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Contextual Complexity and Violent Delinquency among Black and White Males

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Abstract

Most social scientists agree that whites and African Americans exist in different economic, political, and social environments and assert that these "contextual" differences contribute substantially to group differences in violence and other antisocial outcomes. This paper extends these ideas into the empirical realm by using data from the National Longitudinal Study of Adolescent Health and structural equation modeling to compare a model of violent delinquency among black adolescents to one among white adolescents. The results from this comparative analysis illustrate how context leads to racial differences in violent delinquency.

Contextual Complexity and Violent Delinquency among Black and White Males

Recent school shootings across the United States remind us that adolescence can be a dangerous period in the life course. Teenagers are more susceptible to preventable injuries and death than those in other times of life. The level of risk is especially pronounced among African American males. Black males between 12 and 24 years old are considerably more likely to be murdered than are their white counterparts (Snyder and Sickmund, 1995). Many scholars attribute racial differences in violent outcomes to differences in material conditions. Although plausible, results from this line of research are inconsistent. Some studies show economic disadvantages to be partially responsible for racial differences in crime or delinquency; others suggest that material disadvantages explain very little of such group differences. Common explanations for these inconsistent results have been the absence of quality data and the use of inappropriate statistical techniques (Land, McCall and Cohen, 1990; Messner and Golden, 1992) and theoretical limitations (Bruce, Roscigno, and McCall, 1998; Sampson and Wilson, 1995).

Many of these issues have been addressed in the most recent wave of research on violence as theorists use new sources of data, employ cutting-edge statistical techniques, and construct and test multilevel and multidimensional conceptual and empirical frameworks (e.g., Heimer, 1997; Heimer and DeCoster, 1999; Krivo and Peterson, 2000). This line of violence research allows us to identify some of the precipitating factors leading to violence among African Americans and other disadvantaged groups. It is not clear, however, whether the factors influencing violence among blacks have the same impact on the violent behavior of their white counterparts.

This issue remains largely unaddressed because a substantial proportion of research investigating racial differences in violence tends to focus on homicide rates at the city or census-tract level. Violence can occur in a number of forms that do not result in death. For example, physical altercations between two or more individuals generally known as “fights” are among the most common forms of violent activity. Furthermore, important factors associated with violent behavior are embedded within a city or neighborhood.

The purpose of this paper is to introduce a comparative framework illustrating how context leads to racial differences in violent activity. I use structural equation modeling to analyze data from the National Longitudinal Study of Adolescent Health and examine the extent to which the conditions contributing to criminal behavior among black adolescents differ from those of white adolescents. Many of the factors leading to violence among black and white teens are the same. However, this study demonstrates that the manner in which these factors are correlated with violent behavior can vary by race.

BACKGROUND

Early work attempting to understand the link between race (and class) and criminality can be classified into two general categories, cultural and structural. Classic cultural explanations have tended to concentrate on normative attributes allegedly specific to a given group. Here violence was seen as resulting from a culture where criminality and violence are more acceptable forms of behavior (e.g., Curtis, 1975; Elkins, 1959; Wolfgang and Ferracuti, 1967). Classic structural perspectives, in contrast, have maintained that violence among African Americans and other disadvantaged groups stems from the depressed material conditions they face, such as high levels of poverty and unemployment (e.g., Blau and Blau, 1982; Braithwaite, 1979; Golden and Messner, 1987; Hagan and Peterson, 1995; Harer and Steffensmeier, 1992; Lafree, Drass, and O'Day, 1992; Messner, 1982; Messner and Golden, 1992; Sampson, 1987). Newer work attempting to make sense of racial differences in violence has integrated elements from both schools of thought. Theorists (e.g., Bruce, 2000a; Bruce, Roscigno, and McCall, 1998; Sampson and Wilson, 1995) have argued that unique "cultural tendencies" emerge from the surrounding economic, political, and social environment. Qualitative work (Anderson, 1994, 1999; MacLeod, 1995) and quantitative work (Heimer, 1997; Heimer and De Coster, 1999) have suggested that structural location can influence violent delinquency through institutions (families, church, schools) in

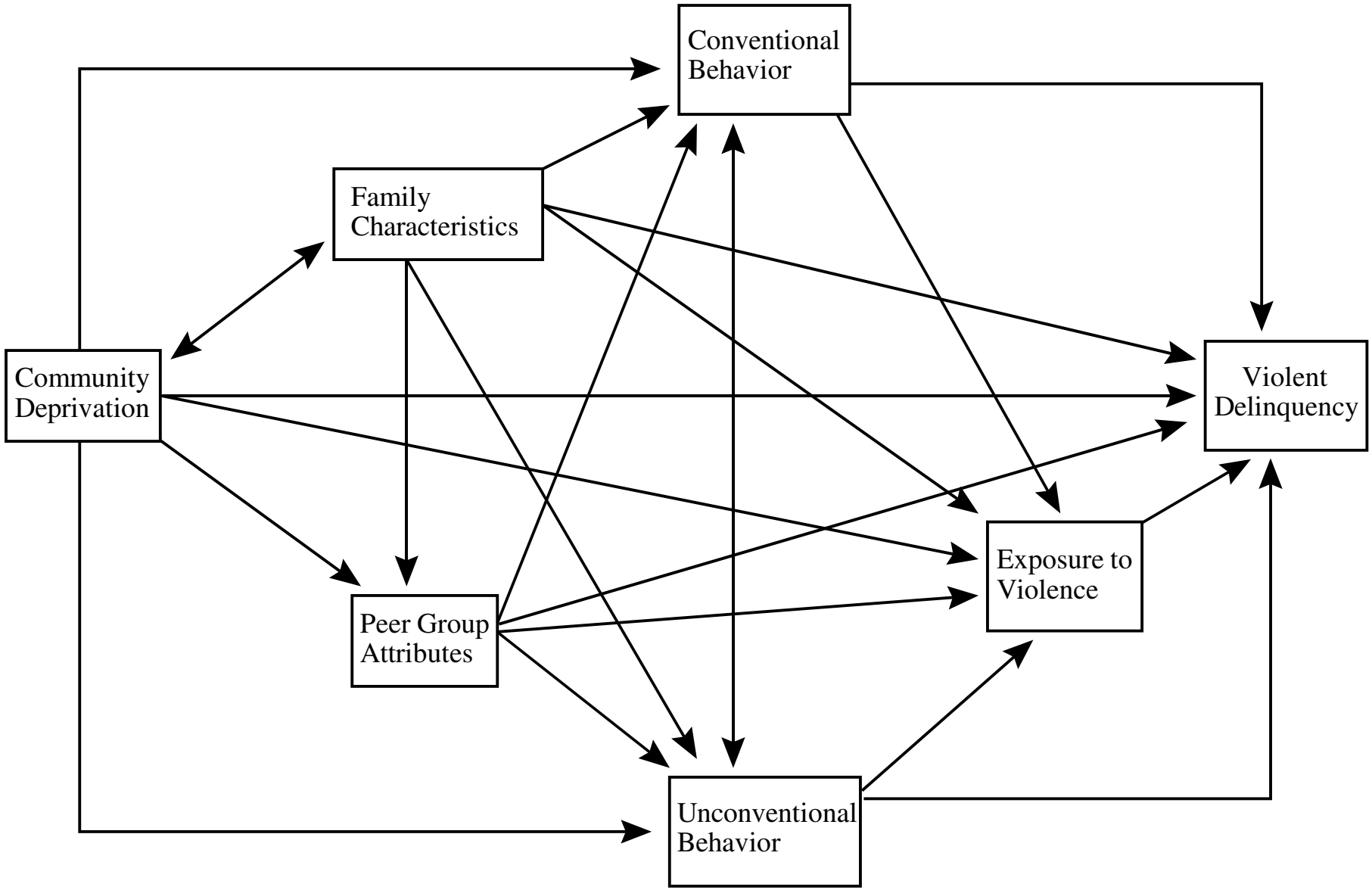
which culturally influenced practices affect behavior. Hence, antisocial behaviors that have been typically thought of as reflections of African American culture were, in fact, a reflection of the resource-deprived neighborhoods in which the group existed. Bruce (2000b, 2000c) has provided evidence suggesting that racial differences in fighting were linked with community-level poverty and racial inequality. Practices often thought to be exclusively associated with some racial/ethnic culture could also be related to community-level deprivation.

Research integrating structural and cultural ideas have moved past some of the problems plaguing early criminological work, but researchers have continued to couch their empirical frameworks in the image of a unidimensional scale of problem behavior affecting racial minority groups. Most empirical research investigating violence among African Americans has used racial composition, commonly known as %black, as a proxy for race or culture. The size of the African American population has been presumed to be equivalent to the size of a subpopulation with differing normative characteristics and/or material circumstances. “Percent black” essentially has been equated to “percent problem people.” Most empirical models investigating the race-violence relationship have neglected the dynamic character of race- or class-based stratification. Consequently, research has told us little about the processes through which race or class could lead individuals to participate in behavior that places themselves at risk (Bruce, Roscigno, and McCall, 1998). Moreover, overemphasizing group differences could also cause theorists to neglect some important similarities. For example, males have been more likely than females to be the perpetrators and victims of violent events, regardless of racial-group membership.

Comparative work could reveal some important factors about *all* groups being compared. I believe social environmental factors can influence how, rather than if, one participates in unconventional behavior. Pursuing this idea requires the use of a comparative approach that considers similarities as well as differences between racial groups.

Figure 1 combines factors known to be associated with violence in a manner that outlines the process leading to violent outcomes. Unlike previous work, the framework depicted in Figure 1 features

FIGURE 1
Conceptual Model of Relationships between Community, Family, Peers, Individual Factors, and Violent Delinquency among Black and White Adolescent Males



indirect effects as well as direct effects. The impact of community and family characteristic are presumed to affect violent behavior through such individual-level factors as deviant peers and violence exposure. In short, Figure 1 highlights important contextual elements affecting violent delinquency and outlines potential interplay between them.

INEQUALITY, CONTEXT, AND VIOLENT DELINQUENCY

The plausibility and strength of the model presented in Figure 1 can be enhanced by considering historical nuances of race and class inequality that vary across groups. Blacks and whites exist in different social environments, but these contextual differences do not translate directly into racial differences in violent delinquency. Rather, differing contexts shape how community, family, and individual factors affect violent behavior. Using the framework depicted in Figure 1 will allow us to see more clearly how context matters for black *and* white individuals.

Inequality and Violent Behavior

Marginalized groups have been concentrated in places characterized by economic, political, and social disadvantages. Historical and contemporary research has shown that disadvantages at the level of job and labor market (Blalock, 1967; Bonacich, 1972; Kirschenman and Neckerman, 1991; Olzak, 1992; Reich, 1981; Syzmanski, 1976; Tomaskovic-Devey and Roscigno, 1996; Wacquant and Wilson, 1989; Wilson, 1987), individual and institutional discriminatory practices (Farley and Frey, 1994; Massey and Denton, 1993; Massey and Gross, 1991; Peterson and Krivo, 1993; Tomaskovic-Devey, 1993), and patterns of economic investment/disinvestment decisions (Logan and Molotch, 1987; Molotch, 1988; Squires, DeWolfe, and DeWolfe, 1979; Squires, Valez, and Taeuber, 1991; Wilson, 1992) have continued to restrict access to economic, political, and social resources. These disadvantages, coupled with structural changes in the economy, have trapped a sizable portion of the poor and/or racial minority groups in areas characterized by high levels of unemployment, substandard educational resources,

inadequate housing, family disruption, general disorder, and danger (Kasarda, 1989; Massey and Denton, 1993; West, 1993; Wilson, 1978, 1987).

Research on inequality has shown that living in an economically and politically disadvantaged area enhances exposure to "corner" or "skid row" behaviors that place marginalized group members at risk. Consistent exposure to violence has serious consequences, as violence could become a prominent behavioral tool used to navigate geographical and social space. For example, Anderson (1999) chronicled a process, referred to as "campaigning for respect," in which some adolescents withstood and engaged in violent acts in order to walk the streets in their neighborhood without continuously being "tried" (challenged) or "rolled on" (physically assaulted) by other youths in the community. In this case, resource-deprived areas affected behavior through the violence individuals were exposed to within them.

Interestingly, the empirical work examining the relationship between inequality and antisocial outcomes such as violence has tended to focus on direct effects. However, recent work by Bruce (2000b) has provided evidence suggesting that the primary impact of macrolevel material forces on fighting is indirect. The results from his robust regression analysis suggest that the effect of area resource deprivation measures on antisocial behavior shrinks considerably in the presence of family and individual factors. These findings, coupled with urban ethnographic work (e.g., Anderson, 1999; Liebow, 1967; MacLeod, 1995; Pattillo-McCoy, 1999; Sullivan, 1989), indicate that the impact of area deprivation on violence and other antisocial outcome could be mediated through factors more proximate to individuals.

In this analysis, the direct impact of community-level factors on violent behavior is presumed to be weak. The influence of area resource deprivation on adolescent violence is expected to operate primarily through positive associations with deviant peers, other adolescent deviance (e.g., alcohol use, illicit drug use), and exposure to violence as well as a negative relationship with prosocial behavior.

It is also noteworthy that Bruce (2000b) and Krivo and Peterson (2000) have presented evidence suggesting that the impact of stratification on violence could vary by race. In a study of homicide rates for 124 central cites, Krivo and Peterson (2000) found that the impact of economic disadvantage on homicide

rates is larger for whites than blacks. Understanding the relationship between race or class disadvantage and violent behavior has encouraged research to sort out the impact of race or class and to consider how both interact with and organize other influential factors.

Family, Peers, and Violent Delinquency

Classic and contemporary research has established that families can be important informal social-control agents that lessen the possibilities of adolescent delinquency (Gottfredson and Hirschi, 1990; Hagan, 1989; Hirschi, 1969; Sampson and Laub, 1993). Family structure, family class background, and family functioning have been indicative of a family's capacity to monitor behavior, restrict behavior, and/or provide adolescents with experiences that encourage prosocial behavior. Most of the existing research has presumed a direct correlation between family resources and violent behavior. But family structure and family class resources could also affect adolescent violence through other mechanisms.

Conventional family household arrangements (e.g., small families or two-parent families) are expected to be negatively correlated with deviant peers, other forms of adolescent deviance, and exposure to violence. Family class background, in contrast, is presumed to be positively associated with deviant peers, other forms of adolescent deviance, and exposure to violence.

In general, researchers have agreed that peer groups shape behavioral outcomes. Numerous studies have shown that delinquent individuals tend to have delinquent friends (Bruce, 2000b; Matsueda and Heimer, 1987; Warr and Staffor, 1991; Warr, 1993). The direct association has been considered to be straightforward. Individuals with marginal or contested status in peer groups holding violence in high esteem have committed violent acts to show they belong. But it is important to consider the impact that peers could have on adolescent violence through other factors. Peers have been important because they have served as the specific other with whom individuals could gain and maintain respect. Individuals desiring acceptance by members of a particular group have tended to tailor their behaviors to reflect the attitudes of the designated group.

Deviant peers in this analysis are presumed to be negatively associated with prosocial behaviors and positively correlated with other adolescent deviance and exposure to violence.

Adolescence, Gender, and Violent Behavior

Adolescence has been known as a period when individuals attempt to establish themselves as adults. For many young males, this has meant exhibiting power over others or control over one's life. Research has shown that teens participated in a number of activities during this turbulent transitory phase of human development (Coleman, 1961). Some of these behaviors have been in line with societal norms (e.g., sports, work, school activities); some have not (e.g., drug use, alcohol use). Qualitative research has provided a glimpse of the complexity associated with adolescent life as theorists have shown that individuals have engaged in conventional and unconventional behavior during their teenage years (see MacLeod, 1995; Sullivan, 1989). As such, it is important to consider the relationship between adolescent behaviors.

Prosocial behaviors have been thought to protect individuals from dangerous environments, thereby reducing the possibility of a violent episode. Prosocial behaviors are expected to have an inverse relationship with the exposure to violence and adolescent violence. Deviant behaviors are expected to have effects opposite of prosocial behaviors. Adolescent deviance is expected to be positively correlated with exposure to violence and violent behavior. In this case, deviance leads to more deviance.

It is noteworthy that unconventional behaviors also have been used to assert manhood by males, regardless of race or class status. Connell (1995) noted that history is full of examples in which powerful males have used violence to establish and maintain social and economic systems that dominate and exploit others. Hagan (1991) has shown alcohol consumption to be a behavior around which white, middle-class, adolescent males establish networks and ties that could provide them with valuable information about jobs and other economic opportunities. Practices often thought to be exclusively

associated with some racial/ethnic culture may have just as much or perhaps even more to do with the conditions in which racial and class dynamics are embedded.

In the next section, I assess the empirical utility of these ideas. Using data to from a national sample of adolescent males, I construct structural equation models to determine the magnitude of the contextual differences between black and white teenage males and to ascertain whether contextual considerations can explain group differences in violent behavior.

DATA, MODELS, AND HYPOTHESES

Since the comparative empirical models examine how community characteristics, family resources, peer associations, and individual behaviors combine to affect violent behavior, it is necessary to use data spanning multiple levels of analysis. Consequently, I use the National Longitudinal Study of Adolescent Health, referred to hereafter as Add Health. The Add Health survey was funded by the National Institute of Child Health and Human Development and 17 other federal agencies (Bearman, Jones, and Udry, 1997). Individual data relevant to this analysis were gathered through a self-administered in-school questionnaire and an in-home face-to-face interview. Information about family life, the school that respondents attended, and the communities in which respondents lived was gathered through a survey of parents and of school administrators and from official data sources such as the U.S. Census, the Centers for Disease Control and Prevention, the National Center for Health Statistics, the Federal Bureau of Investigation, and the National Council of Churches (see Bearman, Jones, and Udry, 1997).

The sample was compiled through a two-stage cluster sampling design. The first stage involved stratifying 80 high schools into clusters by region, urbanicity, school size, school type, and ethnic mix. Once these schools were selected, investigators identified and recruited feeder schools—schools that included the seventh grade and sent their graduates to a high school in the sample. The result of this

recruitment effort was a pair of schools in each of the 80 communities. The total number of discrete schools included in the core study was 132.

The second stage of the design involved drawing a sample of adolescents in grades 7 to 12 who either completed an in-school questionnaire or were listed on a student roster provided by each participating school. Students in each school were stratified by grade level and sex. Seventeen students were randomly chosen from each stratum to ensure that each sex and grade-level category was represented in the core sample. This sampling effort produced a nationally representative core sample of the population in grades 7 to 12 (N=12,105). Research has shown that the study of group-specific patterns must be supplemented with auxiliary information about the historical and political nuances of gender, race, and class stratification that may vary across group or place (Tomaskovic-Devey and Roscigno, 1996). Since factors such as femininity and immigrant status are beyond the scope of this study, females and other minority groups were excluded. Consequently, the sample size for this analysis is 4,620.

Analytic Framework: Structural Equation Modeling

Structural equation modeling combines confirmatory factor analysis and econometric modeling to examine relationships between "constructs" or variables that are not easily observed or are multidimensional (Diamantopoulos and Siguaw, 2000; Hayduk, 1987). Constructs in structural equation modeling can be classified as exogenous or endogenous variables. Exogenous variables are not influenced by any other factors in the model. Endogenous variables, in contrast, can be influenced by exogenous variables as well as other endogenous variables. Both types of variables can be represented by a single indicator or a number of factors. Computer programs such as LISREL use the covariance matrix associated with the variables of interest to solve a system of regression equations simultaneously. These computations produce coefficients and statistics depicting the magnitude, direction, error terms, and statistical significance associated with the specified relationships between variables. It is also noteworthy that structural equation modeling allows researchers to consider indirect as well as direct relationships

between factors. In short, structural equation modeling offers an innovative way to measure context and examine its impact on adolescent violence.

Exogenous and Endogenous Measures

Exogenous Variables

The structural equation model of violent delinquency has six blocks of variables. The first block consists of a set of single-indicator exogenous variables measuring area and family resources. Area resources are represented in the analysis by block-group level measures drawn from the U.S. Census. The area resource indicators in this analysis focus on area deprivation. These measures are typically highly correlated; therefore, estimates generated in a standard Ordinary Least Squares (OLS) regression model would not be reliable due to collinearity (Land, McCall, and Cohen, 1990). However, the structural equation models constructed for this analysis do not assume independence among the exogenous variables. Consequently, correlations between exogenous variables are factored into the model, thereby allowing one to assess the impact of specific area deprivation variables—*percentage of the population below the poverty line*, *percentage of the population without a high school degree*, *percentage of the population unemployed*, and *percentage of female-headed households*—on other endogenous factors in the model.

The family exogenous factors could be classified into two categories, family structure and family class background. Family structure is represented by two variables drawn from the student questionnaire, number of siblings and nonintact family—the presence of one parent in a household. Family class background is captured by two variables, parental education and family income. Parental education comes from items asking students about the educational level of the man and/or woman in the household functioning as their mother and/or father respectively. “How far did she [mother] go in school?” or “How far did he [father] go in school?” are the specific questions. Response categories range from “eighth grade or less” (coded 1) to “graduate training beyond a four-year college or university” (coded 9). The family

income indicator is drawn from information provided by an instrument gathering information about the parents of student participants. The distribution of responses for family income is heavily skewed. As such, the natural logarithmic transformation of family income is used in the analysis to guard against biased estimates.

Endogenous Variables

The first latent endogenous measure introduced in the model is a *deviant friends* construct. The indicators associated with this construct are drawn from the in-home questionnaire items beginning with the prompt, "Of your three best friends, how many..." This phrase is immediately followed by "smoke at least one cigarette a day," "drink alcohol at least once per month," or "use marijuana at least once per month?" The possible responses range from "no friends" to "three friends." The *conventional behavior* measure is a latent endogenous construct subsuming variables measuring a respondent's total number of extracurricular activities, church attendance, and youth group attendance. The church attendance and youth group attendance variables are drawn from questionnaire items "How often do you attend church" and "How often do you attend youth group activities," respectively. The possible response categories for these questions are "never," "less than once a month," "one a month," "two or three times per month," or "at least once a week"

Unconventional behavior is a latent endogenous construct accounting for sample members' alcohol use, marijuana use, and drug-dealing activities. The alcohol use indicator is drawn from an in-home questionnaire item asking, "During the past 12 months, on how many days did you drink alcohol?" The possible responses are "never," "once or twice in the past year," "less that once per month (3–12 times in the past year)," "two or three days a month," "one or two days week," "three to five days a week," or "almost daily." The marijuana use measure is drawn from a question asking respondents to report their marijuana use over a lifetime. Responses to this in-home questionnaire item range from 0 to 900. The drug-dealing indicator comes from an in-home questionnaire item asking, "In the past 12

months, how often did you sell marijuana or other drugs?" The possible responses are "never," "one or two times," "three or four times," or "five or more times."

The fourth set of indicators is a latent endogenous variable measuring *individual exposure to violence.* This construct includes variables drawn from in-home questionnaire items beginning with, "During the past 12 months, how often did each of the following things happen?" "You saw someone get shot," "Someone pulled a knife or gun on you,"or "Someone cut or stabbed you" are the statements following the prompt and "never," "once," or "more than once" are the response categories.

The final latent endogenous construct is the outcome variable, *violent behavior.* This construct is based on responses to four questions on the adolescent in-home survey about violent episodes. All four questions begin with the prompt, "In the past 12 months, how often did you..." This stem is immediately followed by "get into a serious physical fight," "injure someone badly enough to require bandages or care from a doctor or nurse," "use or threaten to use a weapon to get something from someone," or "take part in a fight where a group of your friends was against another group?" The possible response categories are "never," "1 or 2 times," "3 or 4 times," or "5 or more times."

General Hypotheses

Table 1 depicts the predicted relationships between the constructs in the model. Area deprivation is expected to be positively related to all of the endogenous factors except prosocial behavior. Family resources are expected to have a considerable influence on the endogenous constructs in the model, but the direction of the influence varies. The family structure indicators are hypothesized to be positively associated with deviant friends, unconventional behavior, violent exposure, and violent behavior. In contrast, the family class background variables are expected to be positively associated with prosocial behavior and inversely associated with deviant friends, unconventional behavior, violent exposure, and violent behavior.

TABLE 1
General Hypothesized Direction of Relationships

	Deviant Friends	Prosocial Behavior	Antisocial Behavior	Exposure to Violence	Violent Behavior
EXOGENOUS MEASURES					
Neighborhood Characteristics					
Family poverty	+	-	+	+	+
High school dropouts	+	-	+	+	+
Unemployment rate	+	-	+	+	+
Female-headed households	+	-	+	+	+
(Ln) population size	0	0	0	0	0
(Ln) population density (age 12–24)	+	0	+	0	+
Household Characteristics					
(Ln) family income	-	+	-	-	-
Parents' education	-	+	-	-	-
Number of siblings	+	-	+	+	+
Nonintact family (1=yes)	+	-	+	+	+
ENDOGENOUS CONSTRUCTS					
Deviant friends	na	-	+	+	+
Conventional behavior	0	na	0	-	-
Unconventional behavior	0	0	na	+	+
Exposure to violence	0	0	0	na	+

Notes: + = positive relationship; - = negative relationship; 0 = no prediction.

The empirical model also examines how associations or behaviors are linked to one another. In line with traditional criminological ideas about deviant peers, the peer construct is predicted to be negatively associated with prosocial behaviors and positively associated with unconventional behavior, exposure to violence, and violent delinquency. Prosocial behaviors are expected to have an inverse relationship with the exposure to violence and violent behavior constructs. Antisocial behaviors are expected to have effects opposite of prosocial behaviors. The antisocial behavior construct is hypothesized to be positively related to exposure to violence and violent delinquency. The final hypothesis involves the relationship between exposure to violence and violent delinquency. As such, the violence exposure latent variable is predicted to have a positive relationship with violent delinquency.

It is noteworthy that I expect the direction of the effects to be the same for black and white adolescent males. The primary difference between the race-specific models of violence will be the correlations among variables, model error structure, and the magnitude of effects for some substantive indicators.

Table 2 reports the means and standard deviations for key variables in the analysis. The descriptive results show that black students are disadvantaged relative to white sample members. At the structural level, black adolescents, on average, live in areas with higher levels of resource deprivation and danger than white teens. Resource inequality is also apparent at the family level. Compared to white sample members, black respondents live in larger families, belong to families with lower incomes, have parents with lower levels of education, and have a greater likelihood of belonging to a single-parent household.

MODEL ESTIMATION

The substantive and measurement models for black and white adolescents are estimated simultaneously using the maximum-likelihood procedure in LISREL 8 (Jöreskog and Sörbom, 1996).

TABLE 2
General and Race-Specific Means (and Standard Deviations) for Exogenous Variables

	Overall	Black Males	White Males
EXOGENOUS MEASURES			
Neighborhood Characteristics			
Family poverty	.121 (.002)	.227 (.005)	.093 (.001)
High school dropouts	.268 (.002)	.351 (.005)	.244 (.002)
Unemployment rate	.074 (.001)	.113 (.002)	.064 (.001)
Female-headed households	.071 (.001)	.132 (.003)	.054 (.001)
(Ln) population size	1553 (18.34)	1365 (34.74)	1605 (21.26)
(Ln) population density (age 12–24)	.257 (.009)	.514 (.033)	.187 (.007)
Household Characteristics			
(Ln) family income	48.51 (.761)	33.58 (1.29)	52.61 (.891)
Parents' education	3.80 (.016)	3.72 (.035)	3.80 (.018)
Number of siblings	1.28 (.017)	1.39 (.041)	1.26 (.018)
Nonintact family (1=yes)	.451 (na)	.686 (na)	.387 (na)
N	4,620	996	3,624

Note: The race differences in mean coefficients are statistically significant below the .05 level.

Differences in the models will be compared though a technique called "stacked modeling." Stacked models show how the black and white models of adolescent violence differ from each other. The first step is to assess whether one model adequately represents both groups. Fit statistics (provided in Appendix Table 1) from the "completely invariant" model (L^2= 5778 with 548 df; BIC=1147) show that one model of violent delinquency does not sufficiently fit the black and white samples. Model fit (L^2= 2798 with 534 df; BIC=-1708) improves considerably once some of the constraints on correlation and error structure parameters are relaxed. Specifically, racial differences in outcomes can be attributed to some correlations among the exogenous variables (Φ matrix parameters), correlation among the endogenous indicator error terms (Θ_ϵ matrix parameters), and errors on the latent endogenous variables (Ψ matrix parameters).

Table 3 reports the unstandardized maximum likelihood parameter estimates for the stacked model. The coefficients in each table component are drawn from the model in which the parameters for the effects of the exogenous variables on the endogenous variables (Γ matrix) and the effects of the endogenous variables on the other endogenous variables (B matrix) are freed in addition to the free correlation and error structure parameters mentioned previously. The fit statistics (L^2=2571 with 470 df; BIC = -1395) suggest that the model represents a good fit to the data.

RESULTS

Findings from the stacked models are reported in Tables 3a, 3b, and 3c. The results demonstrate that black and white models of violent delinquency have some striking similarities and differences. The following paragraphs discuss these findings and how they help understand some of the complexity associated with race, context, and violent delinquency.

Exogenous Constructs: Community Resources

The results associated with the impact of community resources on violent delinquency show that place matters and that the impact of place can vary by race. Two community-level indicators, percentage

TABLE 3a
Unstandardized Direct and Indirect Coefficients (and Standard Errors): Black and White Males

	Deviant Friends				Conventional Behavior			
	Black Males		White Males		Black Males		White Males	
	Direct Effects	*Indirect Effects*	Direct Effects	*Indirect Effects*	Direct Effects	*Indirect Effects*	Direct Effects	*Indirect Effects*
EXOGENOUS MEASURES								
Neighborhood Characteristics								
Family poverty	**.189**		**-.339**		**.125**	*-.026*	**.878*** **	*.079*
	(.202)		**(.214)**		**(.248)**	*(.029)*	**(.250)**	*(.050)*
High school dropouts	**-.309**		**.104**		**.301**	*-.497*	**.122**	*-.024*
	(.206)		**(.125)**		**(.253)**	*(.032)*	**(.145)**	*(.048)*
Unemployment rate	**-.171**		**.633**		**-.695***	*.023*	**-.529**	*-.148**
	(.286)		**(.341)**		**(.352)**	*(.040)*	**(.396)**	*(.074)*
Female-headed households	**.361**		**-.218**		**.527**	*-.049*	**-1.26*** **	*.051*
	(.391)		**(.344)**		**(.481)**	*(.056)*	**(.401)**	*(.092)*
(Ln) population size	**-.046**		**.053****		**-.050**	*.006*	**.029**	*-.012*
	(.037)		**(.020)**		**(.046)**	*(.006)*	**(.023)**	*(.009)*
(Ln) population density (age 12–24)	**-.022**		**.018****		**-.065*****	*.003*	**-.035*****	*.004*
	(.011)		**(.007)**		**(.014)**	*(.002)*	**(.008)**	*(.003)*
Household Characteristics								
(Ln) family income	**.025**		**.005**		**-.004**	*-.003*	**.004**	*-.001*
	(.013)		**(.006)**		**(.017)**	*(.002)*	**(.007)**	*(.003)*
Parents' education	**-.046***		**-.048*****		**.152*****	*.006*	**.141*****	*.011**
	(.022)		**(.012)**		**(.028)**	*(.004)*	**(.015)**	*(.006)*
Number of siblings	**-.048***		**-.037*****		**.008**	*.006*	**.082*****	*.009*
	(.020)		**(.011)**		**(.024)**	*(.004)*	**(.013)**	*(.005)*
Nonintact family (1=yes)	**.065**		**.174*****		**-.338*****	*-.009*	**-.246*****	*-.041***
	(.048)		**(.026)**		**(.061)**	*(.007)*	**(.032)**	*(.014)*
ENDOGENOUS CONSTRUCTS								
Deviant friends					**-.136****		**-.234*****	
					(.049)		**(.026)**	
Conventional behavior								
Unconventional behavior								
Exposure to violence								
R^2	.03		.04		.14		.16	

Notes: * p<.05 **p<.01 ***p<.001.

TABLE 3b
Unstandardized Direct and Indirect Coefficients (and Standard Errors): Black and White Males

	Unconventional Behavior				Exposure to Violence			
	Black Males		White Males		Black Males		White Males	
	Direct Effects	*Indirect Effects*	Direct Effects	*Indirect Effects*	Direct Effect	*Indirect Effects*	Direct Effects	*Indirect Effects*
EXOGENOUS MEASURES								
Neighborhood Characteristics								
Family poverty	**.290**	*.305*	**.602**	*-.646*	**.193**	*.094*	**.113**	*.049*
	(.331)	*(.326)*	**(.343)**	*(.386)*	**(.116)**	*(.070)*	**(.093)**	*(.062)*
High school dropouts	**.080**	*-.497*	**-.399***	*.198*	**-.111**	*-.089*	**.022**	*-.046*
	(.337)	*(.322)*	**(.200)**	*(.391)*	**(.117)**	*(.071)*	**(.055)**	*(.058)*
Unemployment rate	**-.817**	*-.275*	**-1.45****	*1.20**	**-.173**	*-.180*	**.353***	*-.134*
	(.469)	*(.461)*	**(.546)**	*(.547)*	**(.167)**	*(.105)*	**(.153)**	*(.100)*
Female-headed households	**-.375**	*.581*	**-.133**	*-.414*	**.221**	*-.008*	**.037**	*-.064*
	(.641)	*(.631)*	**(.550)**	*(.745)*	**(.224)**	*(.136)*	**(.146)**	*(.107)*
(Ln) population size	**.028**	*-.074*	**.021**	*.101*	**-.008**	*-.003*	**-.013**	*.012*
	(.061)	*(.060)*	**(.032)**	*(.071)*	**(.021)**	*(.013)*	**(.009)**	*(.010)*
(Ln) population density (age 12-24)	**.065*****	*-.036*	**.020**	*.035*	**.004**	*.009*	**.002**	*.006*
	(.019)	*(.019)*	**(.011)**	*(.022)*	**(.007)**	*(.005)*	**(.003)**	*(.005)*
Household Characteristics								
(Ln) family income	**.008**	*.040*	**.010**	*.010*	**.001**	*.007*	**-.001**	*.002*
	(.022)	*(.022)*	**(.010)**	*(.026)*	**(.008)**	*(.005)*	**(.003)**	*(.004)*
Parents' education	**-.027**	*-.074**	**.067*****	*-.092**	**.027***	*-.019**	**-.024*****	*.004*
	(.036)	*(.036)*	**(.019)**	*(.042)*	**(.013)**	*(.008)*	**(.006)**	*(.007)*
Number of siblings	**-.016**	*-.077**	**-.047****	*-.069*	**-.009**	*-.014**	**.003**	*-.013**
	(.024)	*(.032)*	**(.017)**	*(.038)*	**(.011)**	*(.007)*	**(.005)**	*(.006)*
Nonintact family (1=yes)	**.121**	*.105*	**.082***	*.331****	**.002**	*.046**	**.020**	*.038**
	(.079)	*(.078)*	**(.042)**	*(.093)*	**(.029)**	*(.018)*	**(.011)**	*(.015)*
ENDOGENOUS CONSTRUCTS								
Deviant friends	**1.61*****		**1.90*****		**-.102**	*.318****	**-.142***	*.298****
	(.080)		**(.058)**		**(.085)**	*(.080)*	**(.067)**	*(.093)*
Conventional behavior					**-.024**		**.008**	
					(.018)		**(.007)**	
Unconventional behavior					**.195*****		**.158*****	
					(.048)		**(.033)**	
Exposure to violence								
R^2	.75		.88		.28		.24	

Notes: * p<.05 **p<.01 ***p<.001.

TABLE 3c
Unstandardized Direct and Indirect Coefficients (and Standard Errors): Black and White Males

	Violent Behavior			
	Black Males		White Males	
	Direct Effects	*Indirect Effects*	Direct Effects	*Indirect Effects*
EXOGENOUS MEASURES				
Neighborhood Characteristics				
Family poverty	**-.268** **(.169)**	*.295** (.129)*	**-.186** **(.148)**	*.197 (.129)*
High school dropouts	**-.008** **(.171)**	*-.191 (.131)*	**.060** **(.087)**	*-.091 (.126)*
Unemployment rate	**.175** **(.244)**	*-.485** (.189)*	**.570*** **(.246)**	*-.060 (.204)*
Female-headed households	**.384** **(.328)**	*.104 (.251)*	**-.241** **(.233)**	*-.088 (.237)*
(Ln) population size	**-.039** **(.031)**	*-.007 (.024)*	**-.003** **(.014)**	*.014 (.023)*
(Ln) population density (age 12–24)	**-.001** **(.011)**	*.021** (.009)*	**-.003** **(.005)**	*.014** (.007)*
Household Characteristics				
(Ln) family income	**-.005** **(.011)**	*.011 (.009)*	**-.004** **(.004)**	*.004 (.008)*
Parents' education	**-.012** **(.018)**	*-.005 (.015)*	**-.063*** ** **(.009)**	*-.008 (.015)*
Number of siblings	**.071*** ** **(.016)**	*-.025** (.013)*	**.011** **(.008)**	*-.024 (.013)*
Nonintact family (1=yes)	**.011** **(.042)**	*.066** (.033)*	**-.007** **(.018)**	*.092** (.031)*
ENDOGENOUS CONSTRUCTS				
Deviant friends	**-.280*** **(.128)**	*.563*** (.122)*	**-.261*** **(.108)**	*.549*** (.148)*
Conventional behavior	**.020** **(.026)**	*-.016 (.012)*	**.000** **(.012)**	*.006 (.013)*
Unconventional behavior	**.262*** ** **(.096)**	*.129*** (.030)*	**.228*** ** **(.056)**	*.116*** (.032)*
Exposure to violence	**.663*** ** **(.091)**		**.734*** ** **(.065)**	
R^2	.43		.44	

Notes: * p<.05 **p<.01 ***p<.001.

of the population below the poverty line and percentage of the population unemployed, are found to have an impact on black violent delinquency through endogenous factors at the individual level (Table 3c, column 3, rows 1 and 3). The size of the unemployed population in an area also has implications for white violent delinquency. But the characteristics of the relationship between area unemployment and violent delinquency for white adolescents differ considerably from those of their black counterparts. The proportion of unemployed persons in an area has a positive, direct impact on the violent behavior of white teens (Table 3c, column 5, row 3). These countervailing findings may be linked to racial differences in the effect of disadvantage. Community-level deprivation tends to have a linear relationship with behavioral outcome measures for whites. In contrast, the relationship between community characteristics and behavioral outcomes may be nonlinear for blacks. Recent evidence suggests that the effect of area deprivation indicators on black behavioral outcomes tends to level off at the higher levels of disadvantage (Krivo and Peterson, 2000). These findings raise some interesting questions that are beyond the scope of this paper.

It is also noteworthy that the influence of community resources appears to be spread across other factors in the model in race-specific ways. Tables 3a and 3b show that community characteristics have relationships with white conventional behavior, unconventional behavior, and exposure to violence. Tables 3a and 3b indicate that the proportion of female-headed households in an area has a strong, direct, and inverse impact on prosocial behaviors of white adolescents. The proportions of high school dropouts and unemployed persons in an area (Table 3b, column 4, rows 2 and 3) are also found to have substantial impact on the unconventional behavior of young white males. Area unemployment is also important for white male exposure to violence. The results in Table 3b (column 15, row 3) show that community joblessness has a direct influence on the amount of violence that white teens witness or experience.

The results for black males are interesting because community resource levels do not seem to have an impact on African American peer characteristics, participation in unconventional behaviors, or exposure to violence. But they do have an impact on African American prosocial behavior. The inverse

relationship between area unemployment levels and the prosocial behavior construct (Table 3a, column 6, row 3) suggests that community-level joblessness can discourage adolescents from embracing the activities associated with schools, churches, and other conventional institutions.

Exogenous Constructs: Family Resources

Table 3c shows that family resources are important factors influencing violent delinquency for black and white adolescents. The results reveal some interesting racial-group similarities and differences. Nontraditional household structure has an indirect effect on black and white violent delinquency, suggesting that the impact of nonintact families on adolescent violence is mediated through other factors in the model. The positive relationship between nontraditional household structures and violent delinquency (Table 3c, columns 3 and 5, row 10) indicates that adolescents belonging to nonintact families have more violent encounters than individuals living in two-parent households, all else being equal. The impact of the other family indicators on violent behavior appears to vary by race. Parents' education (Table 3c, column 4, row 8) affects violent delinquency in the expected direction for white adolescents. As the parental educational level increases, the level of white adolescent violent activity decreases. For black teens, family size is an important family factor influencing black violent delinquency. According to Table 3c (column 17, row 9), an increase in family size corresponds with an increase in violent activity among black adolescents. Like the results pertaining to community characteristics, it appears that the impact of family economic and social resources on violent behavior can operate differently across racial groups.

More racial group similarities and differences emerge when considering the impact of the exogenous family variables on the intermediary constructs. In some cases, the results for black teens mirror those of their white counterparts. For example, parents' education is positively associated with prosocial behavior (Table 3a, columns 4 and 6, row 8), the number of siblings is inversely related to deviant friends (Table 3a, columns 2 and 3, row 9) and nontraditional household arrangements have an

indirect and positive relationship with exposure to violence (Table 3b, columns 7 and 9, row 10). But in other cases, the impact of family resources on the intermediate factors vary by race. For black adolescents, parents' education has a direct, positive relationship with prosocial behavior, an indirect inverse relationship with unconventional behavior, and both an indirect and direct impact on exposure to violence. In contrast, the results for white teens show that parents' education has an indirect and direct relationship with conventional behavior and unconventional behavior while having only a direct effect on exposure to violence. Tables 3a and 3b also show that the impact of nonintact family on deviant friends, conventional behaviors, and unconventional behaviors varies by race. For white teens, nonintact family has a positive relationship with deviant friends and both indirect and direct inverse relationships with conventional and unconventional behaviors. Tables 3a and 3b reveal that for black adolescents, nonintact families have no impact on deviant friends or unconventional behavior, and have only a direct impact on conventional behavior. Family size also affects the intermediary factors in race-specific ways. Tables 3a and 3b show that family size has a direct, positive effect on conventional behavior, and a direct, negative impact on the unconventional behavior of white teens. In contrast, family size only can be found to inversely and indirectly affect unconventional behavior in the black model. Like the community characteristics, the impact of family resources for black teens can be different from white adolescents in manner, magnitude, and/or direction.

Endogenous Relationships

Tables 3a, 3b, and 3c demonstrate that the results associated with the relationships among the endogenous variables in the black model are not significantly different from the findings associated with corresponding relationships in the white model. Table 3c indicates that black and white teens who engage in unconventional behavior (columns 2–5, row 13) or are exposed to violence (columns 2 and 4, row 14) tend to fight more. The results also show that the influence of peers on violent delinquency among black adolescents is similar to the corresponding findings among their white counterparts. Both groups have

negative direct effect coefficients and positive indirect coefficients. The sum of the indirect and direct effect is the total effect of a given variable on another. The indirect effect of deviant friends is considerably larger in both models, indicating that the overall effect of deviant friends on violent delinquency is positive.

The strong indirect influence of deviant friends on violent delinquency suggests that peer-group characteristics influence conventional and unconventional behavior. The results in Tables 3a–3c (row 11) show that having friends who drink, do drugs, and smoke cigarettes discourages prosocial behavior and encourages individuals to engage in similar unconventional behaviors among black and white adolescents. It is also noteworthy that the relationship between unconventional behavior and exposure to violence (Table 3b, columns 6 and 8, row 13) is positive for both groups. These results suggest that illicit substance use and selling drugs can place both black and white male adolescents at risk of witnessing or experiencing a violent attack.

DISCUSSION

This research shows how rigorous comparative analysis can help us understand the relationship between context and group differences in behavior. Tables 3a–3c indicate that communities do influence behavior, although the impact is sometimes conditioned by race. White adolescent behavior appears to be more sensitive to community characteristics than black behavior. It may be the case that white youth in the Add Health sample are like the disadvantaged white youth depicted in Cohen (1955) or MacLeod (1995), who appear to withdraw from the activities associated with conventional institutions (i.e., schools and churches) and gravitate toward behaviors that place them at risk socially and physically. The results associated with black adolescents can be attributed to exposure to community deprivation. Structural disadvantage is often a part of the social landscape for African Americans. It may be the case that

exposure to community deprivation encourages black adolescents to develop coping strategies that lessen the adverse impact of living in or close to a depressed area.

The results also show that families are an important part of adolescent life. Like earlier research examining the relationship between family and adolescent behaviors (see Elliott, Huizinga, and Ageton, 1985; Rankin and Kern, 1994; Warr and Stafford, 1991; Warr, 1993), this research finds that family resources generally can encourage adolescents to engage in conventional behaviors, and depressed resources often lead to unconventional or dangerous behaviors. The results associated with parents' education show that belonging to families headed by highly educated parents can mean greater access to and awareness of institutions where prosocial activities take place. The findings also indicate that highly educated parents may have the cultural and economic resources to place adolescents in environments where deviant peer groups are less likely to exist and emerge. It is also noteworthy that parents' education has some interesting race-specific effects. The total effect of parents' education on unconventional behavior is positive, while its effect on violent behavior is negative. These seemingly contradictory results lend support to the notion that family class resources afford advantaged white adolescents the opportunity to safely participate in "less serious" forms of unconventional behavior. At the same time, highly educated white parents have the economic, cultural, and social means to restrict opportunities for their children to engage in dangerous behaviors. Class resources protect white adolescents from some of the dangers or other adverse consequences (e.g., arrest) associated with behavior exploration and boundary testing. Family class resources do not afford black adolescents the same benefits. Parents' education has a moderately positive relationship with exposure to violence, and has no significant impact on violent delinquency. These results are consistent with findings from recent research (see Pattillo-McCoy, 1999) showing that middle-class adolescents continue to be vulnerable to adversities and dangers associated with adolescence. Social class offers some protection against adverse outcomes associated with risky behavior, but the strength of this protection is conditioned by race.

Family structure is another important element of the social environment influencing adolescent behavior. Both family size and household parental arrangements have implications for behavior, although their individual effects differ radically from one another. Family size appears to be a protective factor. Tables 3a and 3b show that family size discourages one from belonging to deviant peer groups, participating in unconventional behavior, and being in areas where violence occurs. These results suggest that the presence of individuals who can report adolescent activity to parents may deter some adolescents from being with people or in places where troublesome behavior can occur. It is also noteworthy that family size has race-specific effects. The number of siblings appears to encourage participation in prosocial behavior among white teens, illustrating another way in which family size can be a social resource for white families. For black adolescents, the protective effects of family size dissipate in regard to violent delinquency. In fact, the results indicate that the number of siblings is positively correlated with fighting. This finding is surprising, given the relationship between family size and exposure to violence. Together, these seemingly contradictory findings suggest that black males are targets for violence despite the presence of mitigating factors like siblings. It may be the case that large black families live in areas where a "code of the street" is such that males have to be willing, if not able, to fight in order to navigate the streets (Anderson, 1999).

Nontraditional household structures can have a detrimental effect on adolescents, as the results show that black and white adolescents belonging to nonintact families are less likely to participate in prosocial activities, more likely to witness a violent event, or fight than students belonging to traditional two-parent households. These results suggest that nontraditional family structures tax economic or social resources that could be used to support involvement with extracurricular school and church activities that could ultimately deter adolescents from violent encounters and behavior. It is also noteworthy that depressed family resources have a more profound effect on white adolescents than on their black counterparts. White respondents belonging to families with nontraditional structures are more likely to have deviant peers and engage in antisocial behavior than their counterparts living in traditional two-

parent families. Nontraditional family structures do not affect African American adolescents in the same way. This difference may exist because African Americans have a long history of coping with few family resources and nontraditional family structures. These factors are a part of their social landscape and, as a result, are less likely to have a major influence on adolescent behavior.

The results associated with the endogenous constructs show black and white adolescents to be strikingly similar at the individual level. This "racial invariance" is noteworthy because it suggests that researchers will gain more insight into race-specific patterns of violence by considering contextual rather than constitutional differences between groups.

CONCLUSIONS

Making sense of racial differences in violent behavior has proven to be a challenge for theorists. Meeting and eventually overcoming this challenge involves developing and testing models that are more explicit with regard to stratification and its relationship with violent delinquency. To this end, I draw from recent work (i.e., Bruce, 2000a, 2000b; Bruce, Roscigno, and McCall, 1998; Elliott et al., 1996; Sampson and Wilson, 1995) to construct and test a comparative, contextually sensitive model of violent delinquency.

The results from this study are important because they show that the processes affecting behavioral outcomes differ by race. For example, depressed community and family resources have a profound effect on the behavior of adolescent white males but not their black counterparts. Race matters. But the results illustrate that race matters for white ***and*** black adolescents.

Class is also an important part of the social environment influencing antisocial and prosocial behavior. Neighborhood poverty and unemployment levels as well as parents' education and nontraditional family structures are shown to have a substantial effect on the behavior of both black and white adolescents. Close inspection of the results indicates that the impact of class is also linked to race.

Black respondents have fewer economic resources available than their white counterparts; however, deprivation appears to matter more for white adolescents than their black counterparts. It may be the case that the impact of resource deprivation levels off over time. Long-term exposure to resource deprivation can condition marginalized groups such that poverty at the community or family level, for example, has little impact on either antisocial or prosocial behaviors of African Americans and the poor.

This research extends our knowledge of the relationship between stratification and crime/delinquency, yet leaves considerable room for conceptual and methodological development. Theoretically, the concept of context can and should be developed further in at least four ways. First, discussions about racial context must incorporate a concern with whiteness, and race effects on white boys. Second, theories about class context and its impact on behavior should give attention to the affluent as well as the poor. Third, it may be fruitful to consider masculinity as an important factor influencing violent delinquency, as violence may be a means through which young males assert their manhood. Finally, antisocial behavior is only one dimension of adolescent life. Perhaps a more adequate examination of this form of adolescent behavior comes with a consideration of behavioral outcomes, such as work or athletics.

Methodologically, the model represents a fairly conservative depiction of the social environment. More refined measures need to be introduced to flesh out the manner in which some factors affect behavioral outcomes. To understand the influence of the number of siblings, for instance, one could introduce measures such as birth order and the sex of siblings. A second site of potential methodological development involves specification. Relationships between race and class inequality, family and peer groups, and behavior can be reciprocal. That is, large numbers of families that are not effective in controlling their younger members, well-established deviant peer systems, and high levels of antisocial activity in any given area can amplify deprivation because potential investors will be unwilling to invest in areas with high levels or perceived high levels of crime/delinquency. Although the structure of the Add

Health data does not lend itself to longitudinal analysis, specifying the temporal order of variables and potential reciprocal effects is a high priority for future research.

Despite these limitations, this study lays the foundation for future research in two important ways. The successful integration of macro- and microlevel factors in one empirical framework establishes the plausibility of multilevel modeling, thereby facilitating a tighter connection between conceptual frames and the empirical models emerging from them. This research also provides a glimpse into the complex relationship between stratification and crime. Rather than debating which axis of stratification is more relevant for violence, this research has shown that it may be more fruitful to consider how race, gender, and class independently and interactively influence behavioral outcomes.

APPENDIX TABLE 1
Fit Statistics for Models with Varying Parameter Constraints

	L^2	*df*	BIC[a]
Completely Invariant Model	5778	548	1147
Relaxed Correlation and Error Structure Parameters (14)	2798	534	-1708
Relaxed Correlation, Error Structure and Beta Parameters (28)	2684	520	-1703
Relaxed Correlation, Error Structure and Gamma Parameters (67)	2603	479	-1439
Relaxed Correlation, Error Structure, Beta, and Gamma Parameters (78)	2571	470	-1395

[a]BIC denotes the Baysian Information Criterion statistic.

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