



and by directly experiencing these behaviors (e.g., peer victimization). In addition, low collective efficacy in underclass neighborhoods (i.e., low social cohesion among neighbors and an unwillingness to intervene on behalf of children) may promote youth aggression and delinquency [Sampson et al., 1997]. Due to mistrust and a lack of shared expectations among neighbors in underclass neighborhoods, adults may be reluctant to monitor and sanction youth misbehavior. Consequently, children in underclass neighborhoods may experience fewer negative consequences for misbehavior than those in nonunderclass areas [Sampson et al., 2002, 1997]. Stressors in underclass areas (e.g., danger, victimization) might also disrupt parenting quality and family relationships, placing children at risk for behavior problems (BPs) [Garbarino and Kostelny, 1993].

### **Family Characteristics Associated with Neighborhood Selection**

The link between underclass neighborhoods and youth aggression and delinquency might also be explained by the self-selection of high-risk families into underclass areas. Parental characteristics associated with living in highly disadvantaged neighborhoods, including low education, few occupational skills, low income, single-parent marital status, minority ethnicity, and parental depression [Massey et al., 1994; Ross, 2000; South and Crowder, 1997] have also been associated with children's risk for externalizing behavior and delinquency [Dornbusch et al., 1985; Dornfeld and Kruttschnitt, 1992; Downey and Coyne, 1990; Duncan et al., 1994; Fergusson et al., 1994]. Low-income families tend to move more frequently than mid- and high-income families [Children's Defense Fund, 1992], and residential instability has been associated with elevated conduct problems [e.g., Stoneman et al., 1999]. Parents with antisocial tendencies may be drawn to neighborhoods where illegal market structures exist [Wikström, 1991]; which may account for associations between neighborhood and child behavior, as parent antisocial behavior has been shown to predict child conduct problems prospectively [e.g., Lahey et al., 2002].

One of the most striking and robust findings has been the observation that underclass neighborhoods tend to be populated predominantly by low-income, African American (AA) and some Latino families—European American (EA) families rarely live in such environments, regardless of family income or marital status [Duncan et al., 1994; Peeples and Loeber, 1994; Wilson, 1996]. Instead, low-income,

EA families tend to live in neighborhoods characterized by a mixture of low- and middle-income residents. Longitudinal research suggests that, compared to low-income EAs, low-income AAs are less likely to move out of poor neighborhoods and into non-poor neighborhoods, controlling for a multitude of family sociocultural factors (e.g., SES, income, marital status, home ownership) [Massey et al., 1994; South and Crowder, 1997].

Thus, because individuals are not randomly distributed across neighborhood contexts, to establish the existence of neighborhood effects on children, researchers must demonstrate that significant associations between neighborhood and child adjustment cannot be explained by variables that impact the neighborhoods in which families choose to live (i.e., selection effects) [Leventhal and Brooks-Gunn, 2000; Tienda, 1991]. However, researchers also must be careful not to *overcontrol* for processes that might mediate relations between neighborhood and youth outcomes [Sampson et al., 2002]. Potential intervening mechanisms (e.g., peer influences, parenting, or family conflict) should not be entered as control variables when testing neighborhood effects but rather should be examined in process models; otherwise, neighborhood effects are likely to be underestimated [Sampson et al., 2002].

### **Children's Developmental Status, Neighborhood Disadvantage, and Youth Antisocial Behavior**

Most research examining the impact of neighborhood disadvantage on youth development has been focused on older children and adolescents. Several investigators have shown that neighborhood disadvantage is associated with aggression and delinquency, controlling for family selection variables [e.g., Peeples and Loeber, 1994; Simcha-Fagan and Schwartz, 1986]. In addition, evidence from experimental research suggests that relocating families out of underclass neighborhoods can reduce youths' risk for antisocial behavior [Katz et al., 2001; Ludwig et al., 2001].

Although less well-studied, young children in underclass neighborhoods may also be at risk for BPs. If young children are exposed on a consistent basis to aggressive behavior and deviant values of other children and adult role models in the community, they may form normative beliefs that aggression and other forms of antisocial behavior are acceptable, which may lead them to become increasingly more aggressive and antisocial as their normative beliefs crystallize [Huesmann and Guerra, 1997].

One might expect neighborhood effects to begin to emerge when children become involved in neighborhood peer networks and start interacting in neighborhood settings without the constant supervision of their parents [Brooks-Gunn et al., 1993]. Developmentally, the transition into kindergarten and first grade (age 5–6) may mark this point, as children begin to experience prolonged interactions with neighborhood peers at school [Chase-Lansdale and Gordon, 1996]. Also, parents may allow children greater freedom to play with peers in neighborhood settings, unsupervised or under the supervision of other adults, around this age. In fact, findings from several studies suggest that, in the United States (US), neighborhood disadvantage appears to be positively associated with child externalizing problems beginning around age 5 or 6, controlling for family sociocultural characteristics [Chase-Lansdale and Gordon, 1996; Duncan et al., 1994; Greenberg et al., 1999; Kupersmidt et al., 1995].

However, researchers have yet to determine if neighborhood effects are specific to underclass neighborhoods. Sociologists have pointed out that high levels of social problems appear only in the most disadvantaged areas [Crane, 1991; Hogan and Kitagawa, 1985]. In their review of neighborhood influences on child and adolescent outcomes, Leventhal and Brooks-Gunn [2000] asserted that researchers need to differentiate levels of neighborhood disadvantage and affluence. Conditions of neighborhood disadvantage may be most relevant for the development of aggression and delinquency, whereas the presence of highly affluent neighbors may be important for school readiness and academic achievement. For example, in the PSID sample, Duncan et al. [1997] found that the presence of affluent neighbors promoted adolescent educational attainment once a threshold was surpassed of higher-than-average numbers of affluent families in the neighborhood.

However, in the US, researchers have not empirically tested for threshold effects that might characterize relations between neighborhood disadvantage and antisocial outcomes. In addition, to date, researchers have relied solely on cross-sectional data to estimate neighborhood effects on young children's development—no studies have been conducted to examine the impact of neighborhood context on changes in early problem behaviors. Research on developmental pathways leading to antisocial behavior suggests that antisocial behavior begins with overt BPs during early childhood (i.e., minor aggression and oppositionality)

that progress into more serious forms of overt (e.g., fighting and rule violations) and covert (e.g., stealing, vandalism) BPs later in childhood and adolescence [Loeber et al., 1993; Patterson et al., 1992; Tolan et al., 2000]. Thus, it is important to examine the potential impact of neighborhood disadvantage on early overt BPs, that set the stage for more serious forms of aggression and delinquency in middle childhood and adolescence. Young children in underclass areas may be less likely than other children to internalize prosocial norms during early childhood due to the effects of social modeling, victimization (e.g., aggression from peers), the lack of negative consequences for antisocial behavior (i.e., reduced collective efficacy), and/or disrupted parenting and family relationships in underclass neighborhoods [Bandura, 1973; Garbarino and Kostelny, 1993; Matsueda, 1988; Sampson et al., 1997].

We examined the impact of neighborhood disadvantage on boys' overt BPs during early childhood using a sample of low-income families residing in a large metropolitan area in the Mid Atlantic region of the US. Boys were the focus of this investigation because of their elevated risk for antisocial BPs [Keenan and Shaw, 1997; Loeber and Hay, 1997]. We hypothesized that AAs would be more likely to live in highly disadvantaged neighborhoods than EAs, controlling for other family selection variables. We expected neighborhood effects on boys' overt BPs to emerge at ages 5 or 6; however, we hypothesized that the effects would be nonlinear, reflecting a threshold effect at the extreme of neighborhood disadvantage (i.e., underclass neighborhoods).

## METHOD

### Participants

Mothers with young boys living in a large metropolitan area in the Mid-Atlantic region of the US were recruited from the Women, Infant, and Children Nutritional Supplement Program (WIC), which provides monetary and nutritional resources to low-income families. At the time of recruitment, mothers were required to have at least two children living at home, with the target child approaching age 1 or  $1\frac{1}{2}$ . Two cohorts of families with boys were recruited to participate in an ongoing longitudinal study of the developmental precursors of antisocial behavior: one cohort of 70 families began the study when boys were age 1 and a second cohort of 240 families began when boys were  $1\frac{1}{2}$  years old. Of the

421 families approached for participation at WIC sites, 111 (26%) declined to participate. The sample was composed primarily of EA (54%) and AA (40%) families. Due to insufficient representation of other subgroups, only AAs and EAs were included in present analyses, resulting in 159 EA and 122 AA families. At the age 1½ assessment, most mothers were married or living with a partner (64%). The median level of educational attainment for mothers and fathers was completion of high school/GED. Average family income was \$11,726 per year for a family of four.

Of the families who began the study, 34 (12%) dropped out by the age-6 assessment. Those who remained had higher family SES scores,  $t(280) = 1.81$ ,  $P < .05$ , and were more likely to be married or living with a partner,  $\chi^2(1, N = 281) = 8.49$ ,  $P < .01$ , at the age-1½ assessment than those who later dropped out. There were no significant differences between completers and attriters with respect to initial levels on other study variables: income, ethnicity, maternal depressive symptoms, parental crime, neighborhood disadvantage, or overt BPs.

## Procedure

Lab assessments were conducted on the entire sample when target boys were ages 1½, 2, 3½, and 6. Assessments were composed of structured tasks during which mothers worked with their sons or completed questionnaires. In addition, home visits on the entire sample were conducted when boys were ages 2 and 5. At the age-2 home visit, mothers completed questionnaires while boys played with their own toys. A portion of the data collected from each of the five timepoints was used in this study.

## Measures

**Overt BPs.** The child behavior checklist (CBCL) was used to assess overt BPs [Achenbach, 1991, 1992]. The CBCL is a widely used parent-report measure of the frequency of recent childhood adjustment problems rated on a three-point scale (0 = not true; 1 = somewhat/sometimes true; 2 = very/often true). The ages 2–3 version of the CBCL was used at ages 2 and 3½, and the age 4–16 version was used at ages 5 and 6. Both versions contain items tapping BPs, although the content of some items varies across versions. Overt BP scores were created by taking the average of the raw scores on the 0–2 scale for five items that appear on both versions and assess aggressive or oppositional behavior to create a measure of overt BPs that

could be used across timepoints: “gets in many fights,” “physically attacks people,” “cruel to animals,” “temper tantrums or hot temper,” and “disobedient.” This subgroup of items has been used previously to examine trajectories of overt conduct problems during early childhood [Shaw et al., 2003]. Cronbach’s  $\alpha$  coefficients ranged from .57 at age 2 to .69 at age 6.

**Neighborhood disadvantage.** Families’ residential addresses at the ages 2, 3½, 5 and 6 assessments were geocoded to 1990 US Bureau of the Census data at the block group level, which is the smallest unit for which the Census Bureau has summarized all of the results of the 1990 census. Census data from 1990 were used because all assessments up to age 6 were conducted in the early- to mid-1990s. Census block groups represented in the study’s metropolitan area contained an average of 373 households and 912 persons in 1990.

On the basis of prior research [e.g., Wikström and Loeber, 2000], the following census block group level variables were used to create a neighborhood disadvantage factor: *median family income*, *% families below poverty*, *% households on public assistance*, *% unemployed*, *% single-mother households*, and *% bachelor degree or higher*. Using all census block groups in the metropolitan area, variables were standardized and averaged (after reverse-scoring median family income and % Bachelor degree) ( $\alpha = .88$ ); the composite was then standardized. To examine ethnic differences within the sample, ethnicity was not included as part of the neighborhood disadvantage factor. Given that crime rates have been shown to be highest in urban, poverty-stricken areas [e.g., Sampson, 1987], and that concentrations of poverty tend to be most pronounced in the Midwest and Northeast [e.g., South and Crowder, 1997], only census block groups within the county where the study was conducted that were 100% urbanized were included. Of the 1,063 street addresses geocoded from ages 2 to 6, 68 (6%) received missing scores on the neighborhood disadvantage factor as a result of these restrictions.

Consistent with previous research [e.g., South and Crowder, 1997], neighborhood disadvantage remained highly stable over the 4-year period. Intercorrelations among neighborhood disadvantage variables over the four time-points ranged from .71 to .95,  $P < .0001$ . Given the high stability, we averaged neighborhood disadvantage scores from all four time-points to provide the single most reliable indicator of neighborhood disadvantage during early childhood to be used in analyses.

Summary scores were also created for control variables (described below) to be consistent with the approach taken for neighborhood disadvantage.

**Family income-to-needs.** At each assessment mothers were asked a series of questions to obtain family sociocultural information. A family's income-to-needs ratio was computed by dividing the family's yearly income by the US Census Bureau official poverty threshold corresponding to the year for which income was reported (e.g., US Bureau of the Census, 1992). The poverty threshold is adjusted for the number of children and adults living at home. An income-to-needs ratio of 1.0 reflects the official poverty line. This construct has been shown to predict externalizing BPs among children in epidemiologic samples, controlling for other sociocultural factors, such as family structure and SES [e.g., Duncan et al., 1994]. Mean income-to-needs was calculated by averaging the income-to-needs ratios across four assessments: ages 1½, 2, 3½, and 5. Intercorrelations among income variables over the four time-points ranged from .53 to .78,  $P < .0001$ .

**Family SES.** The Hollingshead Four Factor Index [Hollingshead, 1975] was used to assess family SES. The measure incorporates information on parents' educational and occupational levels, and allows comparisons to be made among single-parent as well as two-parent families. Hollingshead demonstrated that the instrument was highly correlated with an occupation index developed by the National Opinion Research Center ( $r = .93$ ). Family SES scores were averaged across four assessments: ages 1½, 2, 3½, and 5. Intercorrelations among SES variables over the four time-points ranged from .54 to .76,  $P < .0001$ .

**Family structure.** Using information provided by mothers at the 1½, 2, 3½, and 5 year assessments, we distinguished families in which parents were married or living together continuously from those in which parents had separated during the interval or were always single by creating two dichotomous variables: *divorced/separated* and *always single*.

**Family ethnicity.** Mothers provided information regarding ethnicity at the initial assessment. Due to insufficient representation of other subgroups, only AA and EA families were included in present analyses. Families were excluded from analyses if the target child's ethnicity was mixed (i.e., if the ethnicities of the child's mother and father were not the same).

**Parental criminality.** At each assessment, mothers reported the number of times a parent or step-parent was arrested, convicted, or had trouble

with the law (i.e., police involvement without a formal arrest) as the prior assessment. At the first assessment, mothers were asked about all parental criminality as the target child's birth. Although it was not necessary for a parent to be arrested for an offense to be counted, only offenses for which arrest was possible were included (i.e., minor infractions such as parking violations were not considered crimes). The severity of crimes ranged from minor offenses (e.g., disorderly conduct, driving while intoxicated) to serious crimes (e.g., robbery, murder), with most crimes falling in between these extremes (e.g., theft).

**Maternal depressive symptomatology.** The Beck Depression Inventory (BDI) was used to assess maternal depressive symptoms [Beck et al., 1988]. Split-half and test-retest reliability estimates of the scale have been high using both psychiatric and nonpsychiatric populations (.60–.90) [Beck et al., 1988]. The BDI has been shown to correlate significantly with clinical ratings of depression [Beck et al., 1988]. Instructions for the BDI were altered slightly to assess symptomatology during the last 6 months, instead of the last 2 weeks, to obtain a more stable indication of depressive state. BDI scores were averaged across four assessments: ages 1½, 2, 3½, and 5. Intercorrelations among BDI variables over the four time-points ranged from .49 to .67,  $P < .0001$ .

**Family residential instability.** The residential instability variable represents the number of times a family moved to a different street address from the target child's birth to age 6.

## RESULTS

### Descriptives and Intercorrelations

Table I presents descriptive statistics and intercorrelations among study variables. The average frequency of overt BPs fell midway between "not true" and "sometimes true." In previous analyses conducted with this sample, we have found that  $T$  scores on the broad-band externalizing scale of the CBCL were approximately ½ SD above the normative sample mean at ages 5 and 6 ( $M = 55$ ,  $SD = 10$ ) [Shaw et al., 1999; D.S. Shaw, personal communication, May 26, 2006]. Thus, boys in our sample had somewhat higher levels of BPs compared to representative samples. Average neighborhood disadvantage was high, approaching 1 SD above the mean of neighborhood disadvantage for the metropolitan area. However, low disadvantage neighborhoods were represented as well—28% of the sample ( $n = 76$ ) lived in neighborhoods with

**TABLE I. Descriptive Statistics and Intercorrelations**

Variable	1	2	3	4	5	6	7	8	9	M (SD) or %
1. AA Ethnicity <sup>a</sup>	.									43%
2. Separated/divorced <sup>a</sup>	.17**	.								35%
3. Always single <sup>a</sup>	.74***	-.97***	.							20%
4. Family income/needs <sup>a</sup>	-.39***	-.22***	-.43***	.						0.93 (0.50)
5. Family SES <sup>a</sup>	-.24***	-.05	-.27***	.64***	.					25.10 (7.76)
6. Parental criminality <sup>a</sup>	-.04	.11 <sup>+</sup>	.16**	-.15*	-.15*	.				1.23 (3.24)
7. Maternal depression <sup>b</sup>	.18**	.12*	.14*	-.18**	-.15*	.16**	.			7.76 (5.65)
8. Residential instability <sup>a</sup>	.13*	.40***	.06	-.14*	-.12*	.16**	.11 <sup>+</sup>	.		1.24 (1.36)
9. Neighborhood disadvantage <sup>c</sup>	.80***	.14*	.50***	-.44***	-.30***	.01	.24***	.03		0.96 (1.53)
10. Overt BPs age 2 <sup>d</sup>	-.10	-.03	.04	-.08	-.07	.10 <sup>+</sup>	.26***	.03	-.06	0.54 (0.33)
11. Overt BPs age 3½ <sup>e</sup>	-.12 <sup>+</sup>	.18**	-.01	-.08	-.02	.23***	.36***	.09	.01	0.52 (0.34)
12. Overt BPs age 5 <sup>f</sup>	-.07	.15*	-.01	-.10	-.09	.22***	.29***	.12*	.04	0.47 (0.36)
13. Overt BPs age 6 <sup>g</sup>	.08	.07	.15*	-.13*	-.13*	.11 <sup>+</sup>	.29***	.11 <sup>+</sup>	.14*	0.43 (0.35)

Note. The following types of correlations were calculated: Pearson product-moment correlations between continuous variables, polyserial correlations between dichotomous and continuous variables, and polychoric correlations between pairs of dichotomous variables. All intercorrelations among BP variables (not shown) were significant, ranging from .32 to .60 ( $P < .001$ ) with the highest correlations occurring between adjacent timepoints.

<sup>a</sup> $n = 281$ ; <sup>b</sup> $n = 280$ ; <sup>c</sup> $n = 271$ ; <sup>d</sup> $n = 257$ ; <sup>e</sup> $n = 258$ ; <sup>f</sup> $n = 254$ ; <sup>g</sup> $n = 235$ .

<sup>+</sup> $P < .10$ ; \* $P < .05$ ; \*\* $P < .01$ ; \*\*\* $P < .001$ .

lower than average levels of disadvantage for the metropolitan area; 9% ( $n = 25$ ) of families lived in neighborhoods that were ½ SD or more below the mean of disadvantage for the metropolitan area. With the exception of parental criminality, selection variables were significantly correlated with neighborhood in expected directions. A small but significant correlation between neighborhood disadvantage and boys’ overt BPs emerged at age 6; neighborhood was not related to BPs at ages 2, 3½ or 5.

**Ethnic Disparities in Neighborhood Disadvantage**

As shown in Table I, ethnicity was strongly correlated with neighborhood disadvantage. The differences between AAs and EAs were large ( $d = 1.69$ ), indicating an overlap of only 25% between the two neighborhood disadvantage distributions. Average neighborhood disadvantage for the EA subsample fell near the mean for the metropolitan area ( $M = .06$ ,  $SD = .57$ , range =  $-1.34$ – $1.98$ ), whereas neighborhood disadvantage for the AA subsample averaged more than two standard deviations above the mean for the metropolitan area ( $M = 2.11$ ,  $SD = 1.61$ , range =  $-0.77$ – $5.24$ ).

To test the hypothesis that AA families would be more likely than EAs to live in highly disadvantaged neighborhoods controlling for other family selection factors, an analysis of covariance (ANCOVA) was conducted with ethnicity as a predictor of average neighborhood disadvantage over the study period,

covarying other selection variables.<sup>1</sup> As illustrated in Table II, ethnicity remained a significant predictor of neighborhood disadvantage, after accounting for the effects of other selection variables. In addition to AA ethnicity, an always single family structure, lower family income-to-needs, and higher maternal depressive symptoms were uniquely associated with living in more disadvantaged neighborhoods.

**Threshold Effect of Neighborhood on Boys’ Behavior**

A piecewise linear function of neighborhood disadvantage was used in regression analyses to examine the hypothesized threshold effect of neighborhood on changes in boys overt BPs. A piecewise linear function is composed of linear segments or “splines” [von Eye and Schuster, 1998]. Three splines were created using the “knots” of 1 SD and 1.5 SD above the mean of neighborhood disadvantage for the metropolitan area. Results of analyses controlling for initial levels of overt BPs (age 2), family selection variables, and residential instability are presented in Table III and graphically depicted in Figure 1. As expected, the relation between neighborhood disadvantage and age 6 BPs was nonlinear, reflecting a threshold effect. A steep and significant slope was detected for underclass neighborhood, with a leveling off from underclass to

<sup>1</sup>For these and subsequent analyses all independent variables were centered using z-scores for continuous variables and values of 0 and 1 for dichotomous variables.

**TABLE II. Ethnic Differences in Neighborhood Disadvantage: Analysis of Covariance Results ( $N = 271$ )**

Source	<i>df</i>	<i>F</i>
Model	7	46.67***
AA ethnicity	1	100.25***
Separated/divorced	1	1.22
Always single	1	4.22*
Family income/needs	1	7.31**
Family SES	1	1.33
Parental criminality	1	1.05
Maternal depression	1	6.62*
Residual	263	(1.17)

Note. Mean square error is enclosed in parentheses.

\* $P < .05$ ; \*\* $P < .01$ ; \*\*\* $P < .001$ .

extreme underclass. The slope from low to moderate disadvantage was nonsignificant. These results suggest that a threshold of high disadvantage must be surpassed before neighborhood disadvantage places young boys at risk for overt BPs.

To provide a descriptive comparison of underclass versus nonunderclass neighborhoods, we dichotomized the neighborhood disadvantage variable at the midway point between moderate disadvantage and underclass neighborhood (i.e.,  $+1.25 SD$ ). Table IV compares the two neighborhood groups on neighborhood census variables and family selection variables and residential instability.

### Changes in Neighborhood Disadvantage and Selection Variables

Given the high stability of neighborhood disadvantage over the study period ( $r = .71-.95$ ), we did not expect to have sufficient variability to detect effects of changes in neighborhood disadvantage on changes in boys' overt BPs. However, we used SAS PROC MIXED<sup>©</sup> to test for possible time-varying effects, given that we had multiple observation points that provide information about within-subject variation in predictors over time.<sup>2</sup>

<sup>2</sup>We did not anticipate significant dependency due to clustering of participants within neighborhoods, because on average, 189 census block groups were represented at each timepoint, with 1.28 participants per census block group. Thus, few neighborhoods contained more than one participant. However, to examine the amount of dependency, we calculated intraclass correlations at each timepoint. All intraclass correlations approached zero (i.e.,  $r < .01$ ), suggesting there was no evidence of dependency due to multiple participants per neighborhood in our dataset. Thus, it was not necessary to specify a three-level model that included participants nested within neighborhoods [de Leeuw and Kreft, 1995; Kreft, 1996].

The coefficients for time-varying covariates are only interpretable if mean scores for the variables are included in the model as well; otherwise, time-varying coefficients are based on both within-subjects and between-subjects variation [Wallace and Green, 2002]. To separate out the within-subjects and between-subjects variation, two variables must be created for each predictor—the participant's mean score for a predictor and the deviation of a predictor score at each timepoint from its mean [Kreft and de Leeuw, 1998; Wallace and Green, 2002]. The coefficient for the mean is then interpreted as the between-subject effect, and the coefficient for the deviation score is interpreted as the within-subject effect (i.e., time-varying effect).

When both within-subject and between-subject effects were included as predictors of overt BPs, none of the coefficients for time-varying covariates were significant, indicating that neither changes in neighborhood disadvantage nor changes in family selection variables over the study period predicted overt BPs.

## DISCUSSION

We examined the impact of neighborhood disadvantage on changes in boys' overt BPs during early childhood, controlling for family variables previously found to be associated with the quality of neighborhoods in which children resided. We found that AA ethnicity, an always single family structure, lower family income-to-needs, and higher maternal depressive symptomatology were uniquely associated with living in more disadvantaged neighborhoods. Neighborhood disadvantage was positively correlated with overt BPs at age 6 but not earlier. The relation between neighborhood disadvantage and overt BPs was nonlinear, reflecting a threshold effect. Neither changes in neighborhood disadvantage nor changes in family selection variables over the study period predicted changes in boys' overt BPs.

### Family Characteristics Associated with Neighborhood Disadvantage

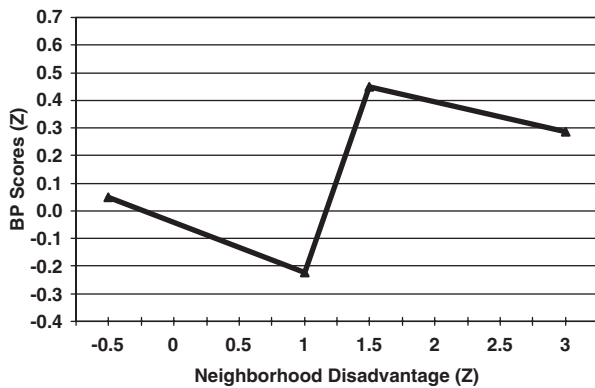
Consistent with prior research [e.g., Peeples and Loeber, 1994], we found large neighborhood disparities between AAs and EAs, with most AA families living in underclass neighborhoods and most EA families living in low disadvantage neighborhoods, controlling for other family selection variables. These results concur with others who have shown that the concentration of AA

**TABLE III. Threshold Effect of Neighborhood Disadvantage on Overt BPs at Age 6: Results of a Piecewise Linear Regression ( $N = 212$ )**

Predictor	<i>B</i>	<i>SE B</i>	$\beta$
Overt BPs (Age 2)	.24	.07	.23**
AA ethnicity	-.28	.20	-.14
Separated/divorced	.13	.17	.06
Always single	.25	.22	.10
Family income/needs	-.02	.09	-.02
Family SES	-.09	.08	-.09
Parental criminality	-.03	.06	-.03
Maternal depression	.23	.07	.21**
Residential instability	.07	.07	.07
Low to moderate neighborhood disadvantage	-.28	.25	-.11
Underclass neighborhood	2.25	.90	.31*
Extreme underclass neighborhood	-.19	.16	-.12

Note.  $R^2 = .21$ ;  $F(12, 199) = 4.33$ ;  $P < .0001$ .

\* $P < .05$ ; \*\* $P < .01$ .



**Fig. 1. Threshold effect of neighborhood disadvantage on boys' overt BPs at age 6, controlling for age 2 overt BPs, family selection variables, and residential instability. BP scores were standardized using the sample mean; neighborhood disadvantage scores were standardized using the mean for the metropolitan area.**

families in underclass neighborhoods cannot be explained solely as a function of socioeconomic factors [Massey et al., 1994; South and Crowder, 1997]. Our findings extend previous research by documenting that ethnic disparities remained, even after considering parental characteristics (i.e., maternal depressive symptoms and parental crime).

Various explanations have been proposed to account for the concentration of low-income AAs in inner-city neighborhoods, including racial discrimination in housing markets [e.g., South and Crowder, 1998], out-migration of affluent AAs from inner-cities [e.g., Wilson, 1987], neighborhood racial composition preferences [e.g., Frey, 1979], and high rates of unemployment among low-skilled, AA males, which have led to increases in the proportion of female-headed families in inner-city neighborhoods [McLoyd et al., 2000; Quillian, 2003; Wilson, 1996]. Consistent with these findings, we

found that AAs were much more likely to have an always single family structure than EAs in our sample, and that an always single family structure was uniquely associated with living in underclass neighborhoods.

Maternal depressive symptomatology was also uniquely associated with neighborhood disadvantage. Other researchers have pointed out that rates of depressive symptoms are often high among adults living in disadvantaged neighborhoods [Leventhal and Brooks-Gunn, 2003; Ross, 2000]. These symptoms may result from experiences of racism, lack of opportunities for quality education, and limited prospects for employment. Depressive mothers may not attempt to surmount these obstacles due to lack of optimism, decreased energy levels, passivity, and feelings of apathy [Wilson, 1996].

Although maternal depressive symptomatology was used as a control variable in this study, it is noteworthy that it emerged as a unique predictor of changes in overt BPs. These results concur with other research suggesting that boys of depressive mothers are at risk for elevated BPs [Downey and Coyne, 1990]. However, because mothers completed measures of both symptomatology and boys' behavior in this study, unique variance due to symptomatology may have resulted from informant bias.

### Threshold Effect of Neighborhood Disadvantage

As expected, boys living in underclass neighborhoods had higher overt BPs than those living in less disadvantaged neighborhoods; however, boys living in moderately disadvantaged areas did not have significantly higher overt BPs than those living in low disadvantage neighborhoods. This threshold

TABLE IV. Descriptive Comparison of Underclass vs. Nonunderclass Neighborhood Groups

Variable	<i>M</i> (SD) or %	
	Underclass ( <i>n</i> = 81)	Nonunderclass ( <i>n</i> = 190)
Census block group		
Median family income	\$12,080.70 (6,142.42)	\$30,495.25 (8,881.13)*
% Families below poverty	53.83 (20.65)	11.40 (8.82)*
% Households on public assistance	41.88 (15.98)	10.36 (7.04)*
% Unemployed	29.77 (13.17)	8.00 (4.95)*
% Single-mother households	35.41 (17.62)	6.68 (4.72)*
% Bachelor degree or higher	5.68 (4.75)	14.65 (11.43)*
% African American <sup>a</sup>	79.16 (20.34)	14.93 (23.32)*
Family		
AA Ethnicity	95%	22%*
Separated/divorced	42%	32%
Always single	44%	10%*
Family income/needs	.67 (.33)	1.03 (.50)*
Family SES	22.50 (7.59)	25.99 (7.57)*
Parental criminality	1.22 (.23)	1.26 (.27)
Maternal depression	9.56 (6.89)	6.84 (4.56)*
Residential instability	1.38 (1.41)	1.17 (1.34)

<sup>a</sup>Not included in the neighborhood disadvantage factor.

\**P* < .001.

effect is consistent with the work of sociologists who have documented the distinctive structural and antisocial characteristics of underclass neighborhoods, as well as the unique challenges faced by residents in these environments [e.g., Sampson, 1987; Wilson, 1996]. Although sociologists have found that only extremely disadvantaged, urban neighborhoods are characterized by violence and other social problems at the aggregate level [Crane, 1991; Hogan and Kitagawa, 1985], and developmental researchers have speculated about the possibility of threshold effects [Leventhal and Brooks-Gunn, 2000], this was the first study conducted in the US to use individual-level child outcome data to demonstrate a threshold effect of neighborhood disadvantage on boys' risk for early overt BPs. It would be interesting to see if this threshold effect is replicated with older boys and girls and children living in different regions.

This finding has methodological implications. Researchers who use continuous measures of neighborhood, or form groupings based on median splits, may underestimate neighborhood effects. The finding also has policy implications. If neighborhood effects were linear, relocating families out of underclass neighborhoods would simply redistribute violence and other social problems across areas, which would likely be met with opposition from residents of more affluent neighborhoods [Roosa et al., 2003]. However, as neighborhood effects

appear to be nonlinear, redistributing low-income families across more affluent neighborhoods has the potential to reduce violence and prevent youth antisocial behavior. Results also imply that individual-based and family-based programs to prevent antisocial behavior should target those living in underclass neighborhoods, and not those in moderately disadvantaged areas.

### Developmental Emergence of Neighborhood Effects

Our findings coincide with the work of other researchers who have demonstrated cross-sectional associations between neighborhood disadvantage and externalizing behavior at ages 5 or 6 [Chase-Lansdale and Gordon, 1996; Duncan et al., 1994]. Our analyses extend prior findings by showing that neighborhood disadvantage predicts changes in overt BPs during early childhood. Neighborhood disadvantage was not associated with boys' overt BPs before age 6; however, controlling for initial overt BPs, neighborhood disadvantage predicted overt BPs at age 6, suggesting neighborhood effects emerge around the transition to elementary school. These results are consistent with those of Guerra et al. [2003], who found increasing rather than decreasing levels of aggression across elementary school for children living in high-risk, urban neighborhoods. Attaining the behavioral and

emotional self-regulatory and problem-solving skills necessary to interact successfully with peers and teachers in the school setting are among the most salient developmental tasks that children face during early childhood [Aber et al., 1997]. Children living in underclass neighborhoods may not internalize prosocial norms during early childhood to the same extent as peers in other neighborhoods.

Recent analyses of the NICHD child care study indicated that aggression in toddlerhood that declined by school entry was not associated with problematic functioning; however, stable aggression across early childhood predicted social and academic difficulties in third grade [NICHD ECCRN, 2004]. Given the high stability of overt antisocial behavior into adulthood [Broidy et al., 2003; Huesmann et al., 1984], our study suggests that young boys in underclass neighborhoods are at risk for problems at school entry and beyond.

### Limitations and Future Directions

Neighborhood effects in this study were small but nonetheless important, given that significant findings emerged despite the use of multiple control variables. However, several limitations should be discussed. Although we controlled for many potential family-level selection effects, there may be other variables related to the neighborhoods in which families choose to live that we did not measure and that could account for relations between neighborhood and overt BPs, such as parental substance use, IQ, and other forms of parental psychopathology in addition to depressive symptomatology. The use of an experimental design in which families are randomly assigned to different neighborhoods would provide a more stringent control for selection effects [Sampson et al., 2002].

Another limitation is that participants included only low-income, AA and EA, urban families with young boys. Findings may not generalize to girls or other sociocultural subgroups. For example, the threshold effect may not generalize to middle-income families. Although we found that low-income boys living in moderately disadvantaged neighborhoods did not have higher overt BPs than those in low disadvantage neighborhoods, it is possible that middle-income boys living in moderately disadvantaged neighborhoods are at risk for elevated overt BPs. In addition, neighborhood effects are likely to be different for other child outcomes, such as academic achievement, which may be more heavily influenced by neighborhood

affluence than disadvantage [Duncan et al., 1997; Leventhal and Brooks-Gunn, 2000].

The neighborhood measure used in this study was based on census block group level data, which provide both advantages and disadvantages. Census data are collected on the population as a whole and include a multitude of sociocultural variables, making them particularly valuable for the identification of concentrated areas of disadvantage. However, census geographic boundaries may not correspond well with what residents demarcate as their neighborhoods [Coulton et al., 2001]. Furthermore, census data assess structural aspects of neighborhoods (e.g., poverty, household composition, employment rates) but not social-organizational characteristics, such as the presence of formal and informal control mechanisms, cohesion among neighbors, or the frequency of antisocial behavior among adults and youth; factors which may be responsible for neighborhood effects [Sampson et al., 1997; Simcha-Fagan and Schwartz, 1986].

Our next step will be to identify intervening processes that account for neighborhood effects during early childhood. It is likely that neighborhood disadvantage does not directly affect young children's behavior. Results of other studies, conducted primarily with older children and adolescents, point to the importance of peer influences, parenting, and family conflict as mediators [e.g., Tolan et al., 2003], moderators [e.g., Beyers et al., 2003; Forehand and Jones, 2003], or amplifiers [e.g., Brody et al., 2003] of neighborhood influences on antisocial behavior. These mechanisms may also be relevant during early childhood. For example, high rates of exposure to violence have been documented for young children living in high-risk neighborhoods [Ingoldsby and Shaw, 2002], and violence exposure has been shown to predict increases in aggressive behavior longitudinally [e.g., Guerra et al., 2003]. Even during the preschool period, exposure to violence has been found to occur most often in the neighborhood [Sinclair et al., 1994]. Children exposed to high levels of violence and disrespect for authority may be less well-equipped to handle the challenges presented by school entry. For example, when faced with peer conflicts, they may resort to aggressive problem-solving tactics they have witnessed or experienced in the neighborhood [Colder et al., 2000].

### Summary

In this study, we discovered that boys living in underclass neighborhoods were at risk for elevated

overt BPs at age 6, controlling for overt BPs at age 2, family selection variables, and residential instability. Neighborhood effects emerged around the transition to elementary school. Additional research is needed to identify intervening mechanisms that mediate or moderate associations between underclass neighborhood and early overt BPs to elucidate the optimal targets for preventive interventions delivered to this population.

### ACKNOWLEDGMENTS

This research was supported by an NRSA institutional training grant from the National Institute of Mental Health (NIMH) (5T32MH018387-15). The study was based on the first author's doctoral dissertation, which was supported by a grant from NIMH (1R03MH058975-01). Data were collected as part of an ongoing longitudinal study, which was supported by NIMH grants (5R29MH046925 and 5R01MH050907). Portions of this research were presented at the Society for Research in Child Development, Tampa, FL, April, 2003. We wish to thank everyone who assisted with data collection and coding; particularly Guy Davis, Rachael Fersch, Clare Flanagan, and Melissa Terek, as well as the families who participated in the study.

### REFERENCES

- Aber JL, Gephart M, Brooks-Gunn J, Connell J. 1997. Development in context: Implications for studying neighborhood effects. In: Brooks-Gunn J, Duncan G, Aber JL, (eds). "Neighborhood Poverty: Vol. 1, Context and Consequences for Children," NY: Russell Sage Foundation, pp 44-61.
- Achenbach TM. 1991. "Manual for the Child Behavior Checklist/4-18 and 1991 Profiles." Burlington, VT: University of Vermont, Department of Psychiatry.
- Achenbach TM. 1992. "Manual for the Child Behavior Checklist/2-3 and 1992 Profiles." Burlington, VT: University of Vermont, Department of Psychiatry.
- Bandura A. 1973. "Aggression: A Social Learning Analysis." Englewood Cliffs, NJ: Prentice-Hall.
- Beck AT, Steer RA, Garbin MG. 1988. Psychometric properties of the Beck Depression Inventory: Twenty-Five Years of Evaluation. *Clin Psychol Rev* 8:77-100.
- Beyers J, Bates J, Pettit G, Dodge K. 2003. Neighborhood structure, parenting processes, and the development of youths' externalizing behaviors: A multilevel analysis. *Am J Commun Psychol* 31: 35-53.
- Brody G, Ge X, Kim S, Murry V, Simons R, Gibbons F, Gerrard M, Conger R. 2003. Neighborhood disadvantage moderates associations of parenting and older sibling problem attitudes and behavior with conduct disorders in African American children. *J Consult Clin Psychol* 71:211-222.
- Broidy L, Nagin D, Tremblay R, Bates J, Brame B, Dodge K, et al. 2003. Developmental trajectories of childhood disruptive behaviors and adolescent delinquency: a six-site, cross-national study. *Dev Psychol* 39:222-245.
- Brooks-Gunn J, Duncan GJ, Klebanov PK, Sealand N. 1993. Do neighborhoods influence child and adolescent development? *Am J Sociol* 99:353-395.
- Bursik RJ Jr. 1989. Political decisionmaking and ecological models of delinquency: Conflict and consensus. In: Messner S, Krohn M, Liska A, (eds). "Theoretical Integration in the Study of Deviance and Crime," Albany, NY: State University of New York Press, pp 105-117.
- Chase-Lansdale PL, Gordon RA. 1996. Economic hardship and the development of five- and six-year-olds: Neighborhood and regional perspectives. *Child Dev* 67:3338-3367.
- Children's Defense Fund. 1992. "The State of America's Children," Washington, DC: Author.
- Colder C, Mott J, Levy S, Flay B. 2000. The relation of perceived neighborhood danger to childhood aggression: A test of mediating mechanisms. *Am J Commun Psychol* 28: 83-103.
- Coulton CJ, Korbin J, Chan T, Su M. 2001. Mapping residents' perceptions of neighborhood boundaries: A methodological note. *Am J Commun Psychol* 29:371-383.
- Crane J. 1991. The epidemic theory of ghettos and neighborhood effects of dropping out and teenage childbearing. *Am J Sociol* 96: 1226-1259.
- de Leeuw J, Kreft I. 1995. Questioning multilevel models. *J Educ Behav Statist* 20:171-189.
- Dornbusch S, Carlsmith J, Bushwall S, Ritter P, Leiderman H, Hastorf A, Gross R. 1985. Single parents, extended households, and the control of adolescents. *Child Dev* 56:326-341.
- Dornfeld M, Kruttschnitt C. 1992. Do the stereotypes fit? Mapping gender-specific outcomes and risk factors. *Criminology* 30:397-419.
- Downey G, Coyne J. 1990. Children of depressed parents: an integrative review. *Psychol Bull* 108:50-76.
- Duncan G, Brooks-Gunn J, Klebanov P. 1994. Economic deprivation and early childhood development. *Child Dev* 65: 296-318.
- Duncan G, Connell J, Klebanov P. 1997. Conceptual and methodological issues in estimating causal effects of neighborhoods and family conditions on individual development. In: Brooks-Gunn J, Duncan G, Aber JL, (eds). "Neighborhood Poverty: Vol. 1. Context and Consequences for Children," NY: Russell Sage, pp 219-250.
- Fergusson DM, Horwood LJ, Lynskey M. 1994. The childhoods of multiple problem adolescents: A 15-year longitudinal study. *J Child Psychol Psychiatry Allied Disciplines* 35: 1123-1140.
- Forehand R, Jones D. 2003. Neighborhood violence and coparent conflict: Interactive influence on child psychosocial adjustment. *J Abnormal Child Psychol* 31:591-604.
- Frey WH. 1979. Central city white flight: racial and nonracial causes. *Am Sociol Rev* 44:425-428.
- Garbarino J, Kostelny K. 1993. Neighborhood and community influences on parenting. In: Luster T, Okagaki L, (eds). "Parenting: An Ecological Perspective," Hillsdale, NJ: Lawrence Erlbaum Assoc, pp 203-226.
- Greenberg M, Lengua L, Coie J, Pinderhughes E. 1999. Predicting developmental outcomes at school entry using a multiple-risk model: Four American communities. *Dev Psychol* 35: 403-417.
- Guerra NG, Huesmann LR, Spindler A. 2003. Community violence exposure, social cognition, and aggression among urban elementary school children. *Child Dev* 74:1561-1576.

- Hogan DP, Kitagawa EM. 1985. The impact of social status, family structure, and neighborhood on the fertility of black adolescents. *Am J Sociol* 90:825–855.
- Hollingshead AB. 1975. "Four Factor Index of Social Status." Unpublished manuscript, Yale University, Department of Sociology, New Haven.
- Huesmann LR, Guerra NG. 1997. Children's normative beliefs about aggression and aggressive behavior. *J Pers Social Psychol* 72: 408–419.
- Huesmann LR, Eron LD, Lefkowitz MM, Walder LO. 1984. Stability of aggression over time and generations. *Dev Psychol* 20: 1120–1134.
- Ingoldsby EM, Shaw DS. 2002. Neighborhood contextual factors and early-starting antisocial pathways. *Clin Child Family Psychol Rev* 5:21–55.
- Katz L, Kling J, Liebman J. 2001. Moving to opportunity in Boston: Early results of a randomized mobility experiment. *Q J Econ* 116: 607–654.
- Keenan K, Shaw DS. 1997. Developmental and social influences on young girls' early problem behavior. *Psychol Bull* 121: 95–113.
- Kreft I. 1996. "Are Multilevel Techniques Necessary? An Overview, Including Simulation Studies," Los Angeles: California State University. Available online at <http://www.calstatela.edu/faculty/ikreft/quarterly/quarterly.html>
- Kreft I, de Leeuw J. 1998. "Introducing Multilevel Modeling," London: Sage.
- Kupersmidt JB, Griesler PC, DeRosier ME, Patterson CJ, Davis PW. 1995. Childhood aggression and peer relations in the context of family and neighborhood factors. *Child Dev* 66: 360–375.
- Lahey B, Loeber R, Burke J, Rathouz P. 2002. Adolescent outcomes of childhood conduct disorder among clinic-referred boys: Predictors of improvement. *J Abnormal Child Psychol* 30: 333–348.
- Leventhal T, Brooks-Gunn J. 2000. The neighborhoods they live in: The effects of neighborhood residence on child and adolescent outcomes. *Psychol Bull* 126:309–337.
- Leventhal T, Brooks-Gunn J. 2003. Moving to opportunity: An experimental study of neighborhood effects on mental health. *Am J Public Health* 93:1576–1582.
- Loeber R, Hay D. 1997. Key issues in the development of aggression and violence from childhood to early adulthood. *Annu Rev Psychol* 48:371–410.
- Loeber R, Wung P, Keenan K, Giroux B, Stouthamer-Loeber M, van Kammen WB, Maughan B. 1993. Developmental pathways in disruptive child behavior. *Dev Psychopathol* 5:103–133.
- Ludwig J, Duncan G, Hirschfield P. 2001. Urban poverty and juvenile crime: Evidence from a randomized housing-mobility experiment. *Q J Econ* 116:655–679.
- Massey DS, Gross AB, Shibuya K. 1994. Migration, segregation, and the geographic concentration of poverty. *Am Sociol Rev* 59: 425–445.
- Matsueda R. 1988. The current state of differential association theory. *Crime Delinquency* 34:277–306.
- McLoyd V, Cauce AM, Takeuchi D, Wilson L. 2000. Marital processes and parental socialization in families of color: A decade review of research. *J Marriage Family* 62:1070–1093.
- NICHD Early Child Care Research Network (ECCRN). 2004. Trajectories of physical aggression from toddlerhood to middle childhood: Predictors, correlates, and outcomes. *Monogr Soc Res Child Dev* 69(4, Serial No. 278).
- Patterson GR, Reid J, Dishion T. 1992. "Antisocial Boys." Eugene, OR: Castalia Publishing Co.
- Peebles F, Loeber R. 1994. Do individual factors and neighborhood context explain ethnic differences in juvenile delinquency? *J Quant Criminol* 10:141–157.
- Pickett KE, Pearl M. 2001. Multilevel analyses of neighbourhood socioeconomic context and health outcomes: A critical review. *J Epidemiol Commun Health* 55:111–122.
- Quillian L. 2003. The decline of male employment in low-income black neighborhoods, 1950–1990. *Social Sci Res* 32:220–250.
- Ross CE. 2000. Neighborhood disadvantage and adult depression. *J Health Social Behav* 41:177–187.
- Roosa M, Jones S, Tein J, Cree W. 2003. Prevention science and neighborhood influences on low-income children's development: Theoretical and methodological issues. *Am J Commun Psychol* 31: 55–72.
- Sampson R. 1987. Urban black violence: The effect of male joblessness and family disruption. *Am J Sociol* 93:348–382.
- Sampson R, Raudenbush S, Earls F. 1997. Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science* 277(5328):918–924.
- Sampson R, Morenoff J, Gannon-Rowley T. 2002. Assessing "neighborhood effects": Social processes and new directions in research. *Annu Rev Sociol* 28:443–478.
- Shaw DS, Winslow EB, Flanagan C. 1999. A prospective study of the effects of marital status and family relations on young children's adjustment among African American and European American families. *Child Dev* 70:742–755.
- Shaw DS, Gilliom M, Ingoldsby EM, Nagin D. 2003. Trajectories leading to school-age conduct problems. *Dev Psychol* 39:189–200.
- Simcha-Fagan O, Schwartz JE. 1986. Neighborhood and delinquency: An assessment of contextual effects. *Criminology* 24: 667–703.
- Sinclair J, Pettit G, Harrist A, Dodge K, Bates J. 1994. Encounters with aggressive peers in early childhood: Frequency, age differences, and correlates of risk behaviour problems. *Int J Behav Dev* 17:675–696.
- South SJ, Crowder KD. 1997. Escaping distressed neighborhoods: Individual, community, and metropolitan influences. *Am J Sociol* 102: 1040–1084.
- South SJ, Crowder KD. 1998. Housing discrimination and residential mobility: impacts for Blacks and Whites. *Population Res Policy Rev* 17:369–387.
- Stoneman Z, Brody G, Churchill S, Winn L. 1999. Effects of residential instability on Head Start children and their relationships with older siblings: Influences of child emotionality and conflict between family caregivers. *Child Dev* 70: 1246–1262.
- Tienda M. 1991. Poor people and poor places: deciphering neighborhood effects on poverty outcomes. In: Huber J, (ed). "Macro-Micro Linkages in Sociology," Newbury Park, CA: Sage Publications, pp 244–262.
- Tolan PH, Gorman-Smith D, Loeber R. 2000. Developmental timing of onsets of disruptive behaviors and later delinquency of inner-city youth. *J Child Family Stud* 9:203–220.
- Tolan PH, Gorman-Smith D, Henry D. 2003. The developmental ecology of urban males' youth violence. *Dev Psychol* 39: 274–291.
- US Bureau of the Census. 1992. "Current Population Reports, Series P-60, No. 181. Poverty in the United States: 1991," Washington, DC: US Government Printing Office.
- von Eye A, Schuster C. 1998. "Regression Analysis for Social Sciences." San Diego: Academic Press.
- Wallace D, Green S. 2002. Analysis of repeated measures designs with linear mixed models. In: Moskowitz D, Hershberger S, (eds). "Modeling Intraindividual Variability With Repeated Measures

- Data: Methods and Applications,” Mahwah, NJ: Lawrence Erlbaum, pp 103–134.
- Wikström PH. 1991. “Urban Crime, Criminals, and Victims: The Swedish Experience in an Anglo-American Comparative Perspective.” NY: Springer-Verlag.
- Wikström PH, Loeber R. 2000. Do disadvantaged neighborhoods cause well-adjusted children to become adolescent delinquents? A study of male juvenile serious offending, risk and protective factors, and neighborhood context. *Criminology* 38: 1109–1142.
- Wilson WJ. 1987. “The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy.” University of Chicago Press.
- Wilson WJ. 1996. “When Work Disappears: The World of the New Urban Poor.” NY: Alfred A. Knopf.