, and general assistance (Medicare payments not included).

8. Including a population predictor is the most commonly used procedure to control for population size. However, this approach could lead to biased estimates because the "log of population size" appears both as a predictor and in the denominator of the dependent variable — the crime rate. To ascertain whether this was the case, we estimated a weighted least squares (WLS) model that had no population predictor, but incorporated a weight for the city population size. The results did not differ appreciably from those using a population predictor in the context of ordinary least squares. Further details on the WLS model are available from the authors.

9. We explicitly examined the issue of multicollinearity since it can be a problem particularly in macrolevel research. Where correlations between the independent variables were sufficiently high to warrant concern (≥ 0.80), we used alternative measures and model specifications (see note 11). We also examined the variance inflation factors (VIF) associated with the parameter estimates and found that none were greater than four. However, since multicollinearity cannot be defined solely in terms of the correlations between the independent variables, we probed further but found that multicollinearity did not appear to be a problem: First, the OLS parameter estimates in the model did not change drastically upon the inclusion of additional variables. And second, the estimates did not change appreciably when we randomly omitted 10% of cases from the model (see Maddala 1992:278-79 for discussion of coefficient sensitivity to sample size in situations of multicollinearity). In the past, researchers faced with possible multicollinearity have created indices by combining variables that are highly correlated. While this is useful for detecting latent structures among groups of related variables, it can also obscure the intrinsic meaning of individual measures. In our case, identifying dimensional structure in the data would not be relevant since our central concern is to determine explicitly the effect of inequality on violent crime.

10. Note, however, that noneconomic factors such as the higher rate of out-marriage among black men also contribute to racial differences in family patterns (see Cherlin 1992).

11. The model in Table 2 does not include a control for per capita income — a commonly used control for absolute poverty at the aggregate level — because it was collinear with black-to-black inequality. While the Gini coefficient is the most widely acknowledged measure of income inequality, we reestimated the model using alternative predictors of black-to-black inequality and total inequality that were not collinear with per capita income. Inequality was measured as the combined proportion of low-income families (those making less than $15,000) and high-income families (those making $35,000 or more) for the entire population (total inequality) and for the black community (black-to-black inequality). These alternative measures reflect the degree of income polarization in the population and are equivalent to deriving the percentage of the total area under the income distribution curve that falls within the low- and high- income ranges (see Cowell 1977). To further strengthen our inferences, family disruption was alternatively measured as the percentage of families with children headed by a female. The results from this alternative specification (not reported), which included a control for poverty (per capita income), largely confirm our earlier conclusions: (1) black-to-black inequality is the only inequality measure that is a significant predictor of family disruption, (2) family disruption is a robust predictor of juvenile rates of homicide and robbery among juveniles, but a weaker predictor of adult violence. Interestingly, the alternative model also revealed an effect of poverty on family disruption that matched that of black-to-black inequality and, similarly, virtually no direct effect on black violence. This suggests that both relative and absolute deprivation are important structural conditions that promote high levels of urban violence in black communities.

12. We conducted a sensitivity analysis to determine the degree to which the parameter estimates of the reciprocal loop depended on the specific zero constraints chosen. We
reestimated the model twelve times, each time constraining the effect of other exogenous variables on family disruption and inequality to zero — regardless of whether there was any theoretical justification to do so. While twelve reestimates do not cover all possible permutations, each of the models we estimated produced parameters of the reciprocal loop that were stable, significant, and in the same direction as those shown in Figure 1.

13. We first replicated Sampson’s nonrecursive model and confirmed that the empirical relationship between family disruption and crime was heavily weighted by the one-way association of family disruption increasing violent crime rates. Our subsequent analysis, which included controls for income inequality, maintained the same identification constraints used by Sampson (1987). See Figure 2. As in our previous nonrecursive model, the results from this analysis were stable across a variety of constraint conditions.

14. We also examined the effects of differing measures of inequality on white rates of violence. As in the findings for blacks, racial inequality (white-to-black income inequality) was not related to white violence rates, while a within-race measure of inequality for whites (white-to-white inequality) did increase the rates of white violence. However, the effect of inequality on white violence was direct, rather than indirect.

References


