Available online at www.sciencedirect.com
SCIENCE DIRECT
Journal of Criminal Justice 34 (2006) 303–316
JOURNAL OF CRIMINAL JUSTICE

Race, economic inequality, and violent crime

Lisa Stolzenberg *, David Eitle, Stewart J. D'Alessio

School of Policy and Management, Florida International University, Miami, FL 33199, USA

Abstract

The current study used data drawn from the National Incident-Based Reporting System (NIBRS) and the census to investigate the relationship between indicators of interracial and intraracial economic inequality and violent crime rates, including White-on-Black, White-on-White, Black-on-White, and Black-on-Black offenses. Multivariate regression results for ninety-one cities showed that while total inequality and intraracial inequality had no significant association with offending rates, interracial inequality was a strong predictor of the overall violent crime rate and the Black-on-Black crime rate. Overall, these results were interpreted as consistent with J.R. Blau and Blau's (1982) relative deprivation thesis, with secondary support for P.M. Blau's (1977) macrostructural theory of intergroup relations. The findings also helped to clarify the unresolved theoretical issue regarding which reference group was most important in triggering relative deprivation among Blacks. It appeared that prior studies were unable to find support for the relative deprivation thesis for Black crime rates because of data and methodological limitations.

Introduction

Many sociological explanations of crime had proffered that economic deprivation acts as a motivational factor in the manifestation of crime. While the causal role that economic hardship plays in promoting criminal behavior differs, most explanations had advanced some variant of the basic theme that poverty in a stratified society weakens institutional legitimacy and undermines the social bonds between these institutions and the impoverished. Economic hardship had been deemed especially critical in grasping an understanding of the disparity evinced frequently between the crime rates of Blacks and Whites in the United States, given that Blacks, on average, live in conditions that are much more economically barren than Whites (Wilson, 1987).

Following the logic articulated in the seminal work by J.R. Blau and Blau (1982), social scientists had commonly examined whether racial disparities in socioeconomic conditions influenced racial differences in crime rates. Indeed, J.R. Blau and Blau (1982) argued rather cogently that economic inequality, or the unequal distribution of wealth, money, and other economic resources between racial groups, had greater salience in explaining crime rates than the absolute level of socioeconomic conditions for a given racial group. It is theorized that economic inequality engenders resentment, hostility, frustration, and to be a precipitating factor in the impetus of criminal behavior (J.R. Blau & Blau, 1982) or more recently, as an indicator of the relative disadvantage that Blacks face in competing with Whites for scarce jobs and other resources (Jacobs & Wood, 1999).

Despite great interest and intuitive appeal, research to date had been unable to provide unwavering support for the thesis that economic inequality between racial groups, or interracial economic inequality, accounted

* Corresponding author. Tel.: +1 305 348 6276; fax: +1 305 348 5848.
E-mail address: stolzenb@fiu.edu (L. Stolzenberg).

0047-2352/$ - see front matter © 2006 Elsevier Ltd. All rights reserved.
doi:10.1016/j.jcrimjus.2006.03.002

for racial differences in crime rates. While a few early research studies lent support to the interracial economic inequality thesis (P.M. Blau & Golden, 1986; P.M. Blau & Schwartz, 1984), other more contemporary research efforts had failed to adduce convincing evidence of a relationship between economic inequality and crime (Harer & Steffensmeier, 1992; Messner & Golden, 1992). These recent failures to uncover support for the interracial economic inequality thesis has led to alternative conceptualizations of economic inequality, particularly the notion that *intraracial* economic inequality may be more salient in predicting group crime rates than interracial inequality (Phillips, 1997). Although within group inequality was reported to influence White crime rates, intraracial economic inequality had often failed to be a predictor of Black crime rates (Harer & Steffensmeier, 1992; Parker & McCall, 1999; but see Phillips, 1997).

Although recent scholarship had shifted away from examining the possible utility of economic inequality as a predictor of Black crime rates specifically and as a predictor of racial differences in crime rates generally, compelling reasons still exist for pursuing this line of inquiry. The major limiting aspect of prior research in this area had been the dearth of data that allow one to fully address the economic inequality-crime thesis. This recurrent problem had resulted primarily from the lack of readily available crime data disaggregated by race. As Sampson (1986b, p. 275) noted in regard to empirical tests of Blau and Blau's arguments, "aggregate offense rates do not distinguish offenders by race and hence cannot address these theoretical issues." Yet most early research studies had only examined the association between global economic inequality and global crime rates and, as a consequence, had failed to address directly the issue of whether racial differences in crime rates were attributable to racial economic inequality. While more recent research had attempted to address the issue of whether race-based economic inequality influences Black and White crime levels, it too was limited by an inability to disaggregate crime rates by race.

Theory and hypotheses

The theoretical rationale for examining the association between economic inequality and crime was borne from the seminal work of Peter Blau and his associates. While several studies examined the linkage between various conceptualizations of economic and socioeconomic inequality in the spirit of Blau's work, Messner and Golden (1992) found that the arguments advanced by Blau to explain the linkage between inequality and crime were inconsistent and implied different processes. Indeed, Messner and Golden (1992) furnished a straightforward clarification and extension of Blau and his colleagues' arguments regarding the economic inequality-crime relationship. Specifically, they argued that two major propositions could be gleaned from Blau and his associates (J.R. Blau & Blau, 1982; P.M. Blau, 1977; P.M. Blau & Schwartz, 1984; see also Sampson, 1986a).[1]

The first thesis of the economic inequality-crime association extracted from P.M. Blau and Schwartz (1984) by Messner and Golden (1992) can be termed the "relative deprivation" explanation. According to Messner and Golden, this thesis highlights the consciousness of the disadvantaged, their realization of their common economic interests, and that the inability of the disadvantaged to get a fair redistribution of resources, or more open access to wealth, generates anger and frustration, which ultimately leads to more crime. Furthermore, Messner and Golden argued that the focus of P.M. Blau and Schwartz's relative deprivation perspective was on the criminogenic effects of *interracial* inequality—that race as an ascribed status facilitated the collective awareness of common economic interests, the collective recognition that Blacks were disadvantaged relative to Whites, and that Blacks did not have open access to wealth and economic resources (P.M. Blau & Schwartz, 1984, p. 179; Messner & Golden, 1992, p. 423). As Harer and Steffensmeier (1992, p. 1035) noted, "The criminogenic consequences of economic inequality, especially in income between the races, are expected to be greater for Blacks than for Whites." Accordingly, relative deprivation should produce increases in Black rather than White (i.e., the advantaged) offending rates.

More recently, some scholars had challenged the relative deprivation thesis as the foundation for expecting a relationship between structural economic inequality and violent crime. Such challenges had focused largely on the reductivistic nature of the argument because of the social psychological foundation of relative deprivation. Some social scientists had argued, however, that there were objective experiences that stem from economic inequality that shape group experiences independent of whether they experience relative deprivation or not. For example, it had been suggested that economic inequality "reduces one's ability to compete for scarce jobs by imposing standards of competition that those individuals cannot realistically be expected to meet, and, therefore, it is directly related to involvement in crime and violence as those individuals adapt to that reality in any way they can" (Kovandzic, Vieratis, &

Yeisley, 1998, p. 590). Nonetheless, whether one accepts the relative deprivation thesis or a structural-based explanation, both theses predict the same relationship. Furthermore, one can forge the same arguments for expecting intraracial or interracial measures of economic inequality to be a more accurate measure of how structural conditions influence violent behavior, depending upon whether one asserts that Blacks compete with other Blacks for scarce jobs or for Whites for employment. The term relative deprivation was used here to refer to either explanation for convenience. This study, however, could not confirm which specific thesis (or both) garnered support if a relationship was to be evinced between measures of economic inequality and violent crime.

The second explanation for the economic inequality-crime relationship advanced by Messner and Golden was derived from P.M. Blau's macrosocial theory of social structure. This explanation, applied to crime by Sampson (1984, 1986a) among others (Wadsworth & Kubrin, 2004), suggested that increasing heterogeneity amplified the probability of intergroup contact (e.g., Black-White contact), which in turn increased the *opportunity* to commit interracial crimes (Sampson, 1986a). P.M. Blau (1977) theorized that racial inequality reduced opportunities for interracial contact, which Messner and Golden (1992, pp. 424–425) extended to hypothesize that increases in racial inequality were associated with a reduction in interracial crime.

In sum, then, Messner and Golden presented two different explanations derived from the work of Blau and his colleagues that generate competing predictions about the relationship between economic inequality and crime. The first was the relative deprivation thesis, which hypothesized that increases in economic inequality, particularly race-based inequality, produced increased crime perpetrated by Black citizens. The second was an extension of the macrostructural theory of intergroup relations, which predicted that increases in race-based inequality produced less interracial crime.

Although Messner and Golden (1992) did more than an adequate job in providing a theoretical foundation for evaluating the relationship between economic inequality and crime, there are additional conceptualization issues that still remain unresolved. Namely, more recent work that explored the association between economic inequality and crime found different conceptualizations of economic inequality as being salient in predicting crime: global inequality (i.e., a measure of inequality that does not account for race, such as a Gini index), interracial economic inequality (differences in income or wealth between Whites and Blacks), and/or intraracial inequality (differences in income or wealth between members of the same racial group). The question of which of the measures of economic inequality should be utilized in conceptualizing the aforementioned theses is not easily resolved. Since prior research had found that Blacks used other Blacks as a reference point for assessing themselves (McCarthy & Yancey, 1971), it is believed that variations in race-based crime rates are best predicted by within-group rather than by between-group economic inequality (Harer & Steffensmeier, 1992; Phillips, 1997). The referent group for the disadvantaged should only be an issue for the relative deprivation thesis because the macrostructural theory of intergroup relations maintained that race-based inequality influenced interracial contact.

With this additional insight, the following hypotheses can be forwarded. First, since the relative deprivation thesis has been interpreted that either inter- or intraracial inequality predicts Black offender based-offenses, but has no effect on White offender based-offenses, both concepts (inter- and intraracial economic inequality) should be evaluated to adjudicate which form of relative deprivation is more salient in understanding Black crime (both interracial and intraracial). Secondly, if the macrostructural theory of intergroup relations has merit, increased economic inequality (capturing interracial inequality) should have a *negative* association with both dyads of interracial crime, while having no influence on Black or White intraracial crime. Finally, racial segregation, as another dimension of inequality, should also have a negative association with both dyads of interracial crime, while having no influence on Black or White intraracial crime, since segregation also reduces opportunities for intergroup contact.

Prior research

To fully evaluate the merits of each of the aforementioned theses, disaggregated crime rates by race must be considered. Past research studies that disaggregated crime rates by race employed one of three strategies, each with its own shortcomings. First, some studies used race-specific arrest rates as a proxy measure for race-specific crime rates. This strategy was employed because Uniform Crime Reports (UCR), the most comprehensive and widely used information on reported crime and arrests made by police in the United States, did not provide race-specific crime rates, only race-specific arrest rates (see Inciardi, 1978).[2] The underlying assumption made in these studies was that race-specific arrest rates reflected race-specific rates of criminal offending accurately.

Justification for the validity of this practice can be traced to the research of Michael Hindelang (1978). Hindelang compared race-specific arrest data drawn from the UCR with NCVS victimization data relating to the race of criminal offenders to determine the convergence of UCR and NCVS data in terms of the relative amount of crime committed by Blacks and Whites. His results showed that 62 percent of the robbery victims in the NCVS reported their assailants to be Black, whereas 63 percent of the people arrested for robbery during the same year by police were also Black. Although Hindelang found that Blacks were overrepresented by about ten percentage points in the UCR arrest data for the crimes of rape, aggravated assault and simple assault, he argued that these differences were due to the fact that crimes involving Black offenders were less apt to be reported to police than crimes involving White offenders.

Although more than 160 studies had cited Hindelang's work mostly to justify the use of race-specific arrest rates as a surrogate measure of race-specific criminal offending, recent research had found that this long-held assumption might be incorrect. Using data from the National Incident-Based Reporting System (NIBRS), D'Alessio and Stolzenberg (2003) assessed the effect of an offender's race on the probability of arrest for 335,619 incidents of forcible rape, robbery, and assault during 1999. The baseline model for these comparisons was the equiprobability hypothesis that relative to violation frequency as reported by crime victims, the likelihood of arrest for White and Black offenders would be roughly equal. Multivariate logistic regression results showed that the odds of arrest for White offenders was approximately 22 percent higher for robbery, 13 percent higher for aggravated assault, and 9 percent higher for simple assault than they were for Black offenders. The race of the offender played no noteworthy role in the likelihood of arrest for the crime of forcible rape. These findings had important implications because they cast doubt on the widespread practice of employing race-specific arrest rates as a surrogate measure of race-specific criminal offending behavior.

A second strategy to estimate race-specific crime rates was to use victimization data collected by the National Crime Victimization Survey (NCVS). While this approach circumvented the procedural issues that were salient with arrest data, using victimization data also had some serious limitations. Specifically, NCVS data ignored crimes committed against businesses, government, religious organizations, and commercial enterprises, over inflated rates of crime for cities with a large nonresident population (Maxfield, 1999), represented juveniles less reliably (Wells & Rankin, 1995), neglected homeless and itinerant individuals (Maxfield, 1999; Rand, 1997), undercounted those most at risk of serious violence (Cook, 1985) and underrepresented offenses involving non-White victims (Chilton & Jarvis, 1999), offenses involving victims under twelve years of age (Greenfeld, 1998), and offenses involving female victims (Bureau of Justice Statistics, 1997). All prior studies that used NCVS data to assess the relationship between economic inequality and race-specific crime levels were vulnerable to one or more of these criticisms. Thus, a compelling rationale exists for questioning the accuracy of their conclusions.

The most popular strategy for examining the effects of economic inequality on race-specific crime rates was to use homicide data drawn from the Federal Bureau of Investigation's (FBI) Supplemental Homicide Reports (SHR). This strategy also had weaknesses, however. Its chief limitation was that homicides occur relatively infrequently (Hepburn & Voss, 1970). Indeed, researchers that examined the relationship between economic inequality and homicide rates used some type of adjustment, such as the pooling of homicide rates across several time periods, to generate a sufficient number of homicide incidents for analysis. Additionally, it should be recognized that because SHR data were submitted by law enforcement agencies to the FBI at early stages of murder investigations, offender characteristic information such as race were frequently missing (Pampel & Williams, 2000).

While the use of SHR data raised these issues, a more elementary concern was the use of such a relatively infrequent occurrence as a proxy of crime. Since the logic underlying relative deprivation and the macrostructural theory was that an uneven distribution of wealth and economic resources generated crime, it seemed that the ideal measure of race-specific crime would be one that captures all forms of crime, not just the most serious and most infrequently occurring form of crime.

The current study

The use of NIBRS data enabled a more accurate test of the economic inequality-crime thesis. The analysis of NIBRS data improved on previous research because it enabled the creation of a greatly expanded and more precise measure of crime that had not been used previously by researchers: reported violent crimes committed by Blacks and Whites where the victim or witness was able to identify the race of the offender.[3] Violent crimes included murder and non-negligent manslaughter, kidnapping/abduction, forcible rape, forcible sodomy, sexual assault with an object, forcible

fondling, robbery, aggravated assault, simple assault, and extortion/blackmail. While accumulated evidence has found that economic inequality does not predict Black homicide rates, the question of whether economic inequality predicts race-based crime rates generally, including much more frequently occurring events such as robberies, rapes, aggravated assaults, and simple assaults has yet to be addressed satisfactorily. This study sought to provide a comprehensive test of the racial economic inequality-crime relationship by using crime data disaggregated by race for a wide range of violent criminal offenses, not simply homicides.

Although the failure to disaggregate crime rates by race and the limited measurement of crime hindered a comprehensive test of the relationship between economic inequality and crime, there were two other salient issues that this study wanted to address. First, while J.R. Blau and Blau (1982) implied between-race measures of economic inequality, compelling reasons for using within-race measures of inequality had recently been adduced. As mentioned previously, some researchers posited that Blacks generally do not use Whites as a comparison group for assessing their standing, but instead tend to use other Blacks as a point of reference. Thus, feelings of inequality or deprivation have been theorized to vary in accordance to inequality within racial groups rather than between racial groups. Much of the research conducted to date, however, had failed to utilize within-race measures in addition to between-race measures of economic inequality (Harer & Steffensmeier, 1992). It is important that research exploring the effect of economic inequality on race-based crime rates assess both inter- and intraracial economic inequality, particularly in light of the hypotheses derived from relative deprivation and the macrostructural theory of intergroup relations. Such an examination was furnished in this study.

A second objective of the current study was to assess the impact of economic inequality on various race-specific offender dyads. Parker and McCall (1999) found that interracial inequality was a significant predictor of Black interracial homicide rates, but it had little effect on White interracial homicides or intraracial homicide rates for either group. Their measure of economic deprivation for Whites (White poverty and income inequality), however, was predictive of both White inter- and intraracial homicides. In another important study that examined the effect of structural factors and racial antagonism on homicide, Wadsworth and Kubrin (2004) found that racial inequality had no salient effect on either Black-on-White homicide or on Black-on-Black homicide. Much of the research on race-based economic inequality and crime had been misspecified, however, because of a general failure to disaggregate crimes into the various offender-victim dyads that exist (i.e., White-on-Black, White-on-White, Black-on-White, and Black-on-Black). Examining these dyads is a worthwhile means for evaluating relative deprivation theory, since Blacks are typically those who are deprived relative to Whites. Whites should be the targets of Black anger, if relative deprivation is applicable. Relative deprivation could also be interpreted as Blacks deprived relative to other Blacks, however, with the logical conclusion being that such deprivation inspires intraracial crime. Unfortunately, not much research had examined both interracial and intraracial crime rates that would allow for addressing this issue.

In summary, the current research revisited the proposed relationship between economic inequality and race-specific crime rates. Inspired by the work of Blau and his colleagues, hypotheses derived from the relative deprivation thesis and macrostructural theory of inter- group relations were examined using data with pronounced advantages over data used in prior inquiries into the subject. The utility of interracial and intraracial measures of economic inequality was examined for predicting race-specific crime rates for an expanded array of violent criminal offenses. Finally, the contentious issue of which racial group is a more important referent for inspiring relative deprivation—within racial groups or between racial groups—was evaluated.

Data and methods

The data used in this study were derived from the NIBRS and the census for ninety-one cities in fifteen states observed during the year 2000.[4] To have sufficient numbers of Blacks to construct the race-specific variables, the sample included only cities of at least 25,000 people and a Black population of at least 2,000 people. The data were aggregated at the city-level because this was the smallest geographical unit for which NIBRS data were made available. Using city-level data also made it possible to examine the relationship between economic inequality and race-specific crime rates across a wide range of social contexts. It also helped to maintain comparability with most previous research in this area.

Dependent variables

Several dependent variables were analyzed in this study. The first endogenous variable was the violent

crime rate. This variable was measured as the number of violent criminal offenses reported to the police divided by the city population and multiplied by 10,000.

Four categories of victim-offender dyads were also analyzed. The dyads for crime incidents in which the victim or witness was unable to identify the race of the offender and crime incidents with multiple suspects and/or victims were excluded from the analysis. The exclusion of these latter cases was necessary because it was extremely difficult to estimate crimes where there were two or more offenders and/or victims present and because there could be White and Black offenders in the same crime incident. The first victim-offender dyad, the White-on-Black crime rate, was measured as the number of violent offenses committed by Whites against Blacks divided by the White population and multiplied by 10,000. The second victim-offender dyad, the White-on-White crime rate, was operationalized as the number of violent offenses committed by White against Whites divided by the White population and multiplied by 10,000. The third victim-offender dyad, the Black-on-White crime rate, was measured as the number of violent crime incidents involving a Black offender and a White victim divided by the Black population and multiplied by 10,000. The final victim-offender dyad, comprising the Black-on-Black crime rate, was measured as the number of violent offenses involving a Black offender and a Black victim divided by the Black population and multiplied by 10,000. The race-specific crime rates for the ninety-one cities examined in this study are provided in the Appendix A.

Independent variables

Multiple measures of interracial and intraracial economic inequality were included in the analyses. Interracial economic inequality was measured by a traditional means—the difference between the logged medians of White and Black household incomes. Additionally, the role of the Black-to-White unemployment ratio on crime was examined to consider the argument that economic inequality has more dimensions than simply income differences (Jacobs & Wood, 1999). Two intraracial economic inequality measures that capture the income distribution of either Black or White households in each city (i.e., Gini coefficient) were included and one overall Gini index that measured inequality regardless of race (Greenberg, Kessler, & Loftin, 1985; Jacobs, 1979).[5] All of these variables were derived from the 2000 census.[6]

The current study sought not only to determine the effect of economic inequality on crime rates, but also to control for other factors that were believed to influence crime levels. Each of these variables was posited to affect crime levels directly, thus including these variables as controls also permitted better estimates of racial threat effects. Prior research had identified several factors that were related to crime rates. These variables included the unemployment rate, race-specific unemployment rates, total population, percent Black, and a dummy coded variable indicating whether the city was located in the South or not, given past scholarship on regional differences in violent crime (Liska & Chamlin, 1984).

The White-Black dissimilarity index was also included as a measure of racial segregation. The dissimilarity index is the most commonly used measure of segregation between two groups, reflecting their relative distributions across neighborhoods within the same city (or metropolitan area). The dissimilarity index varies between 0 and 100, and measures the percentage of one group that would have to move across neighborhoods to be distributed the same way as the second group. (It is a symmetrical measure so that this interpretation can apply to either group.) A dissimilarity index of 0 indicates conditions of total integration while a dissimilarity index of 100 indicates conditions of total segregation such that the members of one group are located in completely different neighborhoods than the second group. Findings of an inverse relationship between segregation and interracial crime can be interpreted as also being supportive of the macrostructural theory of intergroup relations, since segregation would preclude interracial contact of any kind (Messner & Golden, 1992).

Finally, factor scores from a principal components analysis of three indicators of city disadvantage were included: (1) percent of households with public assistance income; (2) percent of the population (ages twenty-five and over) that never graduated from high school; and (3) percent of households headed by a single female (ages sixteen to fifty-four) with children. A high score on this composite variable would indicate a greater level of city disadvantage.[7]

All these variables were included in the analysis as controls so as to avoid basing conclusions on spurious or suppressed relationships. Means, standard deviations, and definitions for all the variables are presented in Table 1.

Regression results

Ordinary least Squares (OLS) regression was the chief analytical tool used in this study. Regressions were

Table 1
Means, standard deviations, and definitions for variables used in the analysis (N = 91 cities)

Variable	Mean	S.D.	Min.	Max.	Definition
Violent crime rate	229.51	118.73	1.12	511.14	Number of violent crimes divided by the population and multiplied by 10,000. Violent crimes include murder and non-negligent manslaughter, kidnapping/abduction, forcible rape, forcible sodomy, sexual assault with an object, forcible fondling, robbery, aggravated assault, simple assault, and extortion/blackmail.
White-on-Black crime rate	5.92	4.35	0.00	21.98	Number of violent crimes that involved a White perpetrator and a Black victim divided by the White population and multiplied by 10,000.
White-on-White crime rate	89.99	52.98	0.46	281.69	Number of violent crimes that involved a White perpetrator and a White victim divided by the White population and multiplied by 10,000.
Black-on-White crime rate	103.50	106.03	2.49	628.71	Number of violent crimes that involved a Black perpetrator and a White victim divided by the Black population and multiplied by 10,000.
Black-on-Black crime rate	221.74	118.57	2.49	496.81	Number of violent crimes that involved a Black perpetrator and a Black victim divided by the Black population and multiplied by 10,000.
White-to-Black inequality	0.39	0.24	−0.27	0.94	A measure of the differences between the median Black and White household incomes (logged).
Black-to-White unemployment	2.22	0.91	0.51	5.50	Ratio of Black-to-White unemployment rates.
Total inequality	0.42	0.05	0.31	0.52	A measure of the distribution of household income for all residents (the Gini coefficient). Ranges from 0 to 1, 0 = perfect equality and 1 = total inequality.
White-to-White inequality	0.41	0.04	0.31	0.51	A measure of the distribution of household income for Whites (the Gini coefficient). Ranges from 0 to 1, 0 = perfect equality and 1 = total inequality.
Black-to-Black inequality	0.44	0.05	0.29	0.58	A measure of the distribution of household income for Blacks (the Gini coefficient). Ranges from 0 to 1, 0 = perfect equality and 1 = total inequality.
Racial segregation	48.91	13.67	18.00	78.30	The White-Black dissimilarity index ranges from 0 = complete integration, to 100 = complete segregation.
Unemployment rate	3.26	1.75	1.00	11.50	Percent of the civilian labor force that is unemployed.
White unemployment rate	4.95	2.11	1.71	11.70	Percent of the White civilian labor force that is unemployed.
Black unemployment rate	10.13	4.13	2.90	26.81	Percent of the Black civilian labor force that is unemployed.
City disadvantage	0.00	1.00	−1.88	2.77	Factor scores from principal component analysis of three variables: (1) percent of households with public assistance income; (2) percent of the population (ages 25+) that never graduated from high school; and (3) percent of households headed by a single female (ages 15–64) with children. Larger scores indicate greater disadvantage.
Total population	97,422.31	107,206.66	25,236.00	656,302.00	Total population.
Percent Black	22.95	17.97	1.93	78.30	Percent of the population that is Black or African American.
Southern city	0.45	0.50	0.00	1.00	A dummy variable coded 1 if the city is located in the South, 0 otherwise. Controls for the possibility of a southern subculture of violence and crime.

estimated separately for the violent crime rate model and each of the individual dyads.[8] Substantial error variances were discovered in the course of the citywide inspection of residuals, thus robust regression was also used to generate more efficient estimates of the regression parameters.[9]

The results of the violent crime rate, the White-on-Black crime rate, the White-on-White crime rate, the Black-on-White crime rate, and the Black-on-Black crime rate on economic inequality and the other explanatory variables for the sample of cities are presented in Table 2. The first model in Table 2 estimated the effects of White-to-Black income inequality, Black-to-White unemployment, total inequality and the control variables on the overall violent crime rate. The statistically significant effect of White-to-Black income inequality was consistent with the relative deprivation thesis of Blau and his colleagues. It appeared that cities

Table 2
OLS regression estimates (N = 91 cities)

	Model 1	Model 2	Model 3	Model 4	Model 5
	Violent crime rate	White-on-Black crime rate	White-on-White crime rate	Black-on-White crime rate	Black-on-Black crime rate
White-to-Black inequality	141.060* (60.077)	4.267 (2.488)	25.550 (30.594)	17.540 (80.096)	222.190** (86.224)
Black-to-White unemployment	−15.245 (12.296)	−.246 (.606)	−5.824 (7.453)	1.427 (15.564)	−14.116 (16.754)
Total inequality	−39.793 (229.562)				
White-to-White inequality		−14.917 (10.410)	−152.224 (128.025)		
Black-to-Black inequality				129.237 (306.134)	−182.290 (329.554)
Racial segregation	−.268 (.982)	−.114** (.042)	−.777 (.520)	−.728 (1.183)	−3.027e−2 (1.274)
Unemployment rate	1.339 (5.002)				
White unemployment rate		.169 (.295)	−.629 (3.629)		
Black unemployment rate				3.517 (3.839)	6.403 (4.132)
City disadvantage	79.387*** (12.123)	2.846*** (.551)	47.954*** (6.775)	17.041 (15.083)	29.467 (16.237)
Total population	6.942e−5 (.000)	7.626e−6* (.000)	6.848e−5 (.000)	−5.576e−5 (.000)	8.805e−5 (.000)
Percent Black	1.027 (.700)	6.238e−2* (.031)	−1.154** (.375)	−3.298*** (.840)	.576 (.904)
Southern city	24.213 (20.470)	.292 (.919)	7.687 (11.307)	−17.480 (24.740)	16.891 (26.633)
Constant	193.228	13.402	213.296	122.817	154.445
R^2	.624	.469	.458	.322	.371

Note: Standard errors are in parentheses.
* $p < .05$.
** $p < .01$.
*** $p < .001$ (two-tailed tests).

with large income disparities between Whites and Blacks had higher rates of violent crime, controlling for other factors. One of the strongest effects in this model was the amount of city disadvantage present within a city. As city disadvantage increased, the violent crime rate rose. None of the effects of the other control variables were statistically significant in Model 1. The R^2 for this model was moderately high at .624.

Model 2 explored the possibility of whether White-to-Black inequality, Black-to-White unemployment, and White-to-White inequality impacted the White-on-Black crime rate. A visual examination of this model showed that all three of these variables were inconsequential in determining the White-on-Black crime rate. The effect of racial segregation on the White-on-Black crime rate was of substantive importance, however, suggesting support for the macrostructural theory of intergroup relations. The White-on-Black crime rate tended to be lower in cities with lower levels of residential segregation. Another strong predictor was city disadvantage. When cities experienced greater disadvantage, the White-on-Black crime rate was magnified. Additionally, two other control variables were statistically significant in this model—total population and percent Black. Cities with a large population and a large Black population had higher rates of White-on-Black crime.

An examination of the Model 3 revealed that White-to-Black inequality, Black-to-White unemployment, and White-to-White inequality were not related strongly to the White-on-White crime rate, net other factors. While the results for these three variables were not important substantively, the effects of a couple of the other variables were worth noting. A rather pronounced effect of the city disadvantage variable on the White-on-White crime rate was observed. The effect of the percent Black variable was also consequential. Net controls, the White-on-White crime rate was likely to be higher in cities with a small Black population.

The results presented in Model 4 failed to indicate an association between the White-to-Black inequality measure and the Black-on-White crime rate. The effects of the Black-to-White unemployment ratio and the Black-to-Black inequality measure were also inconsequential in this model. The effect of the percent Black variable was noteworthy in this model. As the percentage of Blacks in the population increased, the Black-on-White crime rate decreased. This finding suggested some support for heterogeneity theory. Heterogeneity theory's central proposition was that as heterogeneity between two racial groups rose, intergroup relations increased as a consequence of the enhanced opportunity for social contact between members of the two groups (P.M. Blau, 1977). The probability of increased contact was not uniform, however. Since the Black population was proportionally smaller than the White population, Blacks were much more likely to encounter Whites in society than the

reverse (O'Brien, 1987). Thus, as the Black population grew progressively larger in relation to the White population, there was a much greater likelihood for the occurrence of White-on-Black crime than Black-on-White crime. This was why percent Black population had a positive effect in the White-on-Black crime rate model and a negative effect in the Black-on-White rate model.

Another interesting finding in Model 4 was that the lack of a substantive effect of racial segregation, although this variable's influence was in the negative direction as expected. It was previously shown in Model 2 that racial segregation had a significant negative effect on the White-on-Black crime rate. One possible reason for the failure to detect a significant negative effect of racial segregation in the Black-on-White crime rate equation was that Black offenders were more apt than White offenders to venture out of their neighborhoods in order to victimize more lucrative targets (LaFree, 1982; Wilbanks, 1985). If this position has merit, then, racial segregation would be expected to play less of a role in explaining Black-on-White crime than White-on-Black crime. None of the effects of the other control variables were statistically significant in Model 4.

Visual inspection of Model 5 showed support for the economic inequality thesis. This analysis demonstrated that the White-to-Black income inequality variable was consequential in determining the Black-on-Black crime rate. In cities where White-to-Black economic inequality was pronounced, Blacks were much more likely to be victimized by other Blacks, holding constant other factors. This model also investigated the possibility of whether intraracial economic inequality impacted the Black-on-Black crime rate. Results showed that the linear effect for the Black-to-Black economic inequality variable was not substantive. The Black-on-Black crime rate was not higher in cities with high levels of Black-to-Black economic inequality. With regard to the other variables, none of their effects were statistically significant.[10] The R^2 for this model was .371.

Conclusion

The relationship between economic inequality and crime rates continues to remain a topic of interest among social scientists. In their often-cited work, J.R. Blau and Blau (1982) advanced the thesis that Blacks had higher crime rates because they were more apt to suffer from economic inequality than Whites. A plethora of studies had examined the effect of economic inequality on crime rates, but this research had produced mixed findings. Some studies had found that economic inequality increased crime levels (J.R. Blau & Blau, 1982; P.M. Blau & Schwartz, 1984), whereas others reported mixed findings (Williams, 1984) or found that economic inequality predicted crime levels among only Whites (Harer & Steffensmeier, 1992). Still others failed to evince an association (Parker, 1989; Smith & Parker, 1980).

Although these conflicting findings were most likely attributable to a variety of factors (Golden & Messner, 1987), one major shortcoming with virtually all prior research on economic inequality and crime related to the measurement of the dependent variable. Many previous studies used race-specific arrest rates as a surrogate measure of race-specific offending rates, while others relied on victimization data or race-specific homicide data. Each of these approaches had weaknesses.

Although it is unlikely that any single study can definitely settle the issue of whether economic inequality impacts crime rates, the present analysis attempted to provide a more accurate appraisal of the relationship than previously available. Using data derived from the NIBRS and from the census, the effect of economic inequality on the overall violent crime rate and on several race-specific offender/victim dyads was investigated. The results showed that controlling for racial segregation, city disadvantage, and a variety of other factors, interracial economic inequality had a strong positive effect on the overall violent crime rate, and more specifically, on the Black-on-Black crime rate. Additionally, racial segregation predicted White-on-Black crime.

The results of this analysis buttressed two basic theses derived from the work of Blau and his colleagues and by Messner and Golden (1992). In agreement with the relative deprivation thesis, both the overall violent crime rate and the Black-on-Black crime rate were predicted by the measure of economic inequality (income inequality) generally employed in prior studies. Consistent with the macrostructural theory of intergroup relations, racial segregation was shown to be associated inversely with one of two forms of interracial crime, White-on-Black crime. This finding supported P.M. Blau's (1977) thesis that intergroup contact of any kind decreased as segregation (as a form of inequality) increased.

The results of this analysis showed clearly that the effects of economic inequality on rates of violent crime were consistent with the work of Blau and his associates. The failure of prior research to unearth evidence that established a relationship between Black crime rates and economic inequality was most likely due to the methodological limitations outlined earlier,

namely, the use of homicides as a measure of crime. The use of the four dyads had provided a richer framework for exploring the effects of economic inequality and the way in which these effects differed by dyad grouping. The vast majority of studies conducted to date restricted their attention to models that allowed for an economic inequality-crime effect, but that precluded the prospect of race-specific inequality influencing race-specific offender/victim crime dyads.

Further, if one was to accept the relative deprivation thesis, the current study also provided insight as to how economic inequality might inspire Black crime. As proposed originally by J.R. Blau and Blau (1982), interracial economic inequality appeared to be more salient for understanding variation in Black crime than intraracial predictors. As J.R. Blau and Blau (1982, p. 119) argued, "great economic inequalities generally foster conflict and violence, but ascriptive inequalities do so particularly." While the logic that Blacks make social comparisons to other Blacks may be intuitive and appealing, the current study had furnished further support for recognizing the importance of race as an ascriptive status in shaping the lives of Black citizens (Massey & Denton, 1994). These findings had contributed to a clarification of the relative deprivation thesis—the process appeared to be triggered by race-based differences in wealth and economic resources. While intraracial inequality might cause envy, it appeared that the perception that inequality and access to wealth and economic resources was connected to race engendered a much more poisonous set of reactions (hostility, frustration, and anger) that was associated with violent crime.

On the other hand, if one were to accept a structural-based explanation of economic inequality, the findings reported in this study suggested that interracial inequality measures might provide the best means for capturing the relative disadvantages that Blacks face in the workplace. Greater differences in White-Black inequality were associated with increases in Black violent crime, all things being equal. Hence, whether one was to accept relative deprivation or the structural thesis, race permeates the economic inequality-violent crime relationship, as an individual ascriptive characteristic, an important marker of social structure, and as a collective identity.

The current study also found a possible solution to the quandary raised by conflicting research findings regarding the relationship between economic inequality and Black crime levels. Although prior studies had explored both intra- and interracial measures of inequality, the failure to disaggregate Black violent crime into race-specific dyads might have distorted or even suppressed relationships between inequality and Black violent crime levels. This study found evidence that the influence of economic inequality was restricted to Blacks committing violent crimes against other Blacks. Economic inequality may have fostered resentment, anger, and frustration that engendered violence or it may have severely disadvantaged Blacks in the legitimate workplace. It is also important, however, to recognize that other factors such as proximity, familiarity, and opportunity may have served as parameters in restricting the availability of potential crime targets. Further research examining the process that links interracial economic inequality and intraracial violent crime is clearly warranted by these findings.

The regression results for the various control variables also conformed fairly well to expectations. The percent Black population variable was found to have a strong effect in the White-on-Black, White-on-White, and Black-on-White violent crime rate models, with null effects in the other estimated models. City disadvantage, measured by a composite index, was related positively to violent crime rates in three of the models estimated; three of five coefficients estimated were statistically significant at the .001 level of analysis. The finding of a strong relationship between city disadvantage and violent crime rates was consistent with the theoretical interpretation derived from the social disorganization perspective. Although conducted at the city-level of analysis, these findings furnished tacit support for the assertion that a high level of city disadvantage undermines the capacity of communities to control the criminal activities of individuals and reinforce bonds with conventional institutions. The effects of the unemployment rate, the race-specific unemployment rates, and the southern city variable were uniformly not substantive.

The present analysis can be extended in a number of important ways. First, these findings highlighted the importance of examining the relationship between economic inequality and violent crime among racial offender/victim dyads and among smaller or more homogenous ecological units. Second, while providing an important advancement over previous research on economic inequality and violent crime because of the inclusion of information on the occurrence of interracial crime by city, it should be noted that NIBRS does not contain a nationally representative sample of cities. The data set was also limited primarily to small cities. This situation was problematic in that it hinders one's ability to generalize this study's findings nationally. Hopefully, the NIBRS program will continue to expand its scope in

the future to include a greater number of large metropolitan areas. Third, the current study only examined violent crimes in which the victim was able to identify the race of the offender. As a consequence, property crimes, which comprise the vast majority of crimes perpetrated by criminal offenders, could not be examined in this study. Further insight into the relationship between economic inequality and interracial crime for nonviolent crimes such property offenses must await the development of richer data sets. Fourth, future research should consider examining the effect of economic inequality on inter- and intraracial crime levels using longitudinal data. The cross-sectional data used here were ill suited for determining whether the impact of economic inequality is changing or has changed over time. Questions of this type necessitate a reliance on longitudinal data. Longitudinal research using data drawn from NIBRS should be a high priority when the requisite data become more readily available.

Lastly, despite some weaknesses, the authors would like to tout the virtues of using data drawn from the NIBRS to examine such topics as the relationship between economic inequality and crime. Too often, research in this area had been based exclusively on data derived from the UCR or from the Supplemental Homicide Reports. The dependent variable in most studies was also represented by a single variable. It has become increasingly apparent that the relationship between economic inequality and crime is complex. By merging crime incident data from the NIBRS with data collected in the census, the current study was able to address partially these complexities. Additional research may benefit by using NIBRS data to examine core questions asked by criminologists.

Appendix A. Race-specific crime rates for ninety-one cities used in the analysis

City	State	White-on-Black crime rate	White-on-White crime rate	Black-on-White crime rate	Black-on-Black crime rate
Aurora	CO	6.49	83.53	84.57	164.75
Colorado Springs	CO	3.20	72.55	158.79	143.04
New Haven	CT	7.49	53.32	24.58	95.70
New London	CT	8.39	74.83	82.19	145.42
Norwalk	CT	5.25	43.73	53.75	118.57
Cedar Rapids	IA	4.46	98.18	564.71	351.43
Davenport	IA	8.33	113.08	304.79	457.74
Des Moines	IA	7.57	132.17	305.32	379.71
Iowa City	IA	0.56	43.33	240.91	201.49
Sioux City	IA	2.18	122.65	628.71	396.04
Waterloo	IA	3.62	62.01	94.93	245.33
Lawrence	KS	0.00	0.46	2.49	2.49
Leavenworth	KS	4.98	66.23	85.04	107.60
Olathe	KS	1.75	58.90	179.62	111.90
Paducah	KY	5.25	131.85	107.71	332.36
Richmond	KY	1.69	107.98	162.60	95.65
Chelsea	MA	17.42	281.69	164.58	101.88
Springfield	MA	18.40	218.58	105.17	301.22
Worcester	MA	2.95	73.78	107.45	109.89
Battle Creek	MI	12.74	194.29	202.10	480.26
East Lansing	MI	0.81	21.17	59.65	77.54
Farmington Hills	MI	2.38	34.77	43.53	88.80
Flint	MI	11.11	155.60	41.88	297.26
Inkster	MI	13.50	163.40	60.08	346.97
Jackson	MI	12.19	157.68	205.86	371.12
Kalamazoo	MI	11.40	89.34	136.73	458.82
Kentwood	MI	2.80	44.18	111.89	184.87
Oak Park	MI	1.43	19.31	7.44	69.24
Pontiac	MI	6.54	85.94	32.22	121.62
Port Huron	MI	2.56	153.40	234.83	140.90
Saginaw	MI	14.83	193.89	80.93	474.32
Southfield	MI	9.30	32.87	16.53	116.43
Taylor	MI	2.35	104.61	88.68	184.17

(continued on next page)

Appendix A (*continued*)

City	State	White-on-Black crime rate	White-on-White crime rate	Black-on-White crime rate	Black-on-Black crime rate
Warren	MI	0.00	3.69	20.37	26.19
Wyoming	MI	2.51	95.31	220.93	316.05
Bellevue	NE	2.72	62.65	177.75	78.21
Akron	OH	5.31	94.66	64.61	259.11
Cincinnati	OH	7.38	78.30	38.98	283.30
Dayton	OH	2.51	49.91	16.98	109.94
Marion	OH	5.08	149.80	121.14	142.02
Aiken	SC	2.40	42.67	30.24	232.71
Anderson	SC	6.34	121.69	80.93	383.86
Charleston	SC	3.83	45.80	48.90	238.90
Columbia	SC	7.73	47.26	39.59	336.38
Florence	SC	6.80	54.99	33.47	389.71
Goose Creek	SC	2.70	58.09	62.61	102.68
Greenville	SC	5.59	59.11	59.48	329.45
Mount Pleasant	SC	0.24	26.32	60.34	168.31
North Charleston	SC	21.98	195.18	64.69	389.43
Rock Hill	SC	6.57	103.72	46.35	331.91
Spartanburg	SC	14.15	89.24	50.86	496.81
Summerville	SC	4.61	97.28	107.47	190.85
Sumter	SC	5.57	52.67	22.58	315.52
Clarksville	TN	9.00	99.86	67.11	185.28
Cleveland	TN	3.08	104.60	217.56	193.83
Collierville	TN	0.71	26.19	60.83	166.26
Columbia	TN	8.70	186.08	125.07	252.95
Franklin	TN	1.47	36.96	43.96	148.08
Jackson	TN	10.23	93.64	36.08	327.91
Johnson City	TN	4.06	134.00	252.50	170.29
Murfreesboro	TN	4.99	121.37	101.60	289.10
Nashville	TN	9.57	144.99	84.08	339.25
Oak Ridge	TN	2.95	80.62	201.31	318.35
Austin	TX	7.80	176.93	106.75	319.95
Conroe	TX	5.04	189.18	89.31	305.14
Lancaster	TX	3.46	117.71	12.39	130.45
Mckinney	TX	4.88	94.01	140.58	249.34
Missouri City	TX	2.45	30.81	3.48	69.51
Pearland	TX	2.15	80.62	35.78	49.19
Richardson	TX	2.35	30.42	28.02	64.80
Rowlett	TX	3.81	104.69	64.89	152.23
San Angelo	TX	1.88	93.85	74.44	63.16
Salt Lake City	UT	0.00	8.69	25.64	5.70
Alexandria	VA	4.93	45.11	26.72	152.23
Charlottesville	VA	8.41	56.31	67.80	276.26
Danville	VA	3.49	57.38	26.65	205.69
Hampton	VA	3.67	53.11	14.77	104.01
Harrisonburg	VA	3.99	50.40	105.35	113.45
Leesburg	VA	2.65	61.36	110.58	169.83
Lynchburg	VA	5.11	66.64	70.04	321.68
Manassas	VA	14.60	160.57	191.55	228.97
Newport News	VA	8.95	78.22	42.34	271.14
Norfolk	VA	6.00	64.10	34.99	191.31
Petersburg	VA	11.47	99.92	21.58	250.20
Portsmouth	VA	10.53	103.35	29.56	304.09
Richmond	VA	7.62	42.52	17.93	215.08
Roanoke	VA	4.45	73.57	64.60	182.38
Suffolk	VA	3.55	47.89	19.19	210.05
Virginia Beach	VA	6.91	84.79	67.42	194.64
Charleston	WV	8.46	121.66	265.03	394.31
Huntington	WV	7.59	149.40	322.77	196.60

Notes

1. Messner and Golden (1992) suggested that a social disorganization-anomie thesis could also be derived from the work of Blau and his colleagues. The lack of clarity in early work regarding the distinction between this social disorganization-anomie thesis and the relative deprivation thesis, however, rendered the social disorganization-anomie thesis, as a basis for examining the association between economic inequality and crime, redundant.

2. NIBRS represents the next generation of crime data and it was designed to replace the nearly seventy-year-old UCR. The intent of NIBRS was "to enhance the quantity, quality, and timeliness of crime statistical data collected by the law enforcement community and to improve the methodology used for compiling, analyzing, auditing, and publishing the collected crime data" (Federal Bureau of Investigation, 2000, p. 1). NIBRS is unique because rather than being restricted to a group of eight index crimes that the summary-based program uses, it gathers information from individual crime reports recorded by police officers at the time of the crime incident for fifty-seven different criminal offenses. The information collected by police typically includes victim and offender demographics, victim/offender relationship, time and place of occurrence, weapon use, and victim injuries. Both the guidelines and the specifications used in the development of NIBRS can be found in the *Blueprint for the Future of the Uniform Crime Reporting Program* (Abt Associates, 1985). NIBRS is capable of producing more detailed, accurate, and meaningful data than that generated by the traditional UCR, thus, it is a valuable tool for the study of crime. The NIBRS data are archived at the National Archive of Criminal Justice Data at the University of Michigan (www.icpsr.umich.edu/NACJD).

3. The identification of an offender's racial characteristics by victims was reported to be extremely accurate (Hindelang, 1981, p. 471).

4. The fifteen states included Colorado, Connecticut, Iowa, Kansas, Kentucky, Massachusetts, Michigan, Nebraska, Ohio, South Carolina, Tennessee, Texas, Utah, Virginia, and West Virginia.

5. The Gini coefficient is the proportion of the total area below the forty five-degree line that lies above the Lorenz curve, which plots the cumulative percent of households against the cumulative percent of household income.

6. NIBRS recorded the race of the offender as belonging to one racial group only as identified by the victim or witness, thus race-specific census variables that were also mutually exclusive (i.e., Whites alone, Blacks alone) were relied on. Criminal offenders and victims that were Asian/Pacific Islanders and American Indians/Alaskan Natives were excluded from the study. Victim and witness reports revealed that these racial groups comprised less than 1 percent of all criminal offenders in 2000. These racial groups also represented less than 1 percent of crime victims. Additionally, NIBRS did not include Hispanic origin in its reported crime data because it would be highly unlikely that a victim or witness could identify accurately whether an offender was of Hispanic origin. This information was only available once an offender was arrested and was self-reported.

7. The principal component analysis of the three indicators of city disadvantage revealed the following extraction and percent of variance scores: percent of households with public assistance income (.830, 12 percent), percent of population that never graduated from high school (.753, 82 percent), and percent of households headed by a single female with children (.876, 6 percent). Although unemployment rate was also considered a measure of city disadvantage, it was excluded from the index because its extraction score was only .127.

8. Variance Inflation Factors (VIF) were calculated for all the estimated models. Serious collinearity problems did not occur when VIFs were less than 4 (Messner & Golden, 1992). The VIFs did not exceed 4 for any of the models displayed in Table 2, indicating that multicollinearity did not impact the results adversely. Nevertheless, to ensure that these findings remained robust across different specifications, nested models were also estimated. The results generated from these nested analyses mirrored the findings produced from the saturated models reported in Table 2.

9. A robust regression analysis was undertaken because preliminary regression diagnostics indicated the presence of influential outliers in the sample. Robust regression was more efficient in the presence of outliers (Berk, 1990). Seven cities in the sample with moderately high Cook's distance scores were identified. The results produced from the robust regression analysis were nearly identical to the findings generated in the original OLS analyses. The effects of each of the variables of interest, or lack thereof, remained stable.

10. Although there were an insufficient number of cases within any particular crime category or within any grouping of offenses to conduct a meaningful analysis of the race-specific crime rates, an adequate number of cases was present to reanalyze Model 1 using assaults (aggravated and simple assaults combined), robbery, and sexual offenses (including forcible rape, forcible sodomy, sexual assault with an object, and forcible fondling). These supplemental analyses produced results nearly identical to those reported in Model 1 of Table 2. Additionally, to correct for possible heteroskedasticity of the error terms, supplemental analyses using weighted least squares with total population as the weighting variable were conducted. The results reported in Table 2 remained unchanged.

References

Abt Associates. (1985). *Blueprint for the future of the Uniform Crime Reporting program.* Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Berk, R. A. (1990). A primer on robust regression. In J. Fox & J.S. Long (Eds.), *Modern methods of data analysis* (pp. 292–324). Thousand Oaks, CA: Sage.

Blau, J. R., & Blau, P. M. (1982). The cost of inequality: Metropolitan structure and violent crime. *American Sociological Review*, *47*, 45–62.

Blau, P. M. (1977). *Inequality and heterogeneity.* New York: Free Press.

Blau, P. M., & Golden, R. M. (1986). Metropolitan structure and criminal violence. *Sociological Quarterly*, *27*, 15–26.

Blau, P. M., & Schwartz, J. E. (1984). *Crosscutting social circles: Testing a macrostructural theory of intergroup relations.* Orlando, FL: Academic Press.

Bureau of Justice Statistics. (1997). *Criminal victimization in the United States, 1994.* Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Chilton, R., & Jarvis, J. (1999). Victims and offenders in two crime statistics programs: A comparison of the National Incident-Based Reporting System (NIBRS) and the National Crime Victimization Survey (NCVS). *Journal of Quantitative Criminology*, *15*, 193–205.

Cook, P. J. (1985). The case of the missing victims: Gunshot woundings in the National Crime Survey. *Journal of Quantitative Criminology*, *1*, 91–102.

D'Alessio, S. J., & Stolzenberg, L. (2003). Race and the probability of arrest. *Social Forces*, *81*, 1381–1397.

Federal Bureau of Investigation. (2000). *National Incident-Based Reporting System, vol. 1: Data collection guidelines.* Washington, DC: U.S. Government Printing Office.

Golden, R. M., & Messner, S. F. (1987). Dimensions of racial inequality and rates of violent crime. *Criminology*, *25*, 525–542.

Greenberg, D. F., Kessler, R. C., & Loftin, C. (1985). Social inequality and crime control. *Journal of Criminal Law and Criminology*, *76*, 684–704.

Greenfeld, L. A. (1998). *Alcohol and crime: An analysis of national data on the prevalence of alcohol involvement in crime.* Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Harer, M. D., & Steffensmeier, D. (1992). The differing effects of economic inequality on Black and White rates of violence. *Social Forces*, *70*, 1035–1054.

Hepburn, J. R., & Voss, H. L. (1970). Patterns in criminal homicide: A comparison of Chicago and Philadelphia. *Criminology*, *8*, 21–45.

Hindelang, M. J. (1978). Race and involvement in common law personal crimes. *American Sociological Review*, *43*, 93–109.

Hindelang, M. J. (1981). Variation in sex-race-age-specific rates of offending. *American Sociological Review*, *46*, 461–474.

Inciardi, J. A. (1978). The uniform crime reports: Some considerations on their shortcomings and utility. *Public Data Use*, *6*, 3–16.

Jacobs, D. (1979). Inequality and police strength: Conflict theory and coercive control in metropolitan areas. *American Sociological Review*, *44*, 913–925.

Jacobs, D., & Wood, K. (1999). Interracial conflict and interracial homicide: Do political and economic rivalries explain White killings of Blacks or Black killings of Whites? *American Journal of Sociology*, *105*, 157–190.

Kovandzic, T. V., Vieratis, L. M., & Yeisley, M. R. (1998). The structural covariates of urban homicide: Reassessing the impact of income inequality and poverty in the post-Reagan era. *Criminology*, *36*, 569–599.

LaFree, G. D. (1982). Male power and female victimization: Toward a theory of interracial rape. *American Journal of Sociology*, *88*, 311–328.

Liska, A. E., & Chamlin, M. B. (1984). Social structure and crime control among macrosocial Units. *American Journal of Sociology*, *90*, 383–395.

Massey, D. S., & Denton, N. A. (1994). *American apartheid: Segregation and the making of the underclass.* Cambridge, MA: Harvard University Press.

Maxfield, M. G. (1999). The National Incident-Based Reporting System: Research and policy applications. *Journal of Quantitative Criminology*, *15*, 119–149.

McCarthy, J., & Yancey, W. L. (1971). Uncle Tom and Mr. Charlie: Metaphysical pathos in the study of racism and personal disorganization. *American Journal of Sociology*, *76*, 648–672.

Messner, S. F., & Golden, R. M. (1992). Racial inequality and racially disaggregated homicide rates: An assessment of alternative theoretical explanations. *Criminology*, *30*, 421–447.

O'Brien, R. M. (1987). The interracial nature of violent crimes: A reexamination. *American Journal of Sociology*, *92*, 817–835.

Pampel, F. C., & Williams, K. R. (2000). Intimacy and homicide: Compensating for missing data in the SHR. *Criminology*, *38*, 661–680.

Parker, K. F., & McCall, P. L. (1999). Structural conditions and racial homicide patterns: A look at the multiple disadvantages in urban areas. *Criminology*, *37*, 447–477.

Parker, R. N. (1989). Poverty, subculture of violence, and type of homicide. *Social Forces*, *67*, 983–1007.

Phillips, J. A. (1997). Variations in African-American homicide rates: An assessment of potential explanations. *Criminology*, *35*, 527–559.

Rand, M. R. (1997). *Violence-related injuries treated in hospital emergency departments* (Bureau of Justice Statistics Special Rep.). Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Sampson, R. J. (1984). Group size, heterogeneity, and intergroup conflict: A test of Blau's inequality and heterogeneity. *Social Forces*, *62*, 618–639.

Sampson, R. J. (1986a). Effects of inequality, heterogeneity, and urbanization on intergroup victimization. *Social Science Quarterly*, *67*, 751–766.

Sampson, R. J. (1986b). Crime in cities: The effects of formal and informal social control. In A. J. Reiss Jr. & M. Tonry (Eds.), *Communities and crime* (pp. 271–311). Chicago: University of Chicago Press.

Smith, M. D., & Parker, R. N. (1980). Type of homicide and variation in regional rates. *Social Forces*, *59*, 136–147.

Wadsworth, T., & Kubrin, C. E. (2004). Structural factors and Black interracial homicide: A new examination of the causal process. *Criminology*, *42*, 647–672.

Wells, E. L., & Rankin, J. H. (1995). Juvenile victimization: Convergent validation of alternative measurements. *Journal of Research in Crime and Delinquency*, *32*, 287–307.

Wilbanks, W. (1985). Is violent crime intraracial? *Crime and Delinquency*, *31*, 117–128.

Williams, K. R. (1984). Economic sources of homicide: Reestimating the effects of poverty and inequality. *American Sociological Review*, *49*, 283–289.

Wilson, W. J. (1987). *The truly disadvantaged: The inner city, the underclass and public policy.* Chicago: University of Chicago Press.