GENDER, STRUCTURAL DISADVANTAGE, AND URBAN CRIME: DO MACROSOCIAL VARIABLES ALSO EXPLAIN FEMALE OFFENDING RATES?*

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Building on prior macrosocial-crime research that sought to explain either total crime rates or male rates, this study links female offending rates to structural characteristics of U.S. cities. Specifically, we go beyond previous research by: (1) gender disaggregating the Uniform Crime Report (UCR) index-crime rates (homicide, robbery, aggravated assault, burglary, larceny-theft) across U.S. cities; (2) focusing explicitly on the effects of structural disadvantage variables on the index-offending rates of females; and (3) comparing the effects of the structural variables on female rates with those for male rates. Alternative measures of structural disadvantage are used to provide more theoretically appropriate indicators, such as gender-specific poverty and joblessness, and controls are included for age structure and structural variables related to offending.

The main finding is consistent and powerful: The structural sources of high levels of female offending resemble closely those influencing male offending, but the effects tend to be stronger on male offending rates.

Our study links two recent trends in criminologic inquiry—the newly emergent focus on the nature of female offending and the renewed interest in effects of macrolevel or structural characteristics on crime rates—by examining the relationship between rates of female offending and structural characteristics of U.S. cities. On the one hand, recent years have seen a flurry of research and debate about the nature of female offending as part of a broader and rising interest in gender stratification. A sizable literature now exists on trends in female crime, similarities and differences in patterns and contexts of offending by women and men, and the utility of sociological theories of crime for explaining crime by women (for reviews, see Chesney-Lind, 1997; Daly, 1994; Steffensmeier and Allan, 1996). On

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the other hand, the past decade also has witnessed a renewed interest in the social ecology of crime across geographical units. The units can range from neighborhoods, states, or societies, but cities or standard metropolitan statistical areas (SMSAs) are the most widely used units (for reviews, see Allan and Steffensmeier 1989; Bursik and Grasmick, 1993; Sampson and Wilson 1995).

Surprisingly, the above two trends have yet to be joined, so that a glaring gap exists in the criminological literature. In contrast to the accumulating growth of studies on the causes and correlates of female offending at the individual level of analysis, *aggregate-level* research on the link between structural characteristics and crime is essentially about male criminality. That research (which typically involves cities or SMSAs as the unit of analysis) either uses total crime rates that are overwhelmingly weighted by the much larger male rates or uses male rates only (see reviews in Messner and Golden, 1992; Sampson and Wilson, 1995; Shihadeh and Steffensmeier, 1994). To our knowledge, no published research has examined whether the structural and city-level covariates of female offending are similar/distinct to those of male offending.[1]

This omission of gender is only partly attributable to the smaller levels and lesser seriousness of female-perpetrated crime. It also reflects two proclivities in the writings on female crime that have been criticized by feminist criminologists and others (Belknap, 1996; Leonard, 1982; Morris and Gelsthorpe, 1991; Naffine, 1987; Steffensmeier and Allan, 1996). One proclivity is the practice of relying heavily on individual-level factors to explain female offending, with little or no discussion of social-structural considerations (e.g., Daly and Chesney-Lind, 1988; Leonard, 1982), whereas the writings on male crime focus heavily on the role of structural factors while downplaying the role of personal problems and individual pathology. The other proclivity is the overwhelming focus on the gender gap or between-sex differences, instead of investigating within-sex differences in female crime rates. As with males, considerable variation exists in female offending across ecological space—that is, across communities, cities, or even societies. Explaining this variation and focusing on female crime per se are as important as explaining the gender gap (Browne and Williams, 1993; Daly, 1994; Steffensmeier and Allan, 1996).

Ambiguity exists in traditional criminology (see review below) and

1. Note that Weisheit (1993) examined the structural correlates of states' female homicide rates for 1980 and 1981, but his analysis considered only bivariate associations, did not include important structural variables (e.g., poverty, density, joblessness), did not include a comparison to male rates, and was limited to states as the unit of analysis. However, as we discuss later, several analyses of structural correlates of female (and male) homicide *victimization* exist (e.g., Bailey and Peterson, 1995; Gartner et al., 1990; Smith and Brewer, 1992).

within feminist criminology about whether the structural correlates of female offending and male offending will differ (see reviews in Allen, 1989; Daly and Chesney-Lind, 1988; Heidensohn, 1996; Morris and Gelsthorpe, 1991). Some radical and cultural feminist perspectives would predict moderate to considerable differences in the causes and correlates of female crime rates (e.g., Belknap, 1996; Cain, 1989; Figueira-McDonough, 1992; Leonard, 1982; Polk, 1994), whereas socialist and other feminist perspectives (e.g., Carlen, 1988; Mann, 1996; Messerschmidt, 1986; Richie, 1995; Simon and Landis, 1991) emphasize their similarities. Moreover, for feminism more generally, the issue of whether gender differences exist in the structural correlates of offending rates is an institutionally specific manifestation of an ongoing debate—involving "maximalist" versus "minimalist" approaches—on the existence and explanation of gender differences (Epstein, 1988; Giele, 1988; Lehman, 1993). One camp, the "maximalists," argue that the sexes are fundamentally different cognitively, emotionally, and behaviorally as a result of the interaction of biological, psychological, and experiential realities of being male and female. These distinctive realities purportedly lead men and women to take different approaches to a wide variety of issues and problems, including whether and how they engage in criminal pursuits. The other camp, the "minimalists," contends that, rather than different personality traits associated with sex or gender, variations in male/female attitudes and actions reflect the influence of external constraints and opportunities that happen to be associated more with one sex than the other.[2]

Thus, a need exists to examine whether embedded structural factors, such as poverty and family disruption—considered robust predictors of male crime—also influence female offending levels. Although their involvement is less than male levels, a significant minority of females are involved in crime and a still smaller group commit very serious violent

2. The gender-equality hypothesis as it emerged during the early 1970s is also somewhat ambiquous on the issue but apparently predicts more differences than similarities in the structural determinants of female and male violence rates (Adler, 1975). This hypothesis holds that improved employment and economic conditions for women would tend to "masculinize" them and lead to higher levels of female criminal involvement. If so, aggregate studies of city-level crime rates should find that (at least) some structural predictors, such as joblessness and poverty, have differing effects for female violence rates than for male rates. That is, higher levels of employment and improved economic well-being will be positively associated with high female violence rates, whereas higher levels of joblessness (or low employment) will be negatively associated with male violence rates. Note that the gender-equality hypothesis has been criticized by some feminists (and others) who point to the peculiarity of considering an hypothesis that assumed improving women's economic conditions would increase levels of female crime when so much of the existing criminological literature stresses the role played by poverty and joblessness in the creation of crime (Chesney-Lind, 1997).

crimes (Steffensmeier and Allan, 1996). Our objective in this study is to link female offending rates to structural determinants used in prior communities and crime research for explaining either total crime rates or male rates. We go beyond previous research by: (1) gender disaggregating the Uniform Crime Report (UCR) index-crime rates (homicide, robbery, aggravated assault, burglary, larceny-theft) across U.S. cities; (2) focusing explicitly on the effects of structural disadvantage variables on the index-offending rates of females; and (3) comparing the effects of the structural variables on female rates with those for male rates.

MACROSOCIAL CHARACTERISTICS AND INTERCITY VARIATION IN CRIME

The search for links between aggregate characteristics and rates of crime has a long tradition in the social sciences, dating at least as far back as Durkheim, Marx, and the early Chicago ecologists (Bursik and Grasmick, 1993). Traditional criminological theories—social disorganization, economic strain, and cultural transmission—all recognize economic hardship, unemployment, cultural conflict, and the breakdown of institutional control in advanced societies as factors that promote crime (Miethe et al., 1991). The structural characteristics used to explain intercity variation in crime rates typically include measures of poverty, income inequality, racial composition, region, population size, and age structure (Blau and Blau, 1982). Other frequently considered variables are measures of family disruption,[3] residential mobility, population density, and joblessness (Chamlin and Cochran, 1997; Liska and Chamlin, 1984; Messner and Golden, 1992).

Two recent research advances on the relationship between macrosocial characteristics and crime are noteworthy for our purposes here. The first involves Land et al.'s (1990) effort to reconcile the melange of methodologies and findings in macrolevel research on crime by examining data across different units of analysis and over time from 1960 to 1980. Despite the wide assortment of variables typically employed in this area of research, their principal component analysis revealed that many of these variables share the same dimensional space and reflect variations in "resource deprivation" and "affluence." Moreover, the combination of

3. Family disruption is measured typically as the percent of female-headed households, which includes families always headed by a single mother that are intact in the sense of never having been broken. An alternative terminology is to refer to such households as "failure to form a family," but this implies that families always headed by a single mother do not constitute a family unit. For lack of a better term, we follow standard practice and use the terms family disruption and female-headed households interchangeably (see Wu, 1996).

structural characteristics comprising the deprivation/affluence component was found to be a robust and consistent predictor of variation in crime rates across geographical units.

A second headway is the small but growing body of race-specific analyses of crime rates (e.g., LaFree et al., 1992; Harer and Steffensmeier, 1992; Messner and Golden, 1992; Sampson, 1987), as compared with the traditional approach of using total or global rates. Because black levels of serious crime are disproportionately high, racially nondisaggregated models of urban violence are potentially misspecified. Starting in the late 1980s, several studies found overlap in the structural correlates (e.g., joblessness, family disruption) of black as well as white violence rates. The studies also revealed that black crime rates are related to some structural features (e.g., economic inequality) differently than white rates (Harer and Steffensmeier, 1992; Krivo and Peterson, 1996; LaFree et al., 1992; Messner and Golden, 1992; Shihadeh and Steffensmeier, 1994).

Clearly, the state of macrolevel research on crime has made significant strides in recent years, but a serious shortcoming remains—the inattention to or omission of gender. As with the emergence of racially disaggregated analyses, there is a need for gender-disaggregated analyses of the structural context and macrolevel forces shaping female offending rates. What are the implications of macrolevel inquiry for understanding female crime? Are the contextual underpinnings for high rates of urban crime in the United States similar/distinct across gender comparisons? Can the structural risk factors predictive of male offending be linked to female offending?

GENDER, STRUCTURAL CONTEXT, AND URBAN CRIME

Traditionally, most writers on the subject women in crime have traced female criminality to biological and/or psychological sources, with little or no discussion of such social-structural considerations as the state of the economy, occupational and educational opportunities . . . (Simon and Landis, 1991:4).

Ambiguity exists in the criminological literature about whether macrosocial variables or adverse structural characteristics will have different or weaker effects on female offending rates. The one position, which would predict greater gender differences than similarities in the structural determinants of offending, assumes that the causes of female criminality differ fundamentally from those of male criminality. Not only are female crime rates much lower than male rates, but variations in male rates are also more attributable to various forms of social and economic dislocation. In particular, males are more at risk for economic and status loss than

females. The arguments backing this position overlap, but we treat them as analytically distinct.

First, rooted in the writings of the classical European theorists, especially in the influential works of Durkheim and Freud, the tendency in criminology has been to trace female criminality to biopsychological stresses and male criminality to environmental stresses (see reviews in Cloward and Piven, 1979; Lehmann, 1995). According to Durkheim, women experience less social stress and are less likely to be touched by adverse economic or social conditions because (1) "being a more instinctive creature than man, woman has only to follow her instincts" and (2) "they [women] are much less involved in collective existence; thus, they feel its influence—good or evil—less strongly" (1951:272, 299). Women, relative to men, are asocial, biological beings consigned to the the private, domestic, familial sphere (Lehmann, 1995:912). They are more biologically regulated, have less need for social regulation, and are relatively immune to the effects of "social facts."[4] Thus, their rates of deviance (e.g., suicide, crime) will be much less influenced than male rates by space-time variability in pathological social forces or "currents."

For Freud, women's temperamental excesses and criminality were problems of biology and maladjustment, brought about by the peculiar functioning of their sexual organs and rooted in their physical nature, which limited their activities to family roles (Eyer and Freud, 1966). Other classic treatments share these views of Freud (and Durkheim), holding that the causative influence of biological factors and individual pathology is greater for explaining female criminality. Particularly noteworthy is the view that hormonal changes and generative phases (e.g., menstruation, pregnancy, menopause) "are frequently accompanied by psychological disturbances which may upset the need and satisfaction balance of the individual or weaken her internal inhibitions, and thus become causative factors in female crime" (Pollak, 1950:157). Thus, although social dislocations and adverse economic conditions may exacerbate the biopsychological stresses and maladjustment leading to female offending, their prevalence, at least initially, appears evenly spread across women regardless of class structure or social position.

Second, traditional anomie theory extends the Durkheimian view of women's greater immunity from negative social forces by suggesting more specifically that women as a group are not subject to the types of "status" pressures (economic, occupational) and frustrations men experience

4. Durkheim writes, "because he is a more complex social being, [man] can maintain his equilibrium only by finding more points of support outside himself, and it is because his moral balance depends on a larger number of conditions that it is more easily disturbed" (1951:216).

(Broidy and Agnew, 1997). Women's social aspirations are constrained by fewer opportunities for upward and downward mobility (thus freeing them from the vicissitudes of economic fluctuation and status loss), and their frustrations or "anomie" are better regulated by a less individualistic orientation and a network of buffering social relationships that they acquire throughout the life span that men do not (Almgren et al., 1998; Gilligan, 1982). Thus, besides being lower than male rates, female crime rates will be less influenced by various forms of social and economic dislocation and will display greater stability across jurisdictions and in the same jurisdictions over time (e.g., see Verkko, 1967).

Third, some subcultural theorists posit that the delinquent and criminal subcultures tending to originate in lower class neighborhoods and structurally disadvantaged communities are mainly a collective solution to male role problems (Leonard, 1982). The delinquent subculture, in view of its *masculine* character, "is not appropriate to the problems of adjustment and the social expectations of the female role" (Cohen, 1955:147). Although adverse social conditions may exacerbate the status problems experienced by females (e.g., relational issues, such as opposite-sex acceptance, tense family situations, personal appearance), they are more insulated from these negative social forces because delinquent or gang subcultures at best, are "irrelevant to the vindication of the girl's status as a girl and at worst, positively threatens her in that status in consequence of its strongly masculine symbolic function" (Cohen, 1955:143–144). A similar perspective can be traced to Thrasher's classic gang study—women remain relatively untouched by the changing forces of an industrial, urban world because the "zones of transition" harboring most gangs in Chicago are only disorganized for males (Thrasher, 1963 (1927); see review in Cloward and Piven, 1979).[5]

In sum, adverse macrosocial forces should increase male offending rates more than female offending rates because (1) the biopsychological stresses contributing to female offending are more evenly distributed across women from all walks of life than are the environmental stresses contributing to male offending, (2) given the differing goals of men and women (e.g., relational concerns versus occupational achievement), the goals-means discrepancy is greater in particular for lower or working-class males residing in socially disorganized localities, and (3) the delinquent/criminal subcultural response to status frustration that abounds in structurally disadvantaged urban communities is largely a "masculine" adaptation. Thus,

5. Thrasher writes: "The reasons girls do not form gangs is that . . . girls, even in urban disorganized areas, are much more closely supervised and guarded than boys and are usually incorporated in the family group or some other social structure" (1963:161).

although female offending rates may be exacerbated by economic hardships and social dislocations, the effects of these conditions in explaining within-sex variation in offending rates across ecological units will be less among females than among males.

There is an alternative position, however, that would predict considerable similarities in the structural determinants of female and male crime rates. This position assumes that the same social and cultural influences affecting male criminality also influence female criminality—that is, the "milieu" effects of deleterious social conditions produce frustration, undermine legitimacy, and weaken social bonds in ways that are criminogenic for female as well as male residents—and that female crime often takes place within the context of male offending or aggression. It is worth noting here that, since the early part of the twentieth century when criminology became a subfield of sociology rather than of the medical-legal profession, the rule among U.S. authors of criminology textbooks has been to provide a sociocultural interpretation of both between- and within-sex differences in crime and to avoid or reject biological explanations, and the like. Indeed, by far the most popular criminology text, that of Sutherland, was perhaps the most antagonistic toward biological and psychological (e.g., individual pathology, "deficit" personality) explanations of crime and most forceful in accepting sociogenic views (see review in Steffensmeier and Clark, 1980). Also, some criminologists have argued that structural dislocations (e.g., war, depressions) might impact more on female than on male deviance rates (including crime) because the social climate and disorganization accompanying these dislocations so severely undermine family stability and kin networks that provide informal social controls and emotional and financial security for women (Mannheim, 1941; Steffensmeier et al., 1980).

RESEARCH HYPOTHESES

The ambiguity and debate on the issue notwithstanding, our guiding hypothesis is that the structural sources of female and male offending rates will be more noteworthy for their similarities than for their differences. This expectation is grounded in a growing body of research on the social and personal correlates of female offenders, tests of criminological theories at the individual-level using female samples, observations of parallelism in the patterning of male and female crime rates at the aggregate-level, and inquiries into the structural covariates of male and female victimization rates.

There exists a substantial amount of microlevel and largely descriptive research on the correlates of female offending, which often includes comparisons to male samples. Some studies do show that female offenders are more likely to have had records of psychological problems, exposure to

childhood abuse, and so forth, but the studies also typically show that there is much overlap in the factors predictive of both female and male criminality (see reviews in Daly, 1994; Denno, 1994; Giordano et al., 1986; Rosenbaum and Lasley, 1990; Steffensmeier and Allan, 1996). Many familial and environmental factors are as strong predictors of crime among females as they are among males. Like male offenders, female offenders (especially the more serious ones) are typically of low socioeconomic status, poorly educated, underemployed or unemployed, and disproportionately from minority groups.

Additionally, tests of criminological theories involving female samples show that sociological theories of crime are nearly as adept at explaining variation in individual female offending as they are at explaining individual male offending (Cernkovich and Giordano, 1979). Factors such as inadequate parental controls and delinquent peers are robust predictors of female as well as male criminality (for a review, see Steffensmeier and Allan, 1996). However, these tests involved relatively minor forms of female and male criminality (versus several serious forms examined in the present study).

Although structural or macrolevel analyses of female offending are relatively scarce, studies regressing female rates on male rates are particularly relevant because they provide indirect evidence of similarity in the etiology of female and male crime (see review in Steffensmeier and Allan, 1996). These studies consistently show that variability in male rates is strongly predictive of variability in female rates across space and time. Groups or societies that have high male rates of crime also have high female rates, whereas groups or societies that have low male rates also have low female rates (Steffensmeier and Allan, 1988; Steffensmeier et al., 1980). Over time, when the male rate rises, declines, or holds steady across a specific historic period, the female rate behaves in a similar fashion (Boritch and Hagan, 1990). This correlation suggests that the rates of both sexes are influenced by similar social and legal forces, independent of any condition unique to women.

Also, research examining the structural risk factors for gender-disaggregated rates of homicide victimization (as opposed to homicide offending) shows that structural variables, such as poverty and economic inequality, increase the risks of being a victim of homicide among females as well as males. Smith and Brewer (1992) found that both male and female homicide victimization were related to a set of sociodemographic variables (e.g., percent poverty, percent black, population density) across a 1980 sample of U.S. central cities, but that these factors were better predictors of male than of female homicide victimization (see also Bailey and Peterson, 1995). In a cross-national study, Gartner et al. (1990) found that structural variables such as poverty and income inequality tended to explain

both male and female homicide-victimization rates across an array of 18 western countries. In view of the general finding that considerable similarity exists in social and ecological characteristics of homicide victims and offenders (see Hindelang, 1978) and that much of the violence committed by women is embedded within the context of male violence (Daly, 1994), these studies imply that the structural determinants of gender-disaggregated rates of violent offending will also overlap.[6]

Thus, accumulating evidence suggests that the effects of macrosocial forces and structural variables on female offending rates are considerable and parallel in many ways the effects observed for male rates. Our analysis considers the gender-specific influence of a collection of structural sources used in prior aggregate research, but the focus is on structural disadvantage.

Specifically, we hypothesize that:

> H_1: Structural disadvantage will increase the criminal offending rates of both sexes.

As the above review suggests, a strong case can be made that for females as well as for males, structural conditions, such as poor employment prospects and poverty, not only produce frustration and increase the motivation to commit crime for economic need, but also have a demoralizing impact that creates an anomic climate with criminogenic consequences. The "milieu" effects of these deleterious conditions may help to create and sustain deviant subcultures (e.g., violence, drugs) while eroding norms, weakening social controls, and lessening the capacity of communities both to guide the behaviors of their residents and to mobilize themselves against crime. Also, because female criminality is often embedded within the context of male behavior—ie., co-offending with males (e.g., females as accomplices to male-initiated property crime) or responding to male-instigated crime (e.g., female violent offending in response to an abusive male)—considerable similarity in social and ecological characteristics of female and male offenders is expected (Bailey and Peterson, 1995; Daly, 1994; Steffensmeier, 1993; Steffensmeier and Terry, 1986). Thus, the more an area is dominated by deleterious social conditions, the greater the proportion of the population—not only male residents but also female residents—at risk for crime.

We also hypothesize that:

> H_2: The effects of structural disadvantage on the offending rates of

6. Note also, that in addition to using offending rather than victimization rates, our analysis includes five index crimes as well as homicide, develops hypotheses and tests them with gender-specific measures, and uses a more recent time period (1990 versus 1980).

both sexes will be greater for the violent or serious crimes (e.g., homicide, robbery) than for the property or minor crimes (e.g., burglary, larceny-theft).

Research generally shows that socioeconomic disadvantage and anomie/social disorganization are more predictive of serious crimes like homicide and robbery than less serious forms of crime like burglary and larceny (Krivo and Peterson, 1996). For example, homicide and robbery offenders are more likely to come from "lower class" or "underclass" backgrounds than is the case with burglary and larceny (Shover, 1996). Crimes like burglary and larceny-theft are broad offense categories involving a wide range of behaviors that vary in seriousness and also appear to be fairly diffuse throughout the population.

Finally, we expect a gender × offense type interaction:

H_{3a}: The structural disadvantage variables will be weaker predictors of female violence rates (i.e., homicide, robbery, and aggravated assault) than of male violence rates.

H_{3b}: Gender differences in the robustness of structural disadvantage to predict offending rates will be trivial for minor crimes like burglary and larceny.

Several reasons exist for expecting some gender differences in the ability of structural characteristics to explain violent offending rates. First, some studies suggest that the pathways leading to violent offending differ somewhat for males and females, for example, that female violent offenders are more likely to have had records of psychological problems and exposure to childhood abuse (Chesney-Lind, 1997; Daly, 1994; Widom, 1989). The research also suggests that, although there is much overlap, socioeconomic factors explain more of the variance in male than in female violence (Denno, 1994; Kruttschnitt, 1994; Morris, 1964; Steffensmeier and Allan, 1996). Second, on theoretical grounds, it generally is argued that, as female crime becomes more serious and more at odds with femininity norms, it is more idiosyncratic in causation (Steffensmeier and Allan, 1996). Because females in particular face greater barriers to aggression, they must experience higher levels of provocation and anger before turning to violence. Third, although much overlap exists in both the sources and the levels of strain experienced by males and females, some differences also exist (e.g, greater occupational stress for males, greater interpersonal strain for females) and their coping strategies differ somewhat (Beutel and Marini, 1995). Because of differences in social support, opportunities, and disposition to commit crime, male strains are more conducive to serious property or violent crime, whereas female strains are more conducive to less confrontational crimes, such as minor property crimes or to other "deviant" adaptations, such as drug use and depression (Broidy and

Agnew, 1997; Cloward and Piven, 1979; Steffensmeier and Allan, 1996). Thus, keeping in mind their robust effects on the violence levels of both sexes, the strains produced by embedded structural factors, such as poverty and joblessness, will impact more on male than on female violent offending rates.

In view of the scarcity of research to date, it is unresolved whether structural disadvantage has similar/different effects on female offending rates as it does on male rates. Our concern here is whether city-level variation in rates of female offending is linked to basic features of structural context and whether structural disadvantage predicts variation in those rates as well as it predicts variation in male offending rates. We focus on UCR offending rates for five index crimes (homicide, robbery, aggravated assault, burglary, and larceny-theft), but we also use Supplemental Homicide Report (SHR) data (which provide information on the victim-offender relationship) to examine whether the effects of structural disadvantage on gender-specific homicide offending rates are contextualized by type of homicide.

DATA AND MEASURES

The unit of analysis for our gender-disaggregated analysis of the structural sources of crime is the 178 cities in 1990 that contain 100,000 or more residents. The data are taken from 1990 Bureau of Census publications and the UCR Program. City-level population counts and socioeconomic data were obtained either from the Summary Tape Files of the Bureau of the Census or from other published volumes of the 1990 census. To the census extracts, we added FBI city arrest data (U.S. Department of Justice). Following our main analysis of the arrest data, we also examine data from the SHRs, which include information on the victim-offender relationship and allows us to assess the effects of structural disadvantage on gender-specific homicide offending across types of homicide.

The dependent variable is sex-specific arrest rates for the FBI's Index Crimes (homicide, robbery, aggravated assault, burglary, and larceny). These "offending" rates were averaged across 1987–1993 to ensure adequate frequency and dampen any year-to-year fluctuations.[7] The rates also were logarithmically transformed (natural log) to induce homoscedasticity and to counteract the floor effect of these positively skewed distributions.

7. If the proportion of the population known to be at low risk for serious offending (e.g., the elderly and young children) varies with city characteristics (e.g., racial composition), estimates of the effects of these characteristics on offending may be biased. Therefore, each offending rate was calculated after elimination of those under age 10 or 65 and older from the denominator of the sex-specific rates. (See Steffensmeier and Allan, 1988, for a discussion of the calculation of demographically adjusted arrest rates.)

Although official arrest data have been subject to numerous criticisms, it is generally believed that the UCR index arrest statistics are reasonable proxies for involvement in criminal offending (Krivo and Peterson, 1996; Steffensmeier, 1980). In particular, we can be reasonably certain that homicide arrest rates, and to a lesser extent, robbery rates, are unbiased and accurately reflect levels of male and female offending (Hindelang, 1978). We also applied a procedure used by Sampson (1987) to correct sex-specific rates for possible "jurisdictional bias" that could affect comparison of these rates across ecological units. This procedure involved multiplying the arrest rates by the offense/arrest ratio, thereby inflating the arrest rate to create what he calls an estimate of "offending." The results derived from this method did not diverge from those reported here, i.e., when the actual sex-specific rates are used as the dependent variable. (Sampson also found no differences with regard to race-specific rates.)[8] Finally, as discussed below, we introduce percent law enforcement officers per capita as an independent variable in our models to control for differences across SMSAs that could bias comparison of sex-specific arrest rates.

MEASUREMENT OF CITY-LEVEL STRUCTURAL DETERMINANTS

We selected independent and control variables on theoretical grounds and from previous empirical research. The key variables are described in Table 1 and include percent black of the female city population and percent black of the male city population, female poverty and male poverty, female joblessness and male joblessness, and female-headed households. For some variables, gender disaggregation was not applicable or was not theoretically justified. Income inequality, based on the overall distribution of family income (i.e., Gini coefficient), is used as a measure of income inequality. The log of the city population controls for the variation in the size of urban areas. A West dummy variable controls for regional variations in levels of poverty, family disruption, and so on. (Note: the inclusion of south as the dummy control did not affect the findings reported here.) Also, because prior research (Sampson, 1983) suggests that a high structural density of housing units can lower guardianship behavior and thereby increase the opportunity to perform criminal acts, we control for the percentage of housing units in a city located in attached units of five or more. We also include controls for residential instability (defined as the percent

8. The adjustment procedure, however, is not able to correct the data for possible city-specific differences in the effects of gender on arrest probabilities (as Sampson was unable to correct for city-specific differences in the relationship between race and the likelihood of arrest).

of persons living in the same household for less than one year) and ages 15–29 (the high crime-prone years). Lastly, we include police per capita as a control for variations across cities in law enforcement activity.

STATISTICAL ANALYSES

Our basic model examines sex-specific UCR-index offending rates as a function of structural disadvantage. We use "seemingly unrelated regression" (SUR) procedures to estimate separate models of each of the Index offenses for females and males. Seemingly unrelated regression is more appropriate than ordinary least-squares (OLS) procedures for testing the equality of the regression coefficients because it takes into account that the male and female models have not been estimated on the basis of two independent samples of cities (Greene, 1997; Zellner, 1962). Also, because the offending rates have skewed distributions with some cities having particularly high rates, the rates are transformed logarithmically (natural log).

Multicollinearity among key socioeconomic and racial composition measures is a problem in our analyses. Although poverty, income inequality, family disruption, joblessness, and percent black may be conceptually and operationally distinct, they are not distinct empirically.[9] That these city-level indicators of racial heterogeneity, economic composition, and family living arrangements are substantially collinear with one another reflects what Wilson (1987) refers to as "concentration effects," namely, that the processes of urbanization historically and the social transformation of the urban landscape in recent years (e.g., through segregation, selective out migration by the middle class) have resulted in the clustering of these economic and social indicators in cities as a whole and within the inner city in particular. Cities having low median family incomes, large absolute poverty levels, and great relative economic inequality also tend to have large concentrations of blacks and children living in broken families (Land et al., 1990).

We address this multicollinearity problem in two ways. First, we examine the effects of each measure separately (net of controls). Second, based on standard principal components methods (see Land et al., 1990), we extracted a single component based on all five disadvantage measures.

9. To determine multicollinearity, we first examined the correlations among predictor variables (see Table 1) and found evidence of considerable multicollinearity among key socioeconomic variables—poverty, joblessness, percent black, family structure, and Gini. The correlations among these variables typically exceed .60, suggesting collinearity problems. Second, we examined the variance inflation factors (VIF) scores produced when all or groups of predictor variables are included in models. Generally, the VIF scores were at or near 4, again indicating that multicollinearity may be a problem (Fisher and Mason, 1981). Based on these decision rules, multicollinearity appears to be fairly considerable among key predictors.

Table 1. Correlations, Means, and Standard Deviations of Dependent and Independent Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1. Fem. Homicide*	1.00															
2. Male Homicide*	0.86	1.00														
3. Fem. Robbery*	0.56	0.68	1.00													
4. Male Robbery*	0.63	0.79	0.90	1.00												
5. Fem. Agg. Ass.*	0.47	0.60	0.62	0.68	1.00											
6. Male Agg. Ass.*	0.40	0.55	0.61	0.64	0.93	1.00										
7. Fem. Burglary*	0.14	0.30	0.41	0.36	0.38	0.51	1.00									
8. Male Burglary*	0.45	0.61	0.64	0.70	0.58	0.63	0.77	1.00								
9. Fem. Larceny*	-0.00	-0.00	0.09	-0.01	0.01	0.00	0.23	0.19	1.00							
10. Male Larceny*	0.21	0.24	0.26	0.26	0.24	0.18	0.24	0.40	0.85	1.00						
11. Fem. Depriv.^	0.71	0.75	0.50	0.66	0.49	0.38	-0.06	0.41	-0.15	0.16	1.00					
12. Male Depriv.^	0.70	0.74	0.52	0.66	0.50	0.39	-0.05	0.41	-0.14	0.17	0.99	1.00				
13. Fem. Black Pop.	0.68	0.68	0.33	0.54	0.41	0.26	-0.16	0.25	-0.25	0.04	0.83	0.80	1.00			
14. Male Black Pop.	0.69	0.68	0.34	0.55	0.41	0.26	-0.15	0.25	-0.25	0.05	0.83	0.80	0.99	1.00		
15. Fem.-Headed	0.62	0.66	0.48	0.63	0.53	0.38	-0.10	0.35	-0.20	0.13	0.90	0.92	0.81	0.81	1.00	
16. Fem. Poverty	0.62	0.68	0.47	0.58	0.41	0.35	-0.03	0.41	-0.06	0.20	0.93	0.93	0.63	0.62	0.77	1.00
17. Male Poverty	0.60	0.66	0.49	0.57	0.40	0.36	0.02	0.42	-0.02	0.20	0.88	0.89	0.54	0.53	0.70	0.98
18. Fem. Unemploy.	0.57	0.62	0.44	0.53	0.34	0.35	0.06	0.37	-0.14	0.04	0.78	0.75	0.55	0.55	0.56	0.79
19. Male Unemploy.	0.54	0.61	0.51	0.56	0.40	0.39	0.02	0.36	-0.16	0.05	0.79	0.82	0.51	0.51	0.71	0.80
20. Gini Coeff.	0.53	0.57	0.42	0.52	0.39	0.29	-0.03	0.36	0.02	0.26	0.82	0.83	0.57	0.56	0.69	0.79
21. Resid. Instab.	-0.08	-0.11	-0.11	-0.22	-0.04	-0.04	0.26	0.06	0.34	0.23	-0.27	-0.27	-0.32	-0.30	-0.30	-0.17
22. Fem. Young Pop.	0.11	0.02	-0.09	-0.02	0.02	-0.15	-0.36	-0.16	-0.13	-0.03	0.29	0.31	0.31	0.30	0.42	0.24
23. Male Young Pop.	0.01	-0.06	-0.12	-0.08	-0.07	-0.20	-0.21	-0.17	-0.09	-0.08	0.10	0.10	0.12	0.14	0.17	0.09
24. West	-0.25	-0.30	-0.11	-0.32	-0.24	-0.07	0.35	-0.02	0.25	0.02	-0.51	-0.48	-0.60	-0.59	-0.59	-0.37
25. Ln. Population	0.28	0.37	0.33	0.32	0.17	0.14	-0.02	0.07	-0.05	0.05	0.26	0.28	0.19	0.20	0.20	0.25
26. Struc. Density	0.01	0.13	0.24	0.29	0.20	0.15	0.07	0.08	-0.03	0.06	0.03	0.05	0.03	0.04	0.09	-0.05
27. Police per cap.	0.47	0.51	0.45	0.56	0.36	0.26	-0.05	0.27	-0.22	0.07	0.56	0.60	0.55	0.54	0.68	0.44
Mean	4.14	37.15	26.45	298.15	122.27	694.28	67.12	635.23	838.47	1785.57	N.A.	N.A.	0.11	0.09	0.27	0.17
(S.D.)	(5.41)	(40.00)	(18.98)	(212.42)	(107.19)	(495.90)	(74.69)	(314.28)	(388.63)	(771.72)			(.10)	(.08)	(.10)	(.07)

* The crime rates are averaged over seven years.
^ The deprivation component is created through principal components analysis and comprises the sex-specific poverty rate, unemployment rate, black population, the percent female-headed households, and Gini coefficient. The index and its components will be highly correlated.

Table 1. Continued

	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.
1. Fem. Homicide											
2. Male Homicide											
3. Fem. Robbery											
4. Male Robbery											
5. Fem. Agg. Ass.											
6. Male Agg. Ass.											
7. Fem. Burglary											
8. Male Burglary											
9. Fem. Larceny											
10. Male Larceny											
11. Fem. Depriv.											
12. Male Depriv.											
13. Fem. Black Pop.											
14. Male Black Pop.											
15. Fem.-Headed											
16. Fem. Poverty											
17. Male Poverty	1.00										
18. Fem. Unemploy.	0.76	1.00									
19. Male Unemploy.	0.78	0.86	1.00								
20. Gini Coeff.	0.78	0.45	0.51	1.00							
21. Resid. Instability	–0.11	–0.26	–0.33	–0.10	1.00						
22. Fem. Young Pop.	0.22	–0.10	0.02	0.33	0.10	1.00					
23. Male Young Pop.	0.08	–0.14	–0.12	0.16	0.25	0.80	1.00				
24. West	–0.25	–0.22	–0.22	–0.38	0.40	–0.44	–0.26	1.00			
25. Ln. Population	0.27	0.16	0.19	0.31	–0.02	–0.06	–0.06	–0.07	1.00		
26. Struc. Density	–0.01	–0.13	–0.10	0.19	0.23	–0.04	0.04	–0.06	0.30	1.00	
27. Police per cap.	0.38	0.33	0.49	0.45	–0.42	0.19	0.03	–0.47	0.24	0.18	1.00
Mean	0.14	0.07	0.07	0.42	0.26	0.16	0.16	0.51	12.31	0.27	0.27
(S.D.)	(.06)	(.03)	(.03)	(.04)	(.05)	(.02)	(.02)	(.50)	(.73)	(.10)	(.11)

In other words, one component represented the combined influence of poverty, unemployment, income inequality, female-headed households, and percent black.[10] This component henceforth is referred to as the disadvantage index to distinguish it from the discrete disadvantage measures. Furthermore, because we use sex-specific measures when applicable, we have one component or "female disadvantage index" representing female poverty, etc., as well as a "male disadvantage index" representing male poverty, etc. As shown below, the general pattern of results is similar across the discrete disadvantage measures and the disadvantage index.

RESULTS

Means and standard deviations for all variables are presented in Table 1. It is clear that males have far higher levels of offending than females. Male rates are roughly 5 to 10 times greater than female rates. These gender differences are consistent with other sources of data (e.g., victimization, self-report), which show that males exhibit much higher rates of offending, especially for the most serious offenses like homicide and robbery (Steffensmeier and Allan, 1996).

Despite these large gender differences, considerable variation still exists among female urban residents in levels of offending. Reporting just mean levels of offending tends to obscure the variation that exists across urban communities. Indeed, comparisons across the standard deviations reveals that the variability in female rates approaches that of male rates. Clearly, communities exist in which female violence is rare or, conversely, unusually high.

Two approaches were used to deal with those cities with values of zero for homicide rates. (Low frequency or zero values are less problematic for the other offenses.) For the SUR models, we assigned a value of 0.1 to the rates before they were transformed logarithmically in those cities not reporting any homicides over the seven-year period. (We also performed the analysis using an alternative procedure of adding a constant to all cases before the log transformations and found that the results are similar to those reported below.) We next replicated the results for female homicide rates using a Poisson distribution with a log link. This strategy is appropriate when a fairly large number of zero values is across aggregate units (Bailey et al., 1994; Liao, 1994).[11] The results from the Poisson regressions

10. The variables in this component possessed loading scores of .4 or greater. The component loadings are not scaled by their corresponding eigenvalues because the component scores are used in metric regression with unstandardized variables.

11. We are grateful to Wayne Osgood for this recommendation. See, also, Osgood and Chambers (1997).

(which are available from the authors) closely parallel those derived from the SUR models reported below.

Considerable variation also exists across the cities in economic and structural characteristics; furthermore, this variation occurs both among the global as well as the sex-specific measures. For example, female-headed households range from a low of 8% to a high of 57%; percent black (whether female or male) ranges from a low of less 1% to a high of 81%; female unemployment ranges from 3% to 18%, whereas male unemployment ranges from 3% to 21%; and female poverty ranges from 3% to 38%, whereas male poverty ranges from 2% to 35%.

Lastly, Table 1 presents the zero-order correlation matrix of variables. The explanatory variables generally have the expected positive correlations with the sex-specific offending rates and, as expected, are higher for homicide and robbery. Overall, the correlations indicate that levels of offending by both males and females are distinctly higher in cities with higher levels of social and economic disadvantage.[12] The multivariate analyses will assess whether these bivariate patterns hold when other variables are considered.

MULTIVARIATE RESULTS

Table 2 presents the results of SUR models examining the effects of the discrete disadvantage measures on the index crimes disaggregated by gender, whereas Table 3 presents the results for the structural disadvantage index. All models include the control variables (e.g., region, population size, structural density, residential instability, police per capita); for parsimony and to reduce clutter, the effects of the control variables on violence rates are displayed only in Table 3. To specifically compare coefficients in different models, we present F tests for the equality of coefficients between equations for male and female violence rates, estimated from the SUR procedure, across the different offending subgroups (e.g., homicide, burglary, aggravated assault, robbery, larceny). Significant differences between the male and female coefficients are indicated by asterisks in Tables 2 and 3.

We turn first to the control variables in our models (see Table 3). We find that structural variables such as residential instability and population composition have small-to-moderate effects on offending rates of both

12. Note, also, the weak associations between a large youth population (percent ages 15–29) and the index offending rates. This counterintuitive finding—that the age variable (e.g., percent ages 15–29) is only weakly associated with crime rates or sometimes is in the opposite direction than expected—is reported often in aggregate crime studies. This anomaly apparently reflects the lack of intercity variation in age composition and is not an impediment for our analysis here, because we only use age composition as a control variable.

Table 2. Seemingly Unrelated Regression of Offending Rates on Discrete Measures of Disadvantage Net of Control Variables (standardized coefficients in parentheses)

	Homicide		Robbery		Agg. Assault		Burglary		Larceny	
Panel A: MALES										
MODEL 1										
Intercept	−0.93		3.06**		5.48**		6.39**		6.75**	
Male Black Pop.	7.11**	(.63)	3.49**	(.37)	2.05*	(.23)	1.86**	(.30)	0.40	(.46)
Adj. R^2	.58		.46		.15		.19		.10	
F-value^	15.79**		19.45**		5.72		8.68*		14.35**	
MODEL 2										
Intercept	−1.75		2.70**		5.29**		6.11**		6.64**	
Female-Headed Households	5.80**	(.63)	4.14**	(.54)	3.69**	(.50)	2.47**	(.48)	0.97	(.21)
Adj. R^2	.53		.51		.23		.25		.12	
F-value^	7.64*		0.03		21.72**		2.76		14.40**	
MODEL 3										
Intercept	−2.15		2.68**		5.18**		6.12**		6.75**	
Male Unemployment Rate	13.85**	(.41)	5.98**	(.21)	3.73	(.14)	4.17**	(.22)	0.33	(.02)
Adj. R^2	.51		.50		.21		.22		.10	
F-value^	10.44**		1.63		0.20		17.36**		7.73*	
MODEL 4										
Intercept	−0.67		3.46**		5.78**		6.57**		6.88**	
Male Poverty	7.64**	(.49)	5.02**	(.39)	4.13**	(.33)	3.02**	(.34)	1.14	(.14)
Adj. R^2	.55		.53		.20		.28		.13	
F-value^	26.10**		2.31		0.21		23.53**		9.54*	
MODEL 5										
Intercept	−3.56**		1.54		4.37**		5.15**		5.97**	
Gini	8.21**	(.37)	5.50**	(.30)	3.97*	(.22)	4.61**	(.37)	3.41**	(.30)
Adj. R^2	.45		.44		.15		.25		.17	
F-value^	30.40**		0.02		3.56		4.67		1.87	
Panel B: FEMALES										
MODEL 1										
Intercept	−1.85*		−0.95		2.77*		4.76**		6.28**	
Female Black Pop.	4.97**	(.72)	1.94*	(.22)	2.80**	(.33)	0.54	(.06)	−0.56	(−.10)
Adj. R^2	.57		.30		.23		.24		.13	
F-value^	15.79**		19.45**		5.72		8.68*		14.35**	
MODEL 2										
Intercept	−2.46**		−1.11		2.67**		4.46**		6.18**	
Female-Headed Households	4.36**	(.63)	4.22**	(.48)	5.28**	(.62)	1.56	(.18)	−0.10	(.02)
Adj. R^2	.47		.39		.36		.27		.13	
F-value^	7.64*		0.03		21.72**		2.76		14.40**	
MODEL 3										
Intercept	−3.14**		−1.19		2.20		4.85**		6.53**	
Female Unemployment Rate	8.98**	(.34)	4.29	(.13)	3.25	(.10)	−1.66	(−.05)	−1.86	(−.09)
Adj. R^2	.45		.36		.22		.24		.13	
F-value^	10.44**		1.63		0.20		17.36**		7.73*	
MODEL 4										
Intercept	−2.09*		−0.62		2.75**		4.49**		6.35**	
Female Poverty	4.54**	(.46)	4.31**	(.34)	3.96**	(.33)	0.35	(.70)	0.18	(.02)
Adj. R^2	.45		.39		.24		.25		.13	
F-value^	26.10**		2.31		0.21		23.53**		9.54*	
MODEL 5										
Intercept	−3.89**		−2.30		1.30		3.96**		5.75**	
Gini	6.13**	(.37)	5.61**	(.26)	5.18**	(.26)	2.43	(.11)	2.67*	(.20)
Adj. R^2	.39		.33		.22		.26		.16	
F-value^	30.40**		0.02		3.56		4.67		1.87	

* F-value^ is used to calculate significant differences between male and female coefficients. Although identical, the F-value is reported for both male and female models.
* $p < .01$; ** $p < .001$.

Table 3. Seemingly Unrelated Regression of Structural Disadvantage Index and Control Variables on Gender-Disaggregated Rates of FBI Index Crimes [standardized coefficients in parentheses and ^*F*-values comparing coefficients across models (male versus female) in brackets]

Panel A: MALES

Variables	Homicide		Robbery		Agg. Assault		Burglary		Larceny	
Intercept	0.69		4.13**		6.29**		7.01**		7.03**	
	[6.37*]		[54.93**]		[36.92**]		[12.67**]		[4.33]	
Male Disadvantage	0.31**	(.67)	0.18**	(.47)	0.14**	(.37)	0.12**	(.45)	0.04	(.19)
Index	[14.35**]		[0.92]		[5.33]		[12.34**]		[12.46**]	
Residential Instability	2.79*	(.16)	−0.80	(−.06)	0.72	(.05)	2.56**	(.27)	3.39**	(.40)
	[0.84]		[0.38]		[1.87]		[4.92]		[0.09]	
Male Young Pop.	−4.45*	(−.12)	−1.26	(−.04)	−2.54	(−.09)	−4.52**	(−.22)	−2.51*	(−.14)
	[9.68*]		[0.98]		[7.86*]		[4.31]		[0.18]	
West	−0.00	(−.00)	0.05	(.03)	0.17	(.12)	0.12	(.12)	−0.03	(−.03)
	[4.23]		[20.73**]		[5.51*]		[14.17**]		[3.74]	
Ln. of Pop.	0.18*	(.15)	0.07	(.07)	−0.03	(−.03)	−0.08	(−.11)	−0.01	(−.02)
	[3.40]		[4.23]		[0.02]		[0.41]		[0.00]	
Structural Density	−0.09	(−.01)	1.66**	(.23)	0.85	(.12)	0.02	(.00)	−0.25	(−.06)
	[2.72]		[0.92]		[1.71]		[0.00]		[2.11]	
Police per capita	1.10	(.15)	1.35*	(.22)	0.69	(.11)	0.85	(.21)	0.47	(.19)
	[0.04]		[4.14]		[1.96]		[2.24]		[6.86*]	
Adj. R^2	.61		.55		.24		.29		.13	
System Weighted R^2	.49		.43		.26		.42		.29	

Panel B: FEMALES

	Homicide		Robbery		Agg. Assault		Burglary		Larceny	
Intercept	−0.93		−0.05		3.58**		4.64**		6.29**	
	[6.37*]		[54.93**]		[36.92**]		[12.67**]		[4.33]	
Female Disadvantage	0.23**	(.65)	0.16**	(.37)	0.17**	(.40)	0.04	(.09)	0.01	(.01)
Index	[14.35**]		[0.92]		[5.33]		[12.34*]		[12.46**]	
Residential Instability	2.06	(.16)	−0.37	(−.02)	1.46	(.09)	4.37**	(.28)	3.52**	(.35)
	[0.84]		[0.38]		[1.87]		[4.92]		[0.09]	
Female Young Pop.	0.50	(.02)	0.16	(.00)	0.70	(.02)	−7.87**	(−.22)	−2.13	(−.09)
	[9.68*]		[0.98]		[7.86*]		[4.31]		[0.18]	
West	0.17	(.13)	0.40*	(.23)	0.03	(.02)	0.46*	(.28)	0.07	(.06)
	[4.23]		[20.73**]		[5.51*]		[14.17**]		[3.74]	
Ln. of Pop.	0.09	(.10)	0.15	(.13)	−0.02	(−.02)	−0.11	(−.09)	−0.01	(−.02)
	[3.40]		[4.23]		[0.02]		[0.41]		[0.00]	
Structural Density	−0.68	(−.10)	1.36	(.16)	1.17	(.14)	0.00	(.00)	−0.53	(−.10)
	[2.72]		[0.92]		[1.71]		[0.00]		[2.11]	
Police per capita	1.18*	(.21)	1.98**	(.28)	1.03	(.15)	1.41	(.21)	−0.04	(−.01)
	[0.04]		[4.14]		[1.96]		[2.24]		[6.86*]	
Adj. R^2	.55		.39		.29		.25		.13	
System Weighted R^2	.49		.43		.26		.42		.29	

^*F*-value is used to calculate significant differences between male and female coefficients. Although identical, the *F*-value is reported for both male and female coefficients.

^ Disadvantage Index comprises the sex-specific unemployment rate, sex-specific poverty rate, percent of female-headed households, sex-specific percent of black population, and the Gini coefficient.

* $p < .01$; ** $p < .001$.

sexes, whereas region and population size have essentially trivial effects. Cities with greater structural density and more police per capita tend to have higher offending rates (among both males and females). These patterns (i.e., significant effects) exist across virtually all index crimes and are generally consistent with aggregate research that uses total rates or male rates only (see Harer and Steffensmeier, 1992).

The more important finding for our purposes is that the effects of these structural variables, both in strength and direction, are similar among males and females. The only significant gender differences to emerge involve West, which is a somewhat stronger predictor of female robbery, aggravated assault, and burglary rates (F = 20.73, 5.51, 14.17), and Young Population, which has a stronger effect on male rates of homicide (F = 9.68). Other gender differences picked up by the F test are less meaningful as they involve nonsignificant coefficients (e.g., police per capita for larceny).

Turning next to the discrete disadvantage measures (panels A and B in Table 2), we address the central issue regarding the effects of structural disadvantage on gender-disaggregated offending rates. A key finding is that index offending rates of both females and males are all higher in cities with high levels of structural disadvantage. The coefficients are highly significant across nearly all of the comparisons for each of the disadvantage indicators (family disruption, poverty, racial composition, joblessness, and income inequality). Consistent with our theoretical prediction, also, the effects of these variables are greater for serious crimes like homicide and robbery than for less serious offenses like burglary and larceny-theft. Indeed, for larceny-theft the effects are in the predicted direction but are not significant (with the exception of the Gini coefficients). The R^2 values also are much larger in the models for the serious offenses, indicating that the structural disadvantage measures explain more of the variance for the violent index offenses than for the nonviolent offenses. However, the disadvantage indicators are less predictive of aggravated assault rates than was expected, a finding that we return to later.

The results for the structural disadvantage variables provide only mixed support for our theoretical predictions about possible gender differences in the magnitude of the effects; i.e., we predicted smaller effects on female than on male rates for serious crimes but no gender differences for minor crimes. First, with regard to our hypothesis for serious or violent crimes, significant gender differences prevail in only 7 of the 15 comparisons (5 disadvantage indicators × 3 violent offenses). For homicide, all disadvantage indicators are more strongly associated with male rates than with female rates of offending (i.e., all F tests are significant). In contrast, the F test results show *no* gender differences across comparisons involving the effects of the disadvantage indicators on robbery and aggravated assault,

with the exception of the male black population for robbery and female-headed households for aggravated assault. Thus, except for homicide, in which all comparisons show significant gender differences, the structural disadvantage variables are as robust at predicting female violent offending rates as they are at predicting male violence. Second, in contrast to our hypothesis expecting fewer gender differences for the minor index crimes, the results for burglary and larceny show that most disadvantage indicators are more strongly associated with male rates than with female rates. Third, despite gender differences in terms of the size of the effect, roughly equal amounts of variance are explained in the female compared with the male models using each of the disadvantage variables and across all offenses. These results offer strong evidence that structural disadvantage has comparable effects in terms of direction on female as well as on male offending rates, but that some differences exist in terms of the magnitude of the effects.

The results for the disadvantage index confirm these patterns (Table 3). The models show that the index-offending rates of both genders are all higher in cities with high structural disadvantage. Second, the disadvantage index has larger effects on homicide and robbery than the other index offenses. In fact, the index is not associated with larceny-theft for either males or females and is associated with burglary rates for males only. Third, most importantly, although the disadvantage index is positively associated with offending rates for both males and females (i.e., the direction is the same for males and females), significant gender differences typically emerge in terms of the strength of the coefficients. Across all five offenses, with the exception for aggravated assault, the disadvantage index is more strongly associated with male rates of offending than with female rates. The finding that the effect is somewhat smaller on female than on male rates provides moderate support for our theoretical prediction of some gender differences and is juxtaposed to the much more consistent set of comparisons showing that disadvantage indicators operate in a similar direction for both males and females. Note also that roughly equal amounts of variance are explained in the female compared with the male models using the the structural index variable. Increases in structural disadvantage are significant contributors to within-sex variation in offending rates among both males and females; however, gender differences emerge consistently in the magnitude of that contribution.

SUPPLEMENTAL ANALYSES

To substantiate the validity of the above results and to exhaust more fully the evidence on the relationships between structural disadvantage, gender, and offending rates, we repeated all regressions by introducing alternative predictors. For example, the rate of public assistance was

entered in lieu of the measures comprising the disadvantage index as an alternative indicator of poverty and economic deprivation. These payments vary across cities and may influence family formation as well as have a "safety net" effect on crime levels. But, because it (i.e., public assistance rate) was correlated highly with the other predictors, such as percent poverty (.77), family structure (.71), and so forth, it did not change the results. The divorce rate (i.e., percent divorced) was also entered into the models, and it too did not change the results. Tests with a southern dummy variable, number of vacant households, and percent Hispanic included as additional controls in all our models, also did not alter the findings as reported here.[13] The results were further validated when a smaller sample was used where the smallest of the big cities were excluded (e.g., cities with fewer than 150,000 persons were dropped). When we limited the analysis to the cities with populations of 150,000 and over, the results parallel closely those reported for the larger sample of cities. In addition, we correlated the male residuals with the female residuals. As expected, and consistent with the previous results, we find that the male residuals are strongly associated with the female residuals.

Next, we explored the effects of our structural disadvantage indicators on female and male homicide offending rates across different types of homicide, using data from the SHR, which provide information on the victim-offender relationship. As noted earlier, one reason for expecting similarity in the structural correlates of female and male offending rates is because female offending often occurs in the context of male offending, which implies considerable overlap in the ecological characteristics of co-offenders and between victims and offenders. Recall also that the largest gender difference to emerge in our main analysis pertained to homicide; ie., structural disadvantage was more predictive of male than of female homicide rates. We subdivided male and female homicides into three categories: partner victim homicide (killing spouse, partner, or lover), nonpartner family victim (killing child, parent, or relative), and nonfamily victim (killing stranger or acquaintance). We expected that gender differences in the effects of structural disadvantage would be diminished in the case of partner homicides because they are more likely to involve female perpetrators responding defensively to aggression initiated by male spouses or partners (Browne and Williams, 1989; Mann, 1996).

13. The effects of these variables, viewed separately, are as follows. Divorce has a small, positive effect on male homicide. Apparently, divorce is more socially disruptive and disintegrative for males; also, divorced males are especially prone to be perpetrators in "mate [i.e., former mate] slayings" (Steffensmeier and Allan, 1996). Percent Hispanic has a small, significant effect on male homicide, which may reflect the high involvement of Hispanic male youth in gangs and their greater risk for participation in gang-related homicides (Klein, 1995).

Table 4. Seemingly Unrelated Regression of Structural Disadvantage Index and Control Variables on Gender-Disaggregated and Relationship-Disaggregated Rates of Homicide [standardized coefficients in parentheses and ^*F*- values comparing coefficients across models (male versus female) in brackets]

	Partner-Victim Homicide				Non-Partner Family Victim				Non-Family Victim Homicide			
Variables	Male Rate		Female Rate		Male Rate		Female Rate		Male Rate		Female Rate	
Intercept	4.32**		6.78**		5.76**		7.60**		2.91**		6.24**	
	[4.33]		[4.33]		[2.40]		[2.40]		[7.03*]		[7.03*]	
Sex-Specific	0.06*	(.19)	0.13**	(.39)	0.13**	(.36)	0.01	(.03)	0.26**	(.59)	0.12*	(.38)
Disadvantage Index	[2.85]		[2.85]		[8.61*]		[8.61*]		[9.90*]		[9.90*]	
Residential Instability	3.44*	(.31)	1.65	(.14)	1.34	(.10)	0.17	(.02)	4.35**	(.27)	1.14	(.10)
	[1.42]		[1.42]		[0.52]		[0.52]		[3.73]		[3.73]	
Sex-Specific Young	-6.11*	(-.25)	-4.18	(-.14)	-6.72*	(-.22)	-3.80	(-.14)	-6.36*	(-.18)	-2.44	(-.09)
Pop.	[0.40]		[0.40]		[0.83]		[0.83]		[1.44]		[1.44]	
West	-0.21	(-.18)	0.11	(.09)	0.02	(.01)	0.00	(.00)	0.03	(.01)	0.05	(.04)
	[4.17]		[4.17]		[0.01]		[0.01]		[0.02]		[0.02]	
Ln. of Pop.	-0.24**	(-.31)	-0.47**	(-.58)	-0.32**	(-.35)	-0.52**	(-.67)	0.01	(.01)	-0.43**	(-.54)
	[7.56*]		[7.56*]		[5.46]		[5.46]		[23.81**]		[23.81**]	
Structural Density	-0.25	(-.21)	-1.08	(-.17)	-0.72	(-.10)	-0.74	(-.12)	-2.12**	(-.25)	-0.96*	(-.16)
	[0.07]		[0.07]		[0.00]		[0.00]		[2.62]		[2.62]	
Police per capita	0.89	(.20)	0.37	(.08)	0.46	(.09)	0.70	(.16)	0.81	(.13)	0.48	(.10)
	[0.64]		[0.64]		[0.13]		[0.13]		[0.24]		[0.24]	
Adj. R^2	.21		.44		.21		.46		.36		.39	
System Weighted R^2	.36		.36		.37		.37		.38		.38	

^*F*- value is used to calculate significant differences between male and female coefficients. Although identical,the *F*- value is reported for both male and female coefficients.

^ Disadvantage Index comprises the sex-specific unemployment rate, sex-specific poverty rate, percent of female-headed households, sex-specific percent of black population, and the Gini coefficient.

* $p < .01$; ** $p < .001$.

The results, as shown in Table 4, indicate that structural disadvantage is predictive of higher homicide offending rates among both females and males, but the size of the effect varies by type of homicide, as predicted. Structural disadvantage is more strongly related to partner homicides perpetrated by females than those perpetrated by males, but the gender difference is much smaller than the others ($F = 2.85$). On the other hand, structural disadvantage is not associated with female-perpetrated homicides involving nonpartner family victims and only moderately associated with female-perpetrated nonfamily homicide. In contrast, structural disadvantage is more predictive of these types of homicides when males are the perpetrators. For both latter types, moreover, the gender differences are significant. Taken together, these findings indicate that gender differences in the effects of structural disadvantage on homicide offending are contextualized by type of homicide. Structural disadvantage is robustly predictive of male-perpetrated homicides across all types of homicide, whereas the effects of structural disadvantage on female-perpetrated homicide are largely confined to killings involving their spouses, partners, or lovers. This result suggests that to some extent structural disadvantage is a primary source of male aggression, which in turn, influences aggression perpetrated by women.[14] It is beyond the scope of our analysis here, but more research is obviously needed to tease out the structural processes contributing to these patterns.

Lastly, we examined the extent to which male offending rates are able predictors of female offending rates to further assess whether common structural causes of female and male offending rates are not included in our models. That similar community-risk factors influence the offending rates of both sexes is inferred from prior research showing that time-space variability in male rates is predictive of time-space variability in female rates (see review in Steffensmeier and Allan, 1996). Table 5 displays the coefficients and R^2's for the pertinent subgroup comparisons. The general

Table 5. Regression of Male Rates on Female Rates of Offending (standardized coefficients in parentheses)

Variables	Homicide	Robbery	Agg. Assault	Burglary	Larceny
Intercept	−1.02***	−2.76***	−2.24***	−4.19***	−0.80*
Male Rate	0.65*** (.86)	1.04*** (.90)	1.06*** (.93)	1.27*** (.76)	1.00*** (.85)
Adj. R^2	.74	.81	.86	.58	.72

* $p < .05$; ** $p < .01$; *** $p < .001$.

14. This interpretation was suggested by one of the reviewers. We are thankful.

finding is astounding—male rates are phenomenally robust predictors of female rates. Cities with higher levels of male index offending also have higher levels of female offending, and conversely, cities with lower male levels have lower female levels. Male rates explain 60% (burglary) to upward of 70% (homicide, larceny) and 80% (robbery, aggravated assault) of city-level variation in female rates.

SUMMARY

The role of embedded structural factors on levels of female offending has rarely been empirically examined in a systematic way. To redress this imbalance, the present study has attempted to link female offending rates to structural determinants used in prior macrosocial and crime research to explain either total violence rates or male rates. Our empirical tests departed from previous research by (1) gender disaggregating the index offending rates (homicide, robbery, aggravated assault, burglary, larceny) across U.S. cities, (2) focusing explicitly on the effects of structural disadvantage variables on female offending rates, and (3) comparing the effects of the structural variables on female rates with those for male rates.

The main finding is consistent and powerful. The structural sources of high levels of female offending resemble closely those influencing male offending. Despite a tremendous difference in mean rates of offending between females and males, all discrete structural disadvantage variables (i.e., poverty, income inequality, joblessness, female-headed households, percent black) as well as the disadvantage index have significant effects on female rates of homicide and robbery rates, and moderate effects on female rates of aggravated assault, burglary, and larceny. Net of controls (e.g., region, size, density, age composition), higher levels of poverty, and so forth are associated with higher rates of female offending, as they also are associated with higher rates of male offending. Although the direction of the effects are similar for both male and female rates of offending, differences emerge in terms of the magnitude of the effects. In the majority of cases, indicators of structural disadvantage are more robustly associated with male than with female rates of offending.

In addition, other structural variables, such as residential instability, structural density, and population size, also have similar effects on rates of female and male offending, and they provide further evidence of the considerable overlap in their structural sources. The effects of structural disadvantage on female violent offending are strong and remain consistent, regardless of the substitution of alternative measures of economic hardship and community instability, such as welfare assistance and divorce. Even the residuals of the predictor and control variables are positively

related, again suggesting that common structural factors account for variations in criminal violence. Unfortunately, because of collinearity among key structural variables, we are unable to decipher the structural element that is a better predictor of female offending. Note, however, that a similar conclusion applies to findings from aggregate-crime research more generally, which also show little support for the prioritization of any one influential structural factor over others (Bruce et al., 1998).[15]

These findings support our main theoretical predictions about the overall effects of structural disadvantage on female and male offending rates. However, the findings are mixed for our hypothesis predicting a gender × offense type interaction—namely, that the structural disadvantage effect will be smaller on female violent offending rates than on male violent offending rates. This prediction was strongly supported for homicide, in which the structural disadvantage index and all five of the disadvantage indicators were more predictive of male homicide, but few gender differences were found for robbery and aggravated assault. The homicide findings may reflect the greater idiosyncracy of female-perpetrated murders on the one hand and their greater relative involvement in infant or child killings on the other hand; the latter appear to be more diffuse across socioeconomic groups than other forms of homicide and less contextualized by economically induced stress (Daly and Wilson, 1988; Ewing, 1990). This conclusion is supported by our analysis showing that structural disadvantage is strongly predictive of male-perpetrated homicides across all types of homicide, whereas it is strongly predictive of female-perpetrated homicides involving spouses or partners, but only weakly predictive of other types of homicide (e.g., killing of other family members or relatives).

We also found for both females and males that the structural disadvantage variables were weaker predictors of aggravated assault than hypothesized. The coefficients and explained variance values were considerably smaller than for homicide and robbery rates but comparable with those for

15. Efforts to disentangle the effects of structural variables are likely to be especially problematic for studies that rely on 1990+ census data. The spatial concentration of poverty and other disadvantage indicators appears to have intensified over the past decade or so (Massey and Denton, 1993.) As a result, efforts to disentangle at the city- or SMSA-level the effects for discrete indicators of structural disadvantage, such as the effects of percent black from those of female-headed households, poverty, and so on, may be more tenuous today than was pointed out by Land et al. (1990) in their review of the aggregate-crime research through 1980. On theoretical grounds, moreover, the communities and crime writings typically interpret the percent of female-headed families solely as a measure of parental socialization and social control, but it also could be seen as reflecting a particularly severe type of poverty (Krivo and Peterson, 1996; Land et al., 1990). Compared with their married family counterparts, poor female-headed families are much more likely to have extremely low incomes, to live in the poorest of areas, and to be poor for long periods of time.

burglary. Some evidence suggests an increasing "criminalization" of disorderly and physically abusive behaviors toward treating them as assaultive offenses (see Steffensmeier, 1993). Changes in laws and enforcement have broadened the definition of "assault" to include minor scrapes and comparatively mild forms of "violence," such as hitting, biting, scratching, kicking, and throwing objects. Also, the contexts for monitoring both minor as well as more severe forms of violence have been greatly expanded to include schools, the home, and the workplace. The targeting of less severe forms of aggravated assault and the ability of authorities to dip more deeply into the pool of offenders will produce arrest patterns for aggravated assault that are more diffuse throughout society and less concentrated in socioeconomically disadvantaged locales (Steffensmeier and Harer, 1999). It is worth noting that, although UCR arrest rates for aggravated assault have almost doubled over the past decade or so, the National Crime Victimization Survey, whose tabulations are based on self-reported victimizations based on annual samples of U.S. households, reveals a small decline in aggravated assault rates during that period.

Future research needs to extend the kind of aggregate analysis presented here in several ways. First, a need exists to further disaggregate the crime data (and the predictors) into gender × race subgroups to assess whether, as some writers suggest (e.g., Baskins et al., 1993), the structural sources of offending by black females and white females differ. Second, a need exists for gender-disaggregated analyses across other ecological units, particularly neighborhoods, because they provide the networks of association in which individuals are embedded (Bursik and Grasmick, 1993). Unfortunately, many direct indicators of key structural variables used in the above analysis are not readily available, and reliability problems involving rare or low frequency counts of more serious forms of offending at the neighborhood level greatly limit the feasibility of gender-specific comparisons. Fourth, as was done in our analysis of types of homicide, there is a need to unpack the other broad index-crime categories and assess whether the structural sources of offending differ by gender across types of robbery, larceny-theft, and so forth. Unfortunately, except for homicide, the data for such an analysis are not available. Lastly, models estimating the effects of macrosocial forces on rates of female offending may expand our list of structural variables, because our models obviously have not incorporated all theoretically relevant structural factors. We have documented some of the social correlates of female offending; yet, we also find that the male offending rate is a substantially stronger predictor of female offending than any of the variables included in our models (see Table 5). This result suggests that other unmeasured social conditions and

shared structural sources are operating as well (e.g., availability of firearms, prevalence of gangs, accessibility of drugs, opportunities for theft), and await identification.

CONCLUSION

The theoretical framework and empirical evidence indicate the importance of investigating within-sex differences in crime, rather than focusing only on between-sex differences (which is the common practice among writers on the topic of women and crime). As with males, considerable variation exists in female offending rates across ecological space (i.e., across cities). Explaining this variation and focusing on female crime per se are as important as explaining the gender gap. We find that the structural sources of high levels of female offending resemble closely those influencing male offending; i.e, the patterns of covariation are similar. Clearly, the macrolevel causes of female crime are not fundamentally different from those of male crime. However, some gender differences did emerge in terms of the magnitude of the effects, in which we found that disadvantage indicators were more strongly associated with male rates of offending than with female rates.

The most consistent difference in magnitude of effects was found for homicide, in which the structural disadvantage variables were robust predictors of male-perpetrated homicide both for homicide measured globally and across all types of homicide, whereas they were moderately strong predictors of female-perpetrated homicides involving spouses or partners and only weakly predictive of other types of homicides (e.g., killing of other family members or relatives). This finding is consistent with the view that because female-perpetrated homicide is so at odds with femininity norms and gendered physical differences, it is more idiosyncratic in causation and mainly emerges in the context of male aggression (Kruttschnitt, 1994; Steffensmeier and Allan, 1996).

Thus, our results are somewhat ambiguous about whether the structural sources of female and male offending rates will be more noteworthy for their similarities than for their differences. Notably, this sort of "half-empty, half-full" conclusion occurs frequently in other areas of gender-related research(see, e.g., Beutel and Marini, 1995; Giele, 1988; Lehman, 1993; Walker and Fennell, 1986)—much overlap in orientations and behaviors but some gender divergence as well. Nonetheless, in view of the tendency in traditional criminological writings to trace female criminality to biopsychological stresses and male criminality to environmental stresses, we believe the gender similarities are more remarkable. As Epstein (1988:12) has noted, the quest to identify gender differences may

focus too much on differences rather than similarities and, thus, sometimes impairs our ability to understand social phenomena.

As with theory testing using individual-level data that has identified causal factors for female offending consistent with those suggested by traditional sociological theories of crime (e.g., differential association, social control), our results using aggregate methodology identify structural causes for female offending that are consistent with traditional macrolevel perspectives (e.g., social disorganization, strain). So, too, our findings support the importance of a comparative approach and its objective to uncover etiological universals or discover that variables assumed to be universal have effects only under unique social and cultural circumstances. Apparently, structural disadvantage—adverse economic conditions and conditions of social disorganization—affects the social order so that criminogenic pressures increase on both the female and the male populations.[16] From a policy perspective, moreover, our results suggest that identifying and remedying the macrosocial factors influencing female crime also will contribute substantially to the reduction of male crime, or vice versa.

REFERENCES

Adler, Freda
1975 Sisters in Crime: The Rise of the New Female Criminal. New York: McGraw-Hill.

Allan, Emilie Anderson and Darrell Steffensmeier
1989 Youth, underemployment and property crime: Differential effects of job availability and job quality on juvenile and young adult arrest rates. American Sociological Review 54:107–123.

Allen, Judith
1989 Men, crime, and criminology: Recasting the questions. International Journal of the Sociology of Law 17:19–39.

Almgren, Gunnar, Avery Guest, George Imerwahr, and Michael Spittel
1998 Joblessness, family disruption, and violent death in Chicago, 1970–1990. Social Forces 76:1465–1494.

Bailey, Arian, James Sargent, David Goodman, Jean Freeman, and Mary Brown
1994 Poisoned landscapes: The epidemiology of environmental lead exposure in Massachusetts. Social Science and Medicine 39:757–766.

Bailey, William and Ruth Peterson
1995 Gender inequality and violence against women: The case of murder. In John Hagan and Ruth D. Peterson (eds.), Crime and Inequality. Stanford, Calif.: Stanford University Press.

16. Our findings do not have any direct bearing on whether innate gender differences in biological drives or programming contribute to sex differences in the offending levels. Rather, our findings establish that—as is true of males—the social forces that impinge on females are decisive for her conformist as well as her deviant behavior.

Baskin, Deborah, Ira Sommers, and Jeffery Fagan
1993 The political economy of female violent street crime. Fordham Urban Law Journal 20:401–417.

Belknap, Joanne
1996 The Invisible Woman: Gender, Crime, and Justice. New York: Wadsworth.

Beutel, Ann and Margaret Marini
1995 Gender and values. American Sociological Review 6:436–448.

Blau, Judith R. and Peter M. Blau
1982 The cost of inequality: Metropolitan structure and violent crime. American Sociological Review 47:114–129.

Boritch, Helen and John Hagan
1990 A century of crime in Toronto: Gender, class, and patterns of social control, 1859 to 1955. Criminology 28:567–599.

Bottcher, Jean
1995 Gender as social control. Justice Quarterly 12:33–57.

Broidy, Lisa and Robert Agnew
1997 Gender and crime: A general strain theory perspective. Journal of Research in Crime and Delinquency 34:275–306.

Browne, Angela and Kirk Williams
1989 Exploring the effect of resource availability and the likelihood of female-perpetrated homicides. Law and Society Review 23:75–94.
1993 Gender, intimacy, and lethal violence trends from 1976-1987. Gender and Society, 7:78–98.

Bruce, Marino, Vincent Roscigno, and Patricia McCall
1998 Structure, context, and agency in the reproduction of black-on-black violence. Theoretical Criminology 2:29–55.

Bursik, Robert J., Jr. and Harold G. Grasmick
1993 Neighborhoods and Crime: The Dimensions of Effective Community Control. New York: Lexington Press.

Cain, Maureen (ed.)
1989 Growing Up Good. Newbury Park, Calif.: Sage.

Carlen, Pat
1988 Women, Crime, and Poverty. Philadelphia: Open University Press.

Cernkovich, Stephen and Peggy Giordano
1979 A comparative analysis of male and female delinquency. Sociological Quarterly 20:131–145.

Chamlin, Mitchell and John Cochran
1997 Social altruism and crime. Criminology 35:203–228.

Chesney-Lind, Meda
1989 Girls' crime and woman's place: Toward a feminist model of female delinquency. 35:5–29.
1997 Girls, Women, and Crime. Thousands Oaks, Calif.:Sage.

Cloward, Richard and Frances Fox Piven
1979 Hidden protest: The channeling of female innovation and resistance. Signs: Journal of Women in Culture and Society 4:651–669.

Cohen, Albert
1955 Delinquent Boys. Glencoe, Ill.: Free Press.

Daly, Kathleen
1994 Gender, Crime and Punishment. New Haven, Conn.: Yale University Press.

Daly Kathleen and Meda Chesney-Lind
1988 Feminism and criminology. Justice Quarterly 5:497–538.

Daly, Martin and Margo Wilson
1988 Homicide. New York: Aldine De Gruyter.

Denno, Deborah
1994 Gender, crime, and the criminal law defenses. The Journal of Criminal Law and Criminology 85:80–180.

Durkheim, Emile
1951 Suicide. New York: Free Press.

Epstein, Cynthia Fuchs
1988 Deceptive Distinctions: Sex, Gender, and the Social Order. New York: Russell Sage Foundation.

Ewing, Charles Patrick
1990 Kids Who Kill. Lexington, Mass.: D.C. Heath.

Eyer, Joseph and Sigmund Freud
1966 Studies in Hysteria. New York: Avon Books.

Figueira-McDonough, Josefina
1992 Community structure and female delinquency rates: A heuristic discussion. Youth & Society 24:3–30.

Fisher, Joseph and Robert Mason
1981 The analysis of multicollinear data in criminology. (ed.) In James Alan Fox (ed.), Methods in Quantitative Criminology. New York: Academic Press.

Gartner, Rosemary, Karen Baker, and Fred Pampel
1990 Gender stratification and the gender gap in homicide victimization. Social Problems 37:593–612.

Giele, Janet
1988 Gender and sex roles. In Neil Smelser (ed.), Handbook of Sociology, Newbury Park, Calif.: Sage.

Gilligan, Carol
1982 In a Different Voice: Psychological Theory and Women's Development. Cambridge, Mass.: Harvard University Press.

Giordano, Peggy, Stephen Cernkovich, and Michael Pugh
1986 Friendships and delinquency. American Journal of Sociology 91:1170–1203.

Greene, William
1997 Econometric Analysis. Englewood Cliffs, N.J.: Prentice-Hall.

Hanushek, Eric and John Jackson
1977 Statistical Methods for Social Scientists. New York: Academic.

Harer, Miles D. and Darrell Steffensmeier
1992 The different effects of economic inequality on black and white rates of violence. Social Forces 70:1035–1054.

Heidensohn, Frances
1996 Women and Crime. 2d ed., London: Macmillan.

Hindelang, Michael
1978 Race and involvement in common law personal crimes. American Sociological Review 43:93–109.

Klein, Malcolm
1995 The American Street Gang. New York: Oxford.

Kleinbaum, David G. and Lawrence Kupper
1978 Applied Regression Analysis and Other Multivariable Methods. North Scituate, Mass: Duxbury Press.

Krivo, Lauren and Ruth Peterson
1996 Extremely disadvantaged neighborhoods and urban crime. Social Forces 75:619–648.

Kruttschnitt, Candace
1994 Gender and interpersonal violence. In Jeffery Roth and Albert Reiss (eds.), Understanding and Preventing Violence: Social Influences, Vol. 3. Washington, D.C.: National Academy of Science.

LaFree, Gary, Kriss A. Drass, and Patrick O'Day
1992 Race and crime in postwar America: Determinants of African-American and white rates, 1957–1988. Criminology 30:157–188.

Land, Kenneth C., Patricia L. McCall, and Lawrence E. Cohen
1990 Structural covariates of homicide rates: Are there any invariances across time and social space? American Journal of Sociology 95:922–963.

Lehman, Edward
1993 Gender and Work, The Case of the Clergy. Albany: State University of New York Press.

Lehmann, Jennifer
1995 Durkheim's theories of deviance and suicide: A feminist reconsideration. American Journal of Sociology 100:904–930.

Leonard, E.
1982 Women, Crime and Society: A Critique of Theoretical Criminology. New York: Longman.

Liao, Tim Futing
1994 Interpreting Probability Models: Logit, Probit, and Other Generalized Linear Models. Sage University Paper Series on Quantitative Applications in the Social Sciences, 07-101. Newbury Park, Calif.: Sage.

Liska, Allen E. and Mitchell B. Chamlin
1984 Social structure and crime control among macrosocial units. American Journal of Sociology 90:383–395.

Mann, Coramae Richey
1996 When Women Kill. Albany: State University of New York Press.

Mannheim, Hermann
1941 War and Crime. London: C.A. Watts.

Massey, Douglas S. and Nancy A. Denton
1993 American Apartheid: Segregation and the Making of the Underclass. Cambridge, Mass.: Harvard University Press.

Messerschmidt, James
1986 Capitalism, Patriarchy, and Crime: Toward a Socialist Feminist Criminology. Totowa, N.J.: Rowman and Littlefield.

Messner, Steven F. and Reid M. Golden
1992 Racial inequality and racially disaggregated homicide rates: An assessment of alternative theoretical explanations. Criminology 30:421–447.

Miethe, Terance, Michael Hughes, and David McDowall
1991 Social change and crime rates: An evaluation of alternative theoretical approaches. Social Forces 70:165–186.

Morris, Alison
1987 Women, Crime, and Criminal Justice. New York: Blackwell.

Morris, Allison and Goraine Gelsthorpe
1991 Feminist perspectives in criminology. Transforming and transgressing. Women and Criminal Justice 2:3–26.

Morris, Ruth
1964 Female delinquency and relational problems. Social Forces 43:82–89.

Naffine, Ngaire
1987 Female Crime: The Construction of Women in Criminology. Winchester, Mass.: Allen and Unwin.

Osgood, Wayne and Jeff Chambers
1997 Social disorganization and youth violence in rural settings: A negative binomial analysis of counties in four states. Unpublished Paper.

Polk, Kenneth
1994 Masculinity, honor, and confrontational homicide. In Time Newburn and Elizabeth Stanko (eds.), Just Boys Doing Business? New York: Routledge.

Pollak, Otto
1950 The Criminality of Women. New York: A.S. Barnes.

Richie, Beth
1995 The Gendered Entrapment of Battered Black Women. London: Routledge.

Rosenbaum, Jill Leslie and James Lasley
1990 School, community context, and delinquency: Rethinking the gender gap. Justice Quarterly 7:493–513.

Sampson, Robert J.
1987 Urban black violence: The effect of male joblessness and family disruption. American Journal of Sociology 93:348–382.

Sampson, Robert J. and William Julius Wilson
1995 Race, crime, and urban inequality. In John Hagan and Ruth D. Peterson (eds.), Crime and Inequality. Stanford, Calif.: Stanford University Press.

Shover, Neal
1996 Great Pretenders: Pursuits and Careers of Persistent Thieves. Boulder, Colo.: Westview.

Shihadeh, Edward S. and Darrell J. Steffensmeier
1994 Economic inequality, family disruption and urban black violence: Cities as units of stratification and social control. Social Forces 73:729–752.

Simon, Rita and Jean Landis
1991 The Crimes Women Commit, the Punishments They Receive. Lexington, Mass.: Lexington Books.

Smith, Dwayne and Victoria Brewer
1992 A sex-specific analysis of correlates of homicide victimization in United States cities. Violence and Victims 7:279–286.

Steffensmeier, Darrell
1993 National trends in female arrests, 1960–1990: Assessment and recommendations for research. Journal of Quantitative Criminology 9:413–441.

Steffensmeier, Darrell and Emilie Allan
1988 Sex disparities in crime by population subgroup: Residence, race, and age. Justice Quarterly 5:53–80.
1996 Gender and crime: Toward a gendered paradigm of female offending. In John Hagan (ed.), Annual Review of Sociology. Vol. 22. Palo Alto, Calif.: Annual Reviews.

Steffensmeier, Darrell and Robert E. Clark
1980 Sociocultural vs. biological/sexist explanations of sex differences in crime: A survey of American criminology textbooks, 1919–1965. The American Sociologist 15:246–255.

Steffensmeier, Darrell and Miles D. Harer
1999 Making sense of recent U.S. crime trends, 1980 to 1996/1998: Age composition effects and other explanations. Journal of Research in Crime and Delinquency 36:235–274.

Steffensmeier, Darrell and Robert M. Terry
1986 Institutional sexism in the underworld. Sociological Inquiry 56:304–323.

Steffensmeier, Darrell, Alvin Rosenthal, and Constance Shehan
1980 World War II and its effect on the sex differential in arrests: An empirical test of the sex-role equality and crime proposition. Sociological Quarterly 21:403–416.

Thrasher, Frederic
1963 (1927) A Study of 1,313 Gangs in Chicago. Chicago, Ill.: University of Chicago Press.

U.S. Department of Justice
1987–1993 Uniform Crime Reports. Federal Bureau of Investigation. Washington, D.C.: U.S. Government Printing Office.

Verkko, Veli
1967 Static and dynamic laws of sex and homicide. In Marvin Wolfgang (ed.), Studies in Homicide. New York: Harper & Row.

Walker, Henry and Mary Fennell
1986 Gender differences in role differentiation and organizational task performance. In Ralph Turner and James Short, Jr. (eds.), Annual Review of Sociology. Vol. 12. Palo Alto, Calif.: Annual Reviews.

Weisheit, Ralph
1993 Structural correlates of female homicide patterns. In Anna Wilson (ed.), Homicide: The Victim/Offender Connection. Cincinnati, Ohio: Anderson Publishing.

Widom, Cathy
1989 Child abuse, neglect and violent criminal behavior. Criminology 27:251–271.

Wilson, William Julius
1987 The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy. Chicago, Ill.: University of Chicago Press.

Wu, Lawrence
1966 Effects of family stability, income, and income instability on the risk of a premarital birth. American Sociological Review 61:386–406.

Zellner, Albert
1962 An efficient method of estimating seemingly unrelated regressions and tests for aggregation bias. Journal of the American Statistical Association 57:348–368.

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