

# Identifying the Structural Correlates of African American Killings

What Can We Learn From Data Disaggregation?

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*The present study extends the understanding of the structural determinants of African American killings by analyzing the impact of key socioeconomic and demographic factors on disaggregated Black homicide rates in St. Louis neighborhoods. The findings reveal that (a) there is significant variation within Black homicides in terms of motive, victim and offender characteristics, victim-offender relationship, and type of death; (b) concentrated disadvantage is significantly associated with some but not all types of Black killings; and (c) residential instability is not significantly related to most Black killings but has a small negative effect on gang homicide. The findings reinforce the necessity of disaggregating homicide rates to understand the race-violence relationship. The theoretical, methodological, and policy implications of the findings are discussed.*

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**Keywords:** *homicide; race; neighborhood disadvantage; social disorganization*

*One of the most intriguing findings* from a number of recent studies that examine the structural covariates of homicide rates is that many of the socioeconomic and demographic factors considered are found to have strong positive effects on White homicide rates but weak or nonexistent effects on Black rates. Most surprising to

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researchers is the discovery that poverty, median family income, and income inequality are more strongly associated with White than Black homicide levels (LaFree, Drass, & O'Day, 1992; Ousey, 1999; Peterson & Krivo, 1993; Shihadeh & Steffensmeier, 1994). This body of research indicates that the structural covariates of homicide rates are race specific, not race invariant, as once previously thought. Thus, current scholars have moved away from the question of whether structural factors are race specific and onto the question of why. Our research addresses this question by examining the structural covariates of disaggregated Black homicide rates to determine whether the effects of community characteristics vary across differing types of Black homicide. Specifically, we ask, (a) What are the various types of homicide committed by African Americans? (b) Which neighborhood factors are significantly related to each of these subtypes? and (c) How does disaggregating Black homicide rates help us to better understand the race-violence relationship? We address these questions by exploring the relationships between neighborhood-level characteristics and disaggregated Black homicide rates using data from the St. Louis Homicide Project and census data for the city of St. Louis.

### **STRUCTURAL COVARIATES OF BLACK HOMICIDE RATES: PAST RESEARCH AND REMAINING CONCEPTUAL ISSUES**

Empirical evidence suggests that the macro-social paths leading to high rates of Black urban violence differ from those contributing to high rates of White urban violence (LaFree et al., 1992; Sampson, 1987; Shihadeh & Steffensmeier, 1994). One explanation for this pattern of racial variability is offered in a recent study by Krivo and Peterson (2000). Krivo and Peterson argued that racially differing effects occur because the crime-generating process is conditioned by the social situations of Blacks and Whites. Variation in levels of structural disadvantage may cease to provide meaningful distinctions across cities once disadvantage reaches very high levels. As a result, additional increases in structural disadvantage may not lead to ever higher rates of violence for Blacks in disadvantaged areas. Krivo and Peterson's results

support this notion. They found that concentrated disadvantage is significantly positively related to both White and Black homicide levels, but the effect for Whites is nearly twice as large as for Blacks. More important, concentrated disadvantage among Blacks has a significant curvilinear association with homicide rates; disadvantage has a positive effect at low levels, but its influence weakens at higher levels. Their finding is supported in a study by McNulty (2001). McNulty examined racially disaggregated homicide rates across block groups in Atlanta and discovered that the effect of disadvantage on violence is similar in Black and White neighborhoods within the low range of the disadvantage distribution but diminishes significantly at the higher levels prevalent in Black areas.

Although the explanation offered by Krivo and Peterson (2000) and McNulty (2001) is empirically supported, in this study we consider an alternative explanation that takes into account the wide variation that exists across Black homicides. It may be the case that many socioeconomic and demographic factors are associated with some but not all types of Black killings and that failing to disaggregate Black homicides masks much of this variation. For example, levels of poverty may be more related to Black murders between strangers than between intimates. Levels of residential instability may be associated only with Black homicides that have an underlying motive of robbery or burglary. As it stands, there has been little empirical support showing a strong relationship between poverty and total Black homicide rates, but that does not necessarily imply that poverty plays no role in producing any type of Black homicide.

Two studies indicate that exploring this avenue of research is promising. Peterson and Krivo (1993) examined the impact of racial residential segregation on rates of African American homicide victimization for U.S. central cities. Their findings demonstrate that Black-White segregation leads to higher rates of Black killing although this is true only for stranger and acquaintance homicide, not family homicide. Similarly, in their research on victim and offender homicide rates in U.S. cities in 1990, K. F. Parker and McCall (1999) disaggregated Black killings by race of the victim, comparing Black intraracial and interracial homicides. Not surprisingly, they found that the correlates of Black homicide vary with the race of the victim; declining employment and poverty are

associated with Black intraracial but not Black interracial homicide. Moreover, job accessibility for the Black population decreases Black intraracial homicide yet increases Black interracial homicide. Other factors including the racial inequality index and a measure for the local opportunity structure also had differing effects depending on the type of homicide examined. These studies provide initial encouragement that criminologists need to disaggregate Black homicide rates to better understand the race-violence relationship.

At the same time, although criminologists have long studied the question of what differences exist between Blacks and Whites in their involvement in homicide, what is less known is the extent of variation within Black homicides themselves and, relatedly, the correlates of this variation. This gap in the race-violence literature is recognized by a number of scholars (Hawkins, 1999; Peterson & Krivo, 1993) but, to date, has been addressed by few (excluding Rose & McClain, 1990). As Hawkins (1999) rightly pointed out,

Within-group comparisons have received much less scholarly and public attention. This is unfortunate, because knowledge of the causes of high rates of homicide among African-Americans can be significantly improved though the use of well-designed studies of the distribution and patterning of homicide within the Black population. (p. 202)

This study begins to address Hawkins's concern.

Finally, as the preceding discussion shows, most research has examined the relationship between poverty, unemployment, or family disruption and racially disaggregated homicide rates at the state, Standard Metropolitan Statistical Area, and city levels. However, social disorganization theory—an explanation frequently employed in these studies—operates at the neighborhood level of explanation because the main process linking social environments and violence depends, at least to some extent, on interaction with others who live nearby (Sampson, 1986). This point has been raised yet rarely addressed empirically (excluding McNulty, 2001). Thus, this study advances what we know by examining whether patterns operate at a lower level of aggregation—the neighborhood.

## THEORETICAL PERSPECTIVES ON NEIGHBORHOOD STRUCTURE, SUBCULTURE, AND HOMICIDE

Our general thesis is that the influence of structural characteristics on Black homicide levels will vary across different subtypes. Social disorganization theory provides the context for understanding how neighborhood factors may be associated with homicide rates. The theory describes how features of the urban environment, such as poverty, residential instability, and racial/ethnic heterogeneity, lead to high levels of social disorganization in communities. Social disorganization refers to the inability of a community to realize the common values of its residents and maintain effective social controls (Kornhauser, 1978, p. 120). Empirically, the intervening dimensions of social disorganization can be measured in terms of the prevalence and interdependence of social networks in a community and in the span and intensity of collective supervision that the community directs toward local problems (Bursik, 1988, p. 521). Whereas social disorganization research has focused most frequently on the relationships between neighborhood structure, social ties and social control, and crime, recent theoretical development highlights the importance of considering neighborhood subcultural elements as well.

For example, theorists suggest that poverty, instability, and other disorganizing features of urban communities can create structural barriers that undermine social organization and, hence, the control of crime. Sampson and Wilson (1995) argued that concentrated disadvantage—high rates of poverty, joblessness, female-headed households, and high school dropouts—gives rise to the attenuation of larger cultural values, a point raised by Kornhauser (1978), who suggested that ecological segregation of communities creates “cultural disorganization,” or the attenuation of societal cultural values.

Similarly, recent work describes violence as a cultural adaptation to the structural impediments resulting from concentrated disadvantage (Anderson, 1999). Poverty, instability, and other features of urban communities are hypothesized to impede the development and maintenance of social networks, to obstruct the quest for common values, and thereby to foster cultural diversity with respect to noncriminal values. For example, groups living in

areas in which legitimate opportunities are limited may adapt to these conditions by incorporating alternative strategies—and in some cases violence—to accomplish common goals (e.g., pride, respect, and sense of accomplishment). This point was raised by Shaw and McKay (1942, pp. 49-50), who found that disorganized communities spawned delinquent gangs with their own subcultures and norms perpetuated through cultural transmission.

Bruce, Roscigno, and McCall (1998) emphasized the dual and reciprocal role of structural and cultural forces. They argued that social structure influences levels of violence in a given community through the interaction of normative and social psychological pressures, often generated by economic deprivation and dangerous living conditions. Their claim is that a number of indicators that signify powerlessness shape social psychological well-being and can lead to anger, frustration, and despair. Growing up in an environment filled with violence can lead to psychological states such as nihilism (as evidenced by adolescents referring to their slim chances of seeing adulthood, for example). This process is exacerbated by few legitimate avenues for opportunity, numerous illegitimate avenues, and a high availability of weapons in these neighborhoods.

It is important to note that these theorists reject the traditional subcultural perspective and are careful to underscore the intersection of cultural and structural forces in their explanations. In the traditional perspective, lower class communities generate a distinctive moral universe that glorifies and legitimates aggressive behavior. This “subculture of violence” becomes self-perpetuating in disadvantaged communities and, according to Wolfgang and Ferracuti (1967), explains why these neighborhoods generate high homicide rates. The perspective, however, takes as a given the existence of a subculture of violence and fails to ask how such a subculture arises in the first place. In other words, the structural forces shaping cultural phenomena are for the most part invisible in the traditional subcultural perspective.

In critiquing this approach, Hawkins (1985) noted inattention to etiological factors as a major limitation:

It is the lack of a full consideration of economic factors that constitutes a crucial ideological basis of subculture of violence theory. Though economic factors are said to determine the contours and boundaries of a given subculture, subcultural theories have

seldom attempted to link such conditions to homicide. Both the lack of attention to economic correlates of black (and white) homicide and the failure to explore situational factors fully are features of existing theoretical analyses of homicide that raise questions about the adequacy for developing strategies of reduction. (p. 94)

In line with Hawkins's comment, scholars should view violence, in part, as a structurally based cultural adaptation.

Recent empirical research supports the notion that structurally disorganized communities engender cultural value systems and attitudes that seem to legitimate, or at least provide a basis of tolerance for, violence. Anderson's (1999) study of a poor Philadelphia neighborhood with high rates of female-headed households identified a "code of the streets" whose norms govern interpersonal encounters in public and "supply a rationale allowing those who are inclined to aggression to precipitate violent encounters in an approved way" (p. 33). Residents of such communities develop an acute sensitivity to disrespect from others and are prone to respond violently to even trivial slights, especially in the presence of bystanders. Similarly, Horowitz's (1983) study of an impoverished Hispanic community in Chicago found a prevailing "code of honor" that encourages deferential treatment of others and aggressive sanctions against those who show disrespect. These studies buttress a point raised by Corzine, Huff-Corzine, and Whitt (1999, p. 46), who alluded to Swidler (1986): Culture's primary influence on violence is through "definitions of the situation," "frames," and/or "attributional styles" that affect the likelihood that an individual will define a situation as one in which violence is appropriate or even demanded.

In essence, social disorganization theory suggests that violence is shaped, in large part, by the constraints and opportunities that the residents of socially disorganized neighborhoods face in terms of access to jobs and job networks, involvement in quality schools, and exposure to conventional role models (Sampson & Wilson, 1995). Concentrated disadvantage and other factors can influence homicide by (a) attenuating the larger cultural values, (b) creating a climate in which the willingness to participate in violence is one of the few strategies males have for earning the respect and admiration of their peers (and for protecting oneself and one's belongings), and (c) increasing frustration, anger, and despair among residents.

Although we cannot empirically measure subculture in the present study, the above-mentioned ideas serve as the rationale for the hypothesized neighborhood structure-homicide relationship. We believe that structural explanations must do a better job of identifying the processes that lead to increased homicide in economically disadvantaged neighborhoods, a stance endorsed by other homicide researchers. Corzine et al. (1999) stated that “our position is that a consideration of social-structural variables is necessary but *not sufficient* to provide an explanation of homicide, and theories that include cultural differences between groups offer a promising avenue for advancing our understanding of killing” (p. 43).

How poverty, residential instability, and percentage of young males—factors examined in social disorganization theory—give rise to cultural patterns of behavior that differentially relate to different types of Black homicide is discussed at length in the hypotheses section.

### DISAGGREGATING BLACK HOMICIDES

The St. Louis homicide data set contains information on murders that occurred in St. Louis between 1985 and 1995. These criminal homicides were compiled from case files maintained by the St. Louis Metropolitan Police Department and the supplemental files submitted by investigating officers. For each case, information about the suspect(s), victim(s), and event was hand coded by trained coders.

Also created was a narrative of each homicide that provides an account of the event, describing what occurred, who was present, whether there were bystanders, and other important information. The source of these narratives is police reports (including a detailed description of the crime scene and surrounding location, any mention of physical evidence, a suspect interview, and witness testimonies).

A potential limitation of these data is related to the accuracy and completeness of information contained in police records. The St. Louis Police Department clears a high percentage of cases and, as a consequence, has more complete records than in cities with lower clearance rates (Decker, 1996, p. 431). To check for intercoder

reliability, an independent researcher read through the narratives, coding a random subset of the cases (roughly 10%). Agreement coefficient alphas for select variables indicate that we can be strongly confident that the high agreement levels between the coders did not result from chance; all of the alphas are above .75. Results from the reliability tests are available from the authors on request.

Of all homicides in St. Louis between 1985 and 1995 ( $N = 2,161$ ), 1,600 were committed by Black offenders. Of these 1,600, the motive is unknown in 127 cases. The motive is a central factor in disaggregating homicide rates, and for this reason, we have eliminated these cases. Three hundred and twenty-five of the remaining 1,473 did not fit into one of the subtypes given idiosyncratic motives (e.g., accidental, psychotic, contract killing). Thus, 1,148 (71.7%) of the Black homicides are included in the analyses.

The St. Louis Police reports offer support to our claim about variation in Black homicide. Many of the murders occurred between friends and family members, whereas others occurred between strangers. Some killings were committed intentionally, or unintentionally, within the context of financially motivated crimes; others were the result of an emotional outburst or long-standing grudge. This observed heterogeneity reinforced our belief that the structural characteristics that influence one type of homicide may not influence another.

Guided by previous literature on disaggregated homicide rates (Dugan, Nagin, & Rosenfeld, 1999; Kubrin, 2003; Macmillan & Gartner, 1999; Miles-Doan, 1998; R. N. Parker, 1989; Rosenfeld, Bray, & Egley, 1999; Williams & Flewelling, 1988), we propose six identifiable subtypes of homicide in the data. They include gang, intimate, stranger robbery, nonstranger robbery, stranger altercation, and nonstranger altercation. Below is a description of each as well as examples from the data.

### **Gang Homicide**

Gang homicides ( $n = 82$ ) result from gang rivalries or disputes over the control of neighborhoods or drug markets. This subtype does not include all killings in which the offender or victim was involved in gang-related activity but only those in which the homicide itself was directly related to furthering the economic, so-

cial, or territorial interests of the gang as an organization. As Table 1 shows, firearms were used in all gang killings, and the offenders/victims were often using drugs or alcohol at the time of the murder (alcohol was involved in 22% and drugs in 17% of the cases).<sup>1</sup> Roughly one third (37%) of gang homicides were committed by offenders younger than the age of 18. Offenders and victims tended to be close in age, with the mean age of the offender and victim being 18.6 and 19.9 years old, respectively. All of these killings were committed by males. Research on disaggregated homicide rates often includes this type of killing (Rosenfeld et al., 1999). An example of a gang homicide is the following:

Case 89745: The victim was a Blood, the suspect a Crip. The victim made gang-related hand gestures to the suspect who was across the street from him. The victim made the sign "crab killer" (Crip killer) and gestured as if he had a gun in his waistband. The suspect stepped from behind a tree yelling "What?!" pulled a gun and fired at the victim. The suspect and two or three others with him fled the scene. The suspect had a prior record and was wanted for parole violation.

### **Intimate Homicide**

Intimate homicides ( $n = 95$ ) occur between individuals who are currently or have been in a romantic relationship. This category—examined in a number of studies (Dugan et al., 1999; Kubrin, 2003; Macmillan & Gartner, 1999; Miles-Doan, 1998; R. N. Parker, 1989)—includes murders between husbands and wives, ex-husbands and ex-wives, boyfriends and girlfriends, and ex-boyfriends and ex-girlfriends. More than two thirds of intimate homicides were committed during an argument, and these killings are frequently the culmination of a long-standing pattern of violence. Intimate offenders were slightly more likely to be males than females (56% versus 44%), and in cases in which the offender was female, self-defense was often given as the justification for the killing. Just under half of these homicides (45%) were alcohol related, and about 17% were drug related. All but 1 were committed by adults, with the mean ages of the offender and victim at 35.6 years and 38.3 years, respectively. Finally, the murder weapon was a gun in about half (51%) of the cases. In the following intimate homicide, an argument between the suspect (male) and victim (female) escalates into lethal violence in their home:

**TABLE 1**  
**Descriptive Statistics for Subtypes of Black Homicide**

Variable	Gang (n = 82)	Intimate (n = 95)	Non- stranger		Non- stranger		Total (N = 1,148)
			Robbery (n = 119)	Robbery (n = 132)	Altercation (n = 125)	Altercation (n = 595)	
Alcohol related (%)	22	45	33.3	39.1	48	40.3	39.8
Drug related (%)	17.1	16.8	35	60.2	28.8	37	35.6
Gang related (%)	96.3	0	9.2	8.3	17.6	7.4	14.6
Male offender (%)	100	55.8	96.7	91.7	99.2	93.1	90.4
Juvenile offender (%)	36.6	1.1	28.3	7.5	16	11.6	14.3
Victim injury:							
Gunshot (%)	100	50.5	77.5	66.2	85.6	78.5	77.2
Mean offender age (in years)	18.6	35.6	21.8	25.6	25.1	27.6	26.5
Mean victim age (in years)	19.9	38.3	38.6	37.6	25.8	29.1	30.8

Case 45724: The suspect had been out all night drinking with friends. When he arrived home, the victim met him at the door and “started arguing.” The suspect said he was tired of the victim’s constant arguments with him and tired of her embarrassing him in front of the neighbors, that the latter had lost respect for him. So, on this date, when the victim “began arguing,” the suspect used his revolver to hit the victim in the head and it discharged. The suspect then put a knife in the victim’s hand to make it look like self-defense. The suspect was arrested at the scene.

### Stranger Robbery Homicide

Stranger robbery homicide ( $n = 119$ ) occurs when a person not known by the offender is killed during the commission of a robbery. A number of studies have specifically considered felony-related homicides (Kubrin, 2003; R. N. Parker, 1989; Williams & Flewelling, 1988). These killings result from a mugging, car jacking, or armed robbery gone awry, although sometimes, from the outset, the offender intended to kill the victim. The victims were the specific targets of a robbery, employees of a commercial establishment that was targeted, or bystanders caught in the crossfire. Firearms were used in about three quarters of these homicides (78%), whereas the other quarter was the result of a stabbing, slashing, or severe beating. The overwhelming majority of stranger robbery homicides (97%) were committed by males.

About a quarter (28%) of the offenders were juveniles, and half (50%) were younger than 20 years of age. In about 9% of these killings, either the offender or the victim was thought to be involved in a gang. The following account is a typical stranger robbery homicide:

Case 88147: This incident occurred on the street. A large group of young people (10-15 males and several females) had been gathered in a circle at the above location, standing in various groups. The suspect was in a group with three friends. The victim, an off-duty police officer, drove up to use the Laundromat. The suspect commented on the victim's gold necklace and then said "Watch this." The suspect approached the victim and said "What's up Cuz?" and displayed a weapon. It's not clear who fired first but both the victim and the suspect fired their weapons. The suspect was shot three times, twice in the groin and once in the arm. The suspect's friends tried to help him from the scene but he collapsed. They took the suspect's gun and hid it. The victim's necklace disappeared. It's not clear whether or not the suspect took it (and a friend took it from him) or whether one of the suspect's friends took it from the victim after the victim was down. The suspect and his friends had been drinking beer and whiskey prior to the incident and were drinking when the victim drove up.

### **Nonstranger Robbery Homicide**

This subtype is differentiated from the stranger robbery subtype by the victim-offender relationship. In cases of nonstranger robbery homicide ( $n = 132$ ), the victim and offender were either nonintimate family members, friends, or acquaintances. Given the preexisting relationship, the victim was most likely the direct target of the robbery. In many cases, the offender was attempting to steal drugs or the proceeds from illegitimate activity; in others, the target of theft was money, jewelry, clothing, or other possessions. Alcohol was involved in almost 40% and drugs in 60% of these murders (a manifestation of the large number of nonstranger robbery homicides in which drugs are the target of theft). Offenders were primarily males (92%) and rarely juveniles (8%), and the vast majority (71%) were between the ages of 18 and 30. Firearms were used in two thirds of these killings (66%). As is common in the nonstranger robbery subtype, the motive of the following murder was the robbery of narcotics:

Case 24421: Suspect 1 knew the victim and suspect 2 did not. One or both of them had the idea to arrange to purchase a quantity of cocaine from the victim as a "set-up" (i.e., in order to insure that the victim would be at a certain location at a certain time with a quantity of cocaine). During the transaction, suspect 2 shot the victim. They had never intended to pay the victim for the drugs. The victim was a drug seller who sold in quantity; he was not a street peddler. Both suspects had been drinking prior to robbing the victim.

### **Stranger Altercation Homicide**

Stranger altercation homicides ( $n = 125$ ) are killings that do not appear to be motivated by material gain and in which the victim and offender have had no previous contact. These homicides are often the result of an argument that escalates to lethal violence. Anderson (1999), Wilson (1987, 1996), Sampson and Wilson (1995), and Bruce et al. (1998) have written extensively about non-felony-related violence between strangers (as well as between friends and acquaintances), and Kubrin (2003) has empirically examined the correlates of this subtype for Whites and Blacks. These authors suggested that such killings are often the result of an unwillingness to back down from an altercation, as a move to deescalate an interpersonal conflict might be viewed by onlookers (or those who would hear about the confrontation later) as weak, causing the participant to lose his or her reputation or integrity in the community. This unwillingness to promote deescalation, combined with the easy access to lethal weapons, may cause a confrontation that would usually end with a scuffle to end with a homicide. Roughly half of these killings (48%) were alcohol related, and about a quarter (29%) were drug related. Almost all offenders were male (99%), and most (86%) used firearms to kill the victims. Although only 16% of the offenders were juveniles, more than two thirds (67%) were younger than the age of 25. As is evident in the following narrative, many stranger altercation homicides result from trivial incidents perceived as disrespectful by the suspect:

Case 75495: The suspect was using a payphone. The victim wanted to use the phone. He asked the suspect how much longer he would be. This infuriated the suspect who started accusing the victim of calling him a "nigger." There was some argument. The victim may have tried to walk away. The suspect turned to his companion and said, "Give it to me." The companion handed him a gun which he

began firing. Everyone ran or dove for cover. The victim had run into a gangway. He threw a bottle at the suspect who turned and shot him. The suspect drove from the scene.

### **Nonstranger Altercation Homicide**

The nonstranger altercation subtype includes the largest number of killings ( $n = 595$ ). These homicides are similar to general altercation homicides between strangers discussed above except that in these cases, the victim and the offender know each other. These killings typically occurred during an escalating argument and, like the altercation homicides involving strangers, were often motivated by the victim's lack of respect shown to the offender. Alcohol and drugs were involved in about 40% and 37% of these cases, respectively. The offenders were overwhelmingly male (93%), and although only a small percentage were juveniles (12%), more than two thirds (67%) were younger than the age of 30. Firearms were used in almost 80% of the killings. A small percentage (7%) were gang related. The following nonstranger altercation murder was the culmination of a heated argument:

Case 02905: The suspect's son had apparently gone out of town and left his car keys with the victim and told him that he could use the car. After drinking, the suspect directed the victim to give him the keys. The victim refused and the suspect asked him to step outside and fight "if he thought he was tough." Victim refused to step outside. Suspect left, went upstairs to his room and returned with a rifle, telling the victim to give him the keys as he shot him in the neck. Suspect then walked up to the victim who was on his knees and shot him twice in the head. Suspect stated that he was very intoxicated at the time of the shooting but appeared sober to detectives at 4 am the same morning. The suspect admitted killing the victim and stated to detectives, "I did what I had to do because the victim thought he was tougher than me." Witnesses said the victim and suspect had never had problems in the past. A .22 rifle, ammunition, and empty beer cans were all recovered at the scene.

## **STRUCTURAL CHARACTERISTICS AND HOMICIDE TYPES: HYPOTHESES**

To incorporate neighborhood characteristics that give rise to structurally based violent cultural responses, we include the

following indicators in our models: percentage of Black males between the ages of 14 and 24, residential instability, and an index of concentrated disadvantage (composed of percentage Black poverty, Black per capita income, percentage Blacks not working, percentage Black families that are female headed, and percentage Blacks with a high school degree). We also include population size as a control.

Our general thesis is that the influence of structural characteristics on Black homicide will vary across the different subtypes. Hypotheses stem from the theoretical and empirical literature on violent criminal behavior. Anderson (1999), Bruce et al. (1998), Horowitz (1983), and Sampson and Wilson (1995) suggested that concentrated disadvantage influences violent crime by creating a climate in which the willingness to participate in violence is one of the few strategies males have for earning the respect and admiration of their peers. Groups living in areas with limited legitimate opportunities adapt to these conditions by incorporating alternative strategies—such as violence—to accomplish goals such as pride, sense of accomplishment, and respect. Krivo and Peterson (1996) and Anderson (1999) suggested that part of the adaptation to living in a disadvantaged neighborhood where some residents adopt these alternative strategies may be the willingness and ability to use violence to protect oneself and one's belongings, which can translate into higher rates of defensive violence. An additional effect of concentrated disadvantage may be an experience of powerlessness that leads to anger, frustration, and despair (Bruce et al., 1998). Such social psychological states can manifest in expressive violence.

These processes—in which disadvantage encourages higher rates of violent behavior as an adaptive strategy, to earn respect and esteem, or as an expression of frustration—are more likely to generate altercation-related homicides, especially those that occur in public. The motivation for these killings is based on the development and defense of one's respect and integrity, or the acting out of intense anger. If witnesses to the confrontation are present, a willingness to escalate its intensity is more important for reputation maintenance. We therefore hypothesize a significant positive relationship between disadvantage and stranger and nonstranger altercation homicides. The effect should be stronger when the victim and offender are not strangers as there is greater

social capital and long-lasting repercussions at stake, both of which underlie the development and maintenance of reputations. Although intimate homicides are similar in some ways to altercation killings (they lack a financial motive and often result from an argument), they are more likely to take place in private. They may be less motivated by reputation maintenance or the development of respect, yet still might result from high levels of frustration. Hence, they are likely to occur in disadvantaged areas but less so than more public displays of violence. Finally, as gang homicides are often committed publicly and are connected to earning respect and defending or claiming territory, we hypothesize a positive relationship between this type of killing and disadvantage. Given this combination of factors, we expect that gang killings will be highly influenced by disadvantage.

Robbery homicides between strangers and nonstrangers are motivated by financial gain, not the development or maintenance of reputations. Although living in a disadvantaged neighborhood may encourage property-related violent crime as an adaptation to limited legitimate opportunities, the location of homicides falling under this subtype is more likely (than the other subtypes) to be outside an offender's neighborhood. Robbery killings involve some level of planning and usually take place where there are material goods worth stealing. The location of these targets is less likely to be disadvantaged neighborhoods. Hence, we hypothesize that there will be no effect of disadvantage on the number of stranger robbery homicides. Because, by definition, the involved parties in nonstranger robbery homicides are friends, family, or acquaintances, it is more likely that the offender and victim will live in the same neighborhood. Given the increased motivation for violent crime generated by a lack of opportunities in disadvantaged neighborhoods, we hypothesize a significant but small positive relationship between nonstranger robbery homicide and disadvantage.

In order for the development and maintenance of respect and reputation to be salient, social networks must be fairly constant. If social relations are constantly in flux, hierarchies based on reputation are much more difficult to maintain, and structurally based cultural adaptations are less likely to take hold. In such instances, a common definition of the situation (and, hence, the appropriate response) becomes less well established, and the development of

these reputations becomes less essential. Although traditional social disorganization theory views residential instability as a key contributor to neighborhood disorganization, and thus crime, a theoretical approach that incorporates culture will make different predictions depending on the characteristics of the homicide. Residential instability may be substantially less influential for violence that stems from the maintenance of social hierarchies, such as altercation or gang homicides. High levels of instability may actually decrease reputation-based crime by inhibiting the development of entrenched social hierarchies. As a result, we hypothesize that altercation and gang homicides will be inversely related to neighborhood instability.

Instability, however, increases the number of targets for economically motivated crimes by decreasing levels of guardianship and increasing the interaction between individuals from diverse social milieus. These factors are more salient when considering robbery homicides between strangers. We therefore hypothesize that instability will be positively related to stranger robbery but not nonstranger robbery killings. We predict that residential instability will not be associated with intimate homicides, due to their private nature.

Finally, the percentage of young Black males between the ages of 14 and 24 is often included in structural analyses of crime rates. Although research has suggested that these individuals have higher rates of offending and victimization, this is less so the case for homicide. The mean offender age was younger than 25 in just two subtypes—gang and stranger robbery—and only about half of all Black homicides (54%) were committed by individuals younger than the age of 25. Given this age distribution, we do not believe that the percentage of young Black males will be significantly associated with any of the subtypes.

## METHOD

### **Neighborhood Measures, Homicide Counts, and Analytic Procedures**

The structural characteristics taken from the 1990 census include percentage Black poverty, Black per capita income,

percentage Blacks not working, percentage Black families that are female headed, percentage of Blacks with a high school degree, percentage young Black males, residential instability, and population size. These characteristics correspond to the neighborhood in which the homicide took place.<sup>2</sup> The operationalization of these variables is included in the appendix.

One of the challenges of exploring the relative influence of structural characteristics is the high level of collinearity that exists between them (Land, McCall, & Cohen, 1990). To address this problem, we performed factor analysis to generate one measure of concentrated disadvantage and to empirically confirm the independent variation of indicators of residential mobility and the size of the young Black male population. The analysis yielded a factor with an eigenvalue above the conventional threshold of 1.00 that explains nearly 70% of the cumulative variance in this latent construct. The variables and their factor loadings include percentage Black poverty (.86), percentage Black not working (.84), percentage Black families headed by single mothers (.73), Black per capita income (−.87), and percentage Blacks with a high school degree (−.87). In addition to minimizing problems of collinearity, creating factor scales allows us to combine multiple measures to create a more inclusive measure of disadvantage. Findings from recent studies suggest that greater attention should be directed toward measuring the multiple disadvantages and “concentration effects” that Wilson theorized characterize inner-city neighborhoods (K. F. Parker & Pruitt, 2000b; Sampson & Wilson, 1995).

An examination of the univariate distributions revealed skewness in the homicide rates. Homicide is a rare event, and most neighborhoods in St. Louis have small numbers of Black homicides despite pooling the data over a 10-year period. Moreover, when populations are small relative to offense rates, the discrete nature of the homicide counts cannot be ignored, and traditional ordinary least squares analyses cannot be employed.

A solution is found with the Poisson-based regression model, an approach that has the advantage of being precisely tailored to the discrete, highly skewed distribution of the dependent variable. The basic Poisson model is appropriate only if the data are not overdispersed, however, as applying a Poisson model to overdispersed data can produce underestimation of standard

errors of the  $\beta$ s. The negative binomial regression model, the best known and most widely available Poisson-based model that allows for overdispersion, should instead be used (for a complete description, see Osgood, 2000). Thus, this study employs counts for each of the homicide types as the dependent variables and uses a negative binomial estimation procedure to determine the relationship between neighborhood structure and disaggregated Black homicide levels.

A final issue involves incorporating a spatial autocorrelation measure into the analyses. Geographic units are seldom spatially independent; levels of homicide in one neighborhood are likely associated with levels in adjacent neighborhoods. The presence or absence of this pattern is formally indicated by the concept of spatial autocorrelation, or the coincidence of similarity in value with similarity in location. Ignoring spatial dependence in the model may lead to false indications of significance, biased parameter estimates, and misleading suggestions of fit (Messner et al., 2001, p. 427). Thus, we use a spatial lag model that stipulates an effect of neighbors' homicide levels (Baller, Anselin, Messner, Deane, & Hawkins, 2001). This model implies an influence of neighbors' homicide rates that is not simply an artifact of measured or unmeasured independent variables. Rather, homicides in one place may actually increase the likelihood of homicides in adjacent areas.<sup>3</sup>

To detect spatial autocorrelation, we use Moran's I (Baller et al., 2001), a cross-product coefficient similar to a Pearson's correlation coefficient and scaled to be less than 1 in absolute value. Significant positive values for Moran's I indicate positive spatial autocorrelation or clustering. In our analyses, we use the Spacestat software to carry out the Moran's I test for spatial autocorrelation.

## RESULTS

### Correlates of Disaggregated Black Homicide Levels

Means, standard deviations, and bivariate correlations for all variables are presented in Table 2. Average counts from 1985 to 1995 for each homicide subtype are 0.99 (gang), 1.13 (intimate),

1.43 (stranger robbery), 1.54 (nonstranger robbery), 1.49 (stranger altercation), and 7.12 (nonstranger altercation). In St. Louis in 1990, the average Black poverty level was nearly 40%, the average percentage of Black female-headed families was 57%, and the average percentage of Blacks not working was 52%. Other characteristics of interest include the average percentage of young Black males (8%), the average percentage of Blacks with a high school degree (49%), and the average per capita income for Blacks (\$7,296).

Turning to the relationship between these characteristics and homicide, two important findings should be emphasized. First, although poverty levels are not significantly related to any of the subtypes as prior research has demonstrated, other socioeconomic indicators are significantly correlated with certain types of Black homicide. For example, Black per capita income is significantly negatively associated with stranger altercation ( $r = -.25$ ) and nonstranger altercation ( $r = -.26$ ) killings, whereas the percentage of Blacks not working is significantly positively associated with intimate ( $r = .28$ ) and nonstranger altercation ( $r = .26$ ) homicides. Moreover, when the cumulative measure of disadvantage is employed, it is significantly positively correlated with intimate ( $r = .26$ ), stranger altercation ( $r = .24$ ), and nonstranger altercation ( $r = .31$ ) murders.

Second, different neighborhood characteristics are associated, in varying degrees, with the different subtypes. For example, residential instability is significantly negatively associated with some categories (gang, intimate, and both altercation categories) but not others (both robbery categories). Likewise, the percentage of Blacks with a high school degree is significantly negatively correlated with only intimate ( $r = -.24$ ) and stranger and nonstranger altercation killings ( $r = -.25$  and  $r = -.30$ , respectively). On the other hand, percentage Black families that are female headed and percentage young Black males are not significantly associated with any categories. To see if these patterns hold, we turn to the regression results.

**TABLE 2**  
**Basic Statistics and Correlations, 1990**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gang	1.00	.26**	.10	.31***	.32***	.52***	-.02	-.18	.19	.09	-.04	-.15	.10	-.30***	.17
2. Intimate		1.00	.15	.40***	.31***	.59***	.04	-.21	.28**	.12	.03	-.24**	.19	-.34***	.26**
3. Stranger robbery			1.00	.34***	.26**	.39***	-.03	-.02	.10	.08	-.03	-.11	.19	-.12	.11
4. Nonstranger robbery				1.00	.44***	.56***	-.08	-.06	.08	-.01	-.07	-.06	.24**	-.20	.07
5. Stranger altercation					1.00	.53***	.05	-.25**	.20	.09	-.03	-.25**	.15	-.26**	.24**
6. Nonstranger altercation						1.00	.06	-.26**	.26**	.16	.05	-.30***	.23**	-.30***	.31***
7. Percentage Black poverty							1.00	-.72***	.68***	.54***	.13	-.70***	-.13	.12	.86***
8. Black per capita income								1.00	-.60***	-.58***	-.33***	.71***	.03	.22	-.87***
9. Percentage Blacks not working									1.00	.51***	.14	-.79***	-.07	-.26**	.84***
10. Percentage Black families female headed										1.00	.02	-.47***	.13	.03	.73***
11. Percentage young Black males											1.00	-.28**	-.12	-.12	.32***
12. Percentage Blacks with high school degree												1.00	.01	.28**	-.87***
13. Population size													1.00	-.05	-.04
14. Percentage residential instability														1.00	-.16
15. Disadvantage															1.00
<i>M</i>	0.99	1.13	1.43	1.54	1.49	7.12	39.89	\$7,296	52.35	56.82	8.44	48.88	3,535	46.03	2.6E16
<i>SD</i>	1.43	1.22	1.47	1.60	1.85	5.97	17.17	\$2,931	13.73	15.81	4.17	11.28	1,463	12.32	1.00

\*\**p* < .05. \*\*\**p* < .01.

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### Neighborhood Structure and Disaggregated Black Homicide Counts: Regression Findings

The coefficients from the negative binomial regressions suggest a number of interesting findings, the most important being the disparate influence of disadvantage on the different homicide categories. As shown in Table 3, concentrated disadvantage is significantly positively associated with gang ( $\beta = .447, p < .05$ ), intimate ( $\beta = .479, p < .01$ ), stranger altercation ( $\beta = .520, p < .01$ ), and nonstranger altercation ( $\beta = .387, p < .001$ ) homicides. These coefficients indicate that a unit change in disadvantage would increase the expected number of gang, intimate, stranger altercation, and nonstranger altercation killings by 56%, 61%, 68%, and 47%, respectively (i.e., percentage change =  $100 * [\exp(.447) - 1]$  for gang homicides). In contrast, disadvantage is not significantly correlated with either type of robbery homicide. This implies that disadvantage (composed primarily of economic indicators) is more strongly associated with noneconomically motivated than with economically motivated homicides. These findings support our hypotheses concerning the influence of disadvantage on non-robbery-related homicides and are consistent with findings from related studies (R. N. Parker, 1989). We also hypothesized that the heightened levels of motivation to commit economic crime that stem from disadvantage, coupled with the residential proximity of the victim and offender, would result in a positive relationship between nonstranger robbery homicide and disadvantage. This hypothesis was not supported. Although there are differences in the size of the disadvantage coefficients across the equations, *t* tests indicated that these differences are not statistically significant.

The findings also suggest that residential instability is not positively associated with homicide levels in St. Louis, despite the key role it plays in social disorganization theory and the support it has received in studies that focus on other crimes. The results do suggest, however, that residential instability is negatively related to gang homicides ( $\beta = -.033, p < .10$ ). Controlling for disadvantage and other structural characteristics, neighborhoods with higher levels of residential instability have lower levels of gang killings, a finding that supports our hypothesis. We previously suggested that instability would be inversely related to subtypes characterized by motives related to the development and maintenance of

**TABLE 3**  
**Regression Findings for Neighborhood Characteristics on Disaggregated Black Homicide Counts**

Variable	Total		Gang		Intimate <sup>a</sup>		Stranger Robbery <sup>a</sup>		Nonstranger Robbery <sup>a</sup>		Stranger Altercation		Nonstranger Altercation	
	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE
Disadvantage	.373****	.070	.447**	.194	.479***	.139	.163	.113	.151	.110	.520***	.164	.387****	.085
Instability	.006	.006	-.033*	.018	-.014	.011	.003	.009	-.001	.009	-.005	.013	.010	.008
Percentage young Black males	-.023	.017	-.071	.053	-.021	.034	-.016	.029	-.038	.030	-.053	.043	-.013	.020
Population size	.0002****	.0000	.0001	.0001	.0002***	.0000	.0002**	.0000	.0002***	.0000	.0002**	.0000	.0002****	.0000
Spatial auto-correlation coefficient	0.171****	.023	1.177	.801	1.808***	.566	1.384***	.452	1.164***	.404	1.608****	.453	0.439****	.071
Constant	-.822	0.663	.440	1.526	-1.964	1.124	-2.038**	1.016	-1.618	1.036	-2.119*	1.199	-2.090**	0.828
Pseudo R <sup>2</sup>	.11		.09		.16		.07		.09		.11		.11	
-2LL	-274.133		-101.845		-97.442		-123.169		-126.435		-120.247		-214.598	

NOTE: Entries are unstandardized coefficients.

a. Results are from a Poisson regression because the negative binomial model indicated no overdispersion in the data for this subtype.

\* $p < .10$ . \*\* $p < .05$ . \*\*\* $p < .01$ . \*\*\*\* $p < .001$ .

pride and reputation as well as the existence of a common definition of conflictive situations. The results suggest that this is true for gang but not for altercation-based killings.

Concerning the percentage of young Black males in the census tracts, as hypothesized, this variable is not significantly related to any homicide categories. This is likely due to a broader age distribution than is often found when studying less serious forms of criminal behavior.

Finally, the results indicate that spatial autocorrelation exists in the models. First, the global Moran's I coefficients for all types of killing are greater than zero and significant at the  $p < .05$  level. These results provide strong evidence of a significant spatial pattern.<sup>4</sup> Second, the results in Table 3 indicate that spatial autocorrelation in the homicide distributions remains after accounting for neighborhood context. The coefficient for the autocorrelation term is significant in all categories excluding the gang category. These results suggest that homicide levels in neighborhoods influence levels in adjacent neighborhoods, even after controlling for community characteristics. The findings also suggest that including adjustments for spatial autocorrelation improves the overall fit of the models.<sup>5</sup>

## DISCUSSION

This study has investigated the relationship between neighborhood structure and disaggregated Black homicide levels in an urban context. We used data on murders from the city of St. Louis to examine whether the effects of community characteristics vary across differing types of Black homicide. Our results suggest that they do. Concentrated disadvantage and residential instability influence some types of killings but not others. These findings add support to contemporary extensions of social disorganization theory that allow for the role of structurally determined cultural patterns of adaptation and shed light on methodological issues regarding the race-specific influence of structural characteristics on homicide.

The finding that instability and disadvantage have a stronger influence on noneconomically motivated homicide offers support for recent extensions of social disorganization theory that argue

that violence is frequently used to earn respect and esteem, build and maintain reputations, and express frustration (Anderson, 1999; Bruce et al., 1998; Horowitz, 1983; Sampson & Wilson, 1995). Although neighborhood instability has traditionally been linked to crime in a number of studies, our results suggest that it plays a small deterrent role in the production of one type of Black homicide. Neighborhoods with higher levels of residential instability have lower levels of gang killings. This implies that the effect of instability on homicide cannot be understood solely through the theoretical lens of traditional social disorganization theory, in which residential mobility is thought to impede the formation of informal social networks that increase levels of social control. Anderson (1999), Sampson and Wilson (1995), and Horowitz (1983) all suggested that violence in poor Black communities results, in part, from the maintenance and development of respect, reputation, and self-esteem. The effectiveness of violence to build and maintain respect and reputation is predicated on social hierarchies and long-term friend- and acquaintanceships. Thus, this process depends on the existence of stable neighborhoods. Although instability is often thought to be criminogenic in that it lowers levels of guardianship and informal social control, this alternative explanation proposes that instability can also inhibit the development of alternative social hierarchies that encourage violent behavior.

Given this thesis, we hypothesized that residential instability would be negatively associated with both the gang and the altercation subtypes. The findings suggest that only gang homicides are significantly negatively correlated with instability. This is likely the case because the gang subtype is the best representation of killings motivated by the development and maintenance of respect and reputation. Moreover, gang killings often involve territorial disputes that are more likely to develop in neighborhoods characterized by patterns of stability where residents have long-standing social ties.

Like instability, disadvantage exerts differential influence across the homicide categories. Disadvantage is not associated with stranger and nonstranger robbery killings. However, neighborhoods with high levels of disadvantage experience greater numbers of nonfinancially motivated homicides in which frustrations, or attempts to develop or defend reputations, are acted out

within the context of a culturally defined situation. These include gang, intimate, stranger altercation, and nonstranger altercation homicides. This finding adds support to recent development in the study of disadvantage and crime (Anderson, 1999; Bruce et al., 1998; Sampson & Wilson, 1995) that adopts a model in which structural characteristics give rise to cultural adaptations that can manifest as interpersonal violence. Our research is the first to disaggregate African American homicide by both motive and victim-offender relationship in a manner that draws on the processes proposed in contemporary models of social disorganization theory. Although we are unable to empirically measure elements of subcultural processes, our study provides unique quantitative support for work that has focused on minority communities experiencing multiple disadvantages. Cultural adaptations to structural forces are evidenced by the influence such forces have on respect- and reputation-building homicides but not on those motivated by economic gain. Disadvantage does not simply increase Black homicide. If this were the case, we would find that all homicides increase in poor areas. Instead, we argue that disadvantage creates cultural adaptations that increase altercation and gang killings.

In addition to offering theoretical support, our results may help to explain why previous research has not consistently identified a strong relationship between socioeconomic indicators and Black homicide. If the pattern identified above holds outside of St. Louis, there would appear to be no relationship between disadvantage and homicide in areas in which a large proportion of the homicides are robbery related. In other words, the ability of structural characteristics to predict levels of homicide varies by the spatial distribution of the types of homicide analyzed. This finding does not refute the explanation put forth by Krivo and Peterson (2000) and McNulty (2001)—that because Blacks and Whites are located at different ends on the disadvantage spectrum, the relationship between disadvantage and homicide will vary across racial groups. These findings suggest a complementary explanation: It is the distribution of the neighborhood characteristics and the distribution of the homicide subtypes that determine the degree to which measures of disadvantage will influence race-specific homicide rates.

It is important to keep in mind that although we have argued the importance of race-specific homicide disaggregation for both theoretical and methodological reasons, we do not suggest that structurally based cultural responses that influence some types of killing (e.g., altercation and gang homicides) are race specific. Rather, these processes are the result of an interaction of structural factors that have created and maintained a system of stratification giving rise to minority neighborhoods characterized by multiple disadvantages including poverty, joblessness, and family disruption. The social, political, and economic forces that help to create structural factors include, among other things, a legacy of slavery and discrimination (Hawkins, 1985), redlining and patterns of residential segregation (Massey & Denton, 1993), and globalization and deindustrialization (Wilson, 1987, 1996).

Had these or other forces created the same multiple disadvantages for the White population, we would expect similar cultural adaptations among Whites. However, this is not the case. The concentrated disadvantage found in many urban African American communities is rarely paralleled in predominantly White neighborhoods (see Krivo & Peterson, 1996, for exception). In most cities, race is highly correlated with concentrated disadvantage (Krivo & Peterson, 2000; Morenoff, Sampson, & Raudenbush, 2001; Sampson, Raudenbush, & Earls, 1997; Sampson & Wilson, 1995). Sampson (1987, p. 354) argued that racial differences in poverty and family disruption, among other things, are so strong that the “worst” urban contexts in which Whites reside are considerably better than the average context of Black communities. This is certainly true in St. Louis where there are no predominantly White (greater than 75%) neighborhoods that map onto the distribution of extreme disadvantage that Black neighborhoods experience. When we divided St. Louis into thirds on poverty level, no predominantly White neighborhoods fall into the high category.

The finding that there are more gang and altercation homicides in neighborhoods with high levels of disadvantage, and the implication that this relationship is driven by cultural adaptations to structural forces, calls for macro-level policies aimed at both decreasing neighborhood deprivation and eliminating strategies (e.g., redlining and disinvestment) that fuel racial inequality in urban settings. In line with Sampson and Wilson (1995), we

believe that patterns of residential inequality give rise to the social isolation and ecological concentration of the "truly disadvantaged," which in turn leads to structural barriers and cultural adaptations that increase violence. Specific policies that address these issues include public and private sector employment programs that create quality jobs for residents of impoverished neighborhoods, housing and urban development projects aimed at distributing subsidized housing throughout working- and middle-class neighborhoods, and government assistance programs that avoid penalizing recipients for working part-time or getting married.

Regarding the theoretical, methodological, and policy implications, an important question raised by the study is the degree to which the findings can be generalized beyond St. Louis. St. Louis is typical of many U.S. cities with respect to poverty and unemployment rates and levels of family disruption, residential mobility, and racial segregation. The generalizability of St. Louis is further evidenced by the fact that the factor analysis results are consistent with results from similar studies conducted at the neighborhood level in other cities such as Chicago (Sampson et al., 1997), Atlanta (McNulty, 2001), Seattle (Bellair, 2000), Cleveland (Crutchfield, Glusker, & Bridges, 1999), and Pittsburgh (Wikstrom & Loeber, 2000), and with results from national homicide studies (Baller et al., 2001; Land et al., 1990; Miles-Doan, 1998; K. F. Parker & Pruitt, 2000a).

Still, future research should explore these issues in other cities and perform a national study of the neighborhood correlates of Black homicide rates. Of particular importance is whether the six subtypes identified in the present research exist in other urban settings and, if they do, whether their patterns of distribution are similar. Perhaps a more critical task for future research is to begin to empirically measure the subcultural processes that we have described in this study. We agree with K. F. Parker and Pruitt (2000a), and others, who called for "greater attention to be given to the development of cultural measures in homicide studies" (p. 1503). Until this is done, the complex process by which community characteristics influence different types of homicide cannot be fully understood.

The results of this study reinforce the need to disaggregate homicide rates. Without disaggregating by important factors

related to the murder, we limit our ability to understand the structural characteristics that set the stage for the most serious type of violent behavior and encourage the processes that facilitate such behavior. This study has demonstrated that although homicides committed by African Americans vary along a number of dimensions, these killings can be grouped into categories based on the motive and victim-offender relationship. Furthermore, these groups vary in the degree to which they are associated with levels of concentrated disadvantage. Distinguishing between different types of homicide that have different correlates and causes is important not only for understanding African American homicide but for shedding light on the complex relationship between race and violence.

## APPENDIX

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### Explanatory variables

All explanatory variables are measured at the census tract level. The information used to create these variables was drawn from the 1990 census. The tract information corresponds to the tract in which the homicide took place.

### Disadvantage

Disadvantage is operationalized as a factor score representing a unidimensional construct composed of five indicators. The first indicator is percentage Black poverty, created by dividing the number of Blacks in the census tract who were living below the poverty line by the total number of Blacks living in the tract. The second indicator is Black per capita income. The values for this indicator come directly from the census, which divides the total income of all Black residents in the census tract by the number of Blacks residing in the tract. The third indicator is percentage Blacks not working, created by dividing the number of Blacks older than the age of 16 who were not working (either unemployed or out of the labor force) by the total number of Blacks older than the age of 16. The fourth indicator is percentage Black families that are female headed, computed by dividing the number of African American households that are headed by females by the total number of African American households. The final indicator is percentage of Blacks with a high school degree. This measure was computed by dividing the number of Blacks older than the age of 18 who had graduated from high school by the total number of Blacks older than the age of 18.

### **Residential instability**

Residential instability is operationalized as the number of individuals living in the tract who have moved in the past 5 years divided by the total number of individuals older than age 5 living in the tract.

### **Percentage young Black males**

Percentage young Black males was computed by dividing the number of Black males ages 14 to 24 by the total number of Blacks in the census tract.

### **Population size**

This variable represents the total population of the census tract.

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## **NOTES**

1. A case was coded 1 (presence) for drug- or alcohol-related homicide if there was any mention of drugs or alcohol being present. This could include bottles or drug paraphernalia found at the scene; evidence that the suspect, the victim, or both were intoxicated; or substantiated witness testimony that the victim, offender, or both had been drinking/using drugs immediately prior to the homicide.

2. The present analysis uses a theoretical framework that links the etiology of homicide to the structural forces in the neighborhood in which the offender resides. Unfortunately, in the St. Louis data set, as in the vast majority of data sets, detailed information on offender residence is not available due to confidentiality purposes. Given this restriction, in the analysis we use census tract characteristics for the neighborhood in which the homicide took place. Previous research suggests that most crime, and in particular most violent crime, is committed close to home (Bailey, 1984; Crutchfield, 1989, p. 508; Curtis, 1974; Sampson, 1983).

3. Although Baller, Anselin, Messner, Deane, and Hawkins (2001) distinguished between a spatial lag and spatial error model, the procedures outlined in their study to determine which model is most appropriate are available only for ordinary least squares-based regressions and not for Poisson-based regressions (R. D. Baller, personal correspondence, May 2002). Currently, one is not able to run the different diagnostic tests in Spacestat that tell you which model is appropriate to deal with the autocorrelation. In particular, the series of Lagrange multiplier tests that perform this procedure is available only for ordinary least squares-based regressions. Thus, we run the spatial lag model; detecting and controlling for the spatial lag are sufficient as the error model is actually nested within the lag model (p. 566).

4. Moran's I was computed using a first-power inverse distance weights matrix based on the distance between census tract centroids. The matrix was row standardized, and no limits were imposed in its construction so that homicides occurring in each tract were allowed to affect every other tract.

5. An important issue concerns the possible reciprocal causation of the structural covariates and homicide in the Black community. The models presented may be too

simplistic in their recursive assumptions, and although homicide is a rare phenomenon, the rate of Black homicide is sufficiently high that it may influence many of the neighborhood variables considered. If so, the parameter estimates are biased, and the effect of the neighborhood factors on Black homicide is overstated (see Sampson, 1987). This is more likely to be the case for certain homicide types (altercation based) than others (gang, intimate).

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