

Gender Equality and Gendered Homicides

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An important insight from the feminist literature is that a particular form of inequality—gender inequality—is likely to be associated with a distinctive type of violence—gendered violence. Previous research has demonstrated that rates of a quintessential gendered crime, rape, are related to the relative status of men and women. The article extends this earlier work by examining the effects of gender equality on the “gendering” of lethal violence. The authors examine the applicability of two feminist hypotheses, the ameliorative hypothesis and the backlash hypothesis, for lethal violence. Regression analyses for a sample of cities indicate that gender equality is positively related to rates of male killings of females and male killings of other males in southern cities. Conversely, gender equality is negatively associated with male killings of other males in cities located in other regions. These cross-sectional analyses thus offer some support for the backlash hypothesis on gender stratification and violence but also point to the complexity of the structural relationships.

Criminologists have long recognized that socioeconomic inequality might be an important structural condition conducive to high rates of violent crime. Either through relative deprivation, diffuse frustration, and hostility or through spreading social disorganization and anomie, economic inequality is expected to increase the levels of violence (e.g., Blau & Blau, 1982; Braithwaite, 1979). Violence, in other words, is often considered one of the more unfortunate costs of a stratification system characterized by pronounced differentials in access to economic resources.

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A large number of studies assessing the effects of levels of economic inequality on violent crime in general, and homicide in particular, has accumulated over recent decades (for reviews, see Messner & Rosenfeld, 1999, Patterson, 1991). The results of this literature are often inconsistent, largely because indicators of different forms of economic deprivation (e.g., income equality and poverty) tend to be highly correlated. However, when composite indexes based on multiple indicators of deprivation are constructed to deal with the problem of multicollinearity, economic inequality broadly understood emerges as a reasonably robust predictor of homicide rates (Land, McCall, & Cohen, 1990; Parker, McCall, & Land, 1999).

In this article, we revisit the inequality/homicide relationship drawing upon insights from the feminist literature. Feminist theory proposes that a particular form of inequality—*gender inequality*—influences a special form of violence—*gendered violence*. Feminist perspectives on violence are most commonly applied to men's attacks on women and are tested with data on rape (e.g., Bailey, 1999; Peterson & Bailey, 1992; Whaley, 2001), although a handful of studies examine the relationship between gender inequality or gender equality and female homicide victimization (e.g., Avakeme, 1999; Bailey & Peterson, 1995; Gauthier & Bankston, 1997). However, as argued by Daly and Chesney-Lind (1988), the influence of feminist theorizing on criminology need not be relegated to explaining female victimization at the hands of male offenders. To the contrary, feminist perspectives have much to offer in the way of explaining women's violence against men and perhaps men's violence against other men. Increased violence of various forms may be part of the cost of gender stratification and a patriarchal gender system. As Daly and Chesney-Lind (1988) suggest, there may be a large price to be paid for "structures of male domination and for the very qualities that drive men to be successful, to control others, and to wield uncompromising power" (p. 527). Heimer (1995) similarly argues that structural inequality based on gender influences the ways both boys and girls, and men and women, define themselves and the types of behaviors, including violent behaviors, available to achieve such definitions.

Our analysis focuses on the effects of gender stratification on the gendering of homicide, that is, levels of different types of

homicide classified with reference to the gender of both victims and offenders. We thus examine rates of male killings of females, female killings of males, male killings of males, and female killings of females. We explore the applicability of two feminist hypotheses, the ameliorative hypothesis and the backlash hypothesis, which previously have been applied to rape. A negative effect of gender equality on, for example, male-female lethal violence would support the ameliorative hypothesis that increased equality is associated with decreased violence against women. A positive effect of gender equality, however, would support the backlash hypothesis that the elevation of women's status relative to men is threatening to some men and functions to increase violence against women.

THEORY AND HYPOTHESES

To understand patterns of social interaction in society including, for example, violent behavior, feminists look to the *gender system*. All societies develop and maintain a gender system that includes socially constructed categories of gender and a division of labor based on biological sex. Within our patriarchal gender system, feminists emphasize the social construction and institutionalization of narrowly defined and diametrically opposed conceptions of masculinity and femininity, according to which masculinity is regarded as superior. An assumption underlying the functioning of this system is that men's greater access to and control over valued resources and opportunities result in a cultural belief system that demotes the status of women relative to men. This patriarchal belief system not only considers women and more specifically, femininity, as inferior; it also condones the use of violence by men to assert and maintain their elevated status. As such, what has long been considered the primary feminist hypothesis on sexual violence is that structures of gender inequality translate into high levels of sexual violence. The more gender inequality in society, the higher the rape rate is because under a system of gender inequality men monopolize power and women's status generally is devalued.

The complement to this particular hypothesis about gender inequality is that higher levels of gender equality should be

associated with lower levels of sexual violence. We refer to this as the *ameliorative hypothesis*; it stipulates that high levels of gender equality tend to reduce sexual violence.

Although the ameliorative hypothesis is the most commonly derived feminist hypothesis in studies of rape, researchers have noted an alternative proposition that can also be found in the early feminist dialogue on sexual violence. This position, which has become known as the *backlash hypothesis*, was first offered by Williams and Holmes (1981) and Russell (1975) as a warning about possible negative consequences of any initial movement towards greater gender equality. Rather than reducing violence against women, the immediate effect of increased equality could be increased violence. According to this scenario, men feel threatened by growing equality with women, and they strike back against women to retain their privileged position.

Though most often applied to rape, the extension of these two hypotheses to other forms of male violence against women is straightforward. For example, the ameliorative hypothesis suggests that incidents of domestic violence will be fewer in number under conditions of greater equality (e.g., Straus, 1994). In this article, we apply the ameliorative and backlash hypotheses to lethal violence. According to the ameliorative hypothesis, gender equality should be negatively associated with rates of male lethal violence against women. The backlash hypothesis, however, suggests the opposite, that equality is positively associated with levels of male-female homicide.

Our extension of the ameliorative and backlash hypotheses to other forms of gendered lethal violence is more speculative in nature. To the extent that the ameliorative hypothesis implies reduced motivation for men's violence against women, we propose that it would also imply reduced motivation for women's lethal violence against men. Similarly, to the extent that gender equality increases men's motivation for violence against women, as suggested by the backlash hypothesis, it will also be associated with higher levels of female-male homicide.

Underlying both of these hypotheses is the assumption that much of women's lethal violence against men is reactive in nature. To the extent that men are less violent toward women generally, women will react in kind and vice versa. Some support for this assumption is evident in the finding that women's murder

victims are more likely to be intimate partners or children than acquaintances or strangers, a pattern very different from that for men (Dobash & Dobash, 1992). Furthermore, research suggests that women require greater provocation before acting violently than men do (for a review, see Fagan & Browne, 1994). A history of abuse is common in narratives of women who kill intimate partners, and victim precipitation is often involved in spousal homicides perpetrated by women (e.g., Goetting, 1989; Willbanks, 1983). Women often report that an argument or fight precipitated the murder and often claim self-defense as a motive (e.g., Mann, 1996, pp. 174-175).

Feminist theory directs attention to violence as a means of creating and protecting male dominance over females, and hence it is most clearly applicable to violence between the sexes. Nevertheless, the logic of the theory provides a rationale for speculating that male violence against other men might also be associated with the level of gender equality. To the extent that the gender system defines, shapes, and maintains certain forms of masculinity, it is possible that gender equality generates (via threats to masculinity) or reduces (via tempered masculinity) male propensities toward violence more generally, not simply violence targeted toward women. As such, the ameliorative hypothesis implies that gender equality reduces male motivation for all violence and thus is negatively associated with men's lethal violence against other men. The backlash hypothesis, in contrast, implies a positive effect. Increased violence involving men may represent a struggle to assert certain forms of masculinity as dominant (for a similar perspective, see Messerschmidt, 1993). A challenge to the balance of power in the structural relations between men and women may increase the need to promote exaggerated definitions of masculinity. Such enhanced self-definition could conceivably occur not only in interaction with women but also in interaction with other men.

Finally, neither hypothesis implies a direct effect of gender equality on female-female killings. However, standard "deprivation theory" implies an indirect effect of gender equality on female offending. Increased gender equality is likely to be associated with higher absolute socioeconomic status of women which should reduce female motivations for violence and therefore

lower rates of female-female killings (see Steffensmeier & Allan, 1996). Accordingly, any bivariate association between gender equality and females' lethal violence toward other females should disappear with controls for female deprivation (i.e., absolute status).

PRIOR RESEARCH

Gender Inequality/Equality and Rape

Research on rape has revealed some support for the ameliorative hypothesis. In a state-level analysis, results affirmed the ameliorative hypothesis that greater levels of gender equality, measured by an index composed of 24 indicators, produce lower rape rates (Baron & Straus, 1984). Peterson and Bailey (1992) also reported supportive results for the ameliorative hypothesis. Using a sample of Standard Metropolitan Statistical Areas (SMSAs), they found that economic gender inequality, measured as the ratio of male to female median income, was positively associated with the official 1980 rape rate, controlling for other factors.

Most recently, two panel studies of cities offered evidence supporting a more complex interpretation of the two feminist hypotheses. In cross-sectional analyses, Bailey (1999) and Whaley (2001) reported negative effects of certain indicators of gender inequality on city rape rates, which supports the backlash hypothesis.¹ Bailey, who was actually testing the ameliorative hypothesis, interpreted these unexpected findings as supportive of the backlash hypothesis; "the less likely women are to challenge men in important status areas, the more that they are 'rewarded' in the form of a lower likelihood of rape" (p. 24).

Qualified support for the ameliorative hypothesis was also evident in these studies. Gender inequality was positively associated with change in rape rates between 1980 and 1990 (Bailey, 1999) and between 1970 and 1980, 1980 and 1990, and 1970 and 1990 (Whaley, 2001). That is, results suggest that higher levels of gender equality are associated with a reduction in rape over 10- or 20-year periods. Considered together, the results from the cross-sectional and change analyses suggest that the relationship

between gender equality and violence against women is more complex than commonly recognized.

Gender Inequality and Homicide

Male Killings of Females

The literature on the relationship between the gender system and male killings of females is more limited and involves differences in basic analytic strategies, data sources, time frames, and theoretical questions, rendering the inconsistent pattern of results across the studies difficult to interpret. For example, some analyses examine the influence of gender equality on intimate female homicide victimization and others on the male-female gap in homicide victimization. Results supporting the backlash hypothesis are evident, but null results and patterns in support of the ameliorative hypothesis also appear.

In support of the ameliorative hypothesis, Bailey and Peterson (1995) found that the male-female disparity in education and the female-male gap in unemployment were positively associated with rates of wife killing, and that male-female income inequality was positively associated with killings of female acquaintances. Smith and Brewer (1995) provided qualified support for this hypothesis with their finding that under conditions of greater male-female educational inequality, occupational equality functioned to decrease women's already low risk of homicide victimization relative to men's.

Contrary to Smith and Brewer (1995), two sets of findings suggest that backlash effects only emerge where women's status is lower (as indicated by educational inequality) or where other cultural traditions and conditions might resist women's increased economic power. Gartner, Baker, and Pampel (1990) reported that backlash effects of women's involvement in less traditional social roles and their greater labor force participation, for example, occurred only in countries where women's overall status was low as measured by educational inequality. Similarly, in high economic status cities and southern cities only, higher levels of gender equality resulted in a greater likelihood of men killing female partners than women killing male partners (Gauthier & Bankston, 1997).

Female Killings of Males

Research on female-male homicide is very scarce; what is published tends to examine intimate partner homicide exclusively because that is the form of homicide most likely to be perpetrated by women. For example, Dugan, Nagin, and Rosenfeld (1999) identified a negative association between women's relative education and married and unmarried male homicide victimization rates, although the coefficient in the married equation did not quite reach standard levels of significance. Equality in earnings was unrelated to both married and unmarried men's homicide victimization rates. The authors suggested that when women are better educated, they are better able and perhaps more interested in leaving abusive relationships, thus avoiding a spousal murder. This interpretation, however, does not fully speak to the empirical problem. The language of their interpretation suggests that it is women's absolute status that determines ability and willingness to exit abusive relationships, whereas the indicator measures women's relative status. The authors never explain why it is women's education relative to men's education that is important.

The recent publication by Steffensmeier and Haynie (2000) represents the first attempt to examine systematically the structural correlates of crime rates disaggregated by the gender of the perpetrator. The primary finding with regard to male perpetrated and female perpetrated homicide was that the structural sources of each are generally similar, although there were differences in the magnitude of effects. Measures of deprivation appeared to have stronger effects on male offending rates than female offending rates. Steffensmeier and Haynie (2000) speculated that these results reflected the fact that female-perpetrated homicide "mainly emerges in the context of male aggression" (p. 431), which would be compatible with the backlash interpretation of a positive association between gender equality and levels of female killings of males.

In summary, the two feminist hypotheses have received mixed support in the rape literature as well as the more limited literature on gender and homicide. Some evidence from studies of rape indicates that support for the hypotheses depends on whether short or long-term effects are examined. Although the analyses of the gender gap in homicide victimization suggest support for the backlash hypothesis, the results are difficult to interpret

theoretically because the size of the gender gap reflects levels of both male and female victimization at the hands of either same- or opposite-sexed offenders. Hence, the nature of the gendering of lethal violence remains unclear. To understand the relationship between the gender system and rates of male and female homicide offending and victimization more fully, it is useful to examine the relationship between indicators of gender stratification and each form of homicide separately, which we do in the analyses below. As such, our analyses expand upon the analyses of Steffensmeier and Haynie (2000) by focusing specifically on the effects of gender stratification on homicide rates disaggregated not only by gender of the perpetrator but also by the gender of the victim.

METHOD

Sample and Measures

The choice of units of analysis for the assessment of hypotheses informed by feminist theory is a difficult one. Feminist theory invokes notions such as “patriarchal gender systems” and “cultural conceptions of masculinity and femininity.” It might be argued that these are fundamental structural and cultural phenomena that tend to characterize societies at large, and thus that cross-national tests are most appropriate (Bradley & Khor, 1993). However, comparative data on the gendering of lethal violence (i.e., pairings of sex of victim/sex of offender) are not available for multinational samples. Moreover, it seems unwise to dismiss a priori the possibility that different areas within nations exhibit meaningful variations in gender relations and beliefs (see Chafetz, 1990, for a discussion of gender inequality at different levels of analysis). In addition, there is ample precedent in the literature for examining the impact of indicators of women’s status and gender inequality with subnational data for the United States, as reviewed above. We accordingly employ cities as units of analysis, recognizing that a more complete appraisal of feminist theory will require research with varying macro-level units.²

Between 1990 and 1994, Supplementary Homicide Reports (SHR) were submitted for a total of 193 cities with populations

greater than 100,000. The sample used in current analyses ($N = 191$) excludes two cities (Amherst Town, NY, and Livonia, MI) because they participated in the SHR only twice in 5 years. Thus, the sample represents an essentially exhaustive collection of large cities that regularly complete the SHR. The cities are located in states across the country: about 5% in New England, 8% in Mid-Atlantic states, 20% in the Midwest or the eastern (13%) and western North-Central region (7%), 35% in the West (including Mountain and Pacific states), and 33% in the South defined as southern Atlantic states (14%) and eastern (6%) and western South Central states (13%).

Homicide rates for the various gender combinations were calculated using SHR data because this source contains information on the gender of both the victim and the offender. Using single offender/single victim homicides only (cf. Williams & Flewelling, 1988), we calculated the four homicide rates as offending rates and thus divided the homicide counts by the sex-specific population for the offender. To reduce the influence of measurement error on the rates, rates are based on 3-year averages using the first 3 years for which data were available between 1990 and 1994. The homicide cases examined in this study represent homicides for which there are complete data on type of homicide, number of offenders, sex of offender, and sex of victim.³

Theoretical and control variables were collected from Summary Tape Files (STF-3A) and from hard-copy publications of the 1990 Census data. To identify indicators of the status of women relative to men, we drew upon prior research on the relationship between gender inequality and rape. Consistent with the precedent in the literature, we collected data for five indicators of gender inequality including the ratio of male to female median income, the percentage of males aged 16 or more who were employed in the civilian labor force relative to the percentage of females aged 16 or more who were employed, the percentage of those employed in the labor force who were male, the percentage of executives, managers, and administrators who were male, and the ratio of men aged 25 with 4 or more years of college education to women aged 25 and older with 4 or more years of college education.

Drawing on the extant homicide literature, we also included several indicators of economic disadvantage including income

inequality (as measured by the Gini Index), percentage Black, percentage unemployed, and percentage poor. Economic disadvantage is expected to be associated with higher rates of homicide either through relative deprivation, diffuse frustration, and increased hostility or through spreading social disorganization and anomie (e.g., Blau & Blau, 1982; Braithwaite, 1979). Because our dependent variables were sex-specific we utilized sex-specific measures of the indicators of economic disadvantage. We also included controls for several indicators of social disorganization including population size, residential instability (i.e., the percentage of people who moved in the past 5 years), and the percentage of divorced males. Finally, we controlled for regional effects. An extensive body of research has emerged relating to the thesis of a "Southern culture of violence" (Nisbett & Cohen, 1996; see Corzine, Huff-Corzine, & Whitt, 1999, for a review), and recent research suggests that the effects of structural variables on homicide rates differ in the South in comparison with other regions (Baller, Anselin, Messner, Deane, & Hawkins, 2001; Gauthier & Bankston, 1997). We accordingly included a dummy variable for southern location based on census classifications.

Procedures

On the basis of the examination of bivariate correlations, we identified multicollinearity as a problem for two sets of indicators, the gender equality and economic disadvantage variables (see Appendix A). The current position in the homicide literature is that, although conceptually distinct, various indicators of economic deprivation, including percentage poor and income inequality, cannot be distinguished empirically (e.g., Land et al., 1990). Thus, we followed precedent and conducted a principal components analysis of the indicators of socioeconomic status. A single component emerged for each of the following: female economic disadvantage and male economic disadvantage. We also performed a principal components analysis of the indicators of male-female relative status.⁴ The resulting factor score for each city was multiplied by -1 to reverse polarity to facilitate interpretation as an indicator of structural gender equality. Factor loadings are presented in Appendix B. Finally, variance inflation factors were examined for the final equations. None exceeded 2.3;

hence multicollinearity is not a serious problem for our regression models.

RESULTS

Preliminary multivariate analyses revealed a significant interaction between southern region and gender equality on homicides involving male offenders.⁵ To better understand the nature of the interaction, we present results for the four types of gendered homicides separately by region in Table 1 (non-South: $N = 127$, South: $N = 64$). Models indicated partial effects of gender equality with controls for conventional structural determinants of homicide rates.

The importance of gender stratification in explaining the gendering of lethal violence is demonstrated in the multivariate regression results. Consider first the models for southern cities. In the models involving male offenders, the positive partial coefficients for gender equality surpassed standard significance levels. Thus, gender equality exhibited positive net effects on rates of male killings of females and male killings of males in cities located in the South. These results are consistent with a backlash interpretation: Greater gender equality is threatening to male dominance, and as such, it increases male violence against women and male violence against other men. Gender equality was not associated with female killings of men or other women in southern cities.⁶

In cities located in the Northeast, Midwest, and West, the coefficients for gender equality in the male-female, female-male, and female-female equations were not significantly different from zero net other variables. In contrast, gender equality exerted a negative or *ameliorative* net effect on male-male homicides in these regions. This result supports the ameliorative hypothesis.

Several control variables also exhibited significant associations in the multivariate models. Consistent with past homicide research, the composite index of economic disadvantage had moderate to strong positive effects on all four types of homicide. In the case of male-male homicide, there was a significant interaction between region and economic disadvantage such that male economic disadvantage had a slightly stronger impact on male-male homicide in the South than elsewhere. When

TABLE 1
Intrasexual and Intersexual Homicide Rates Regressed on Gender Equality and Other Structural Variables for Southern and Nonsouthern Cities^a

	<i>South (N = 64)</i>				<i>Non-South (N = 127)</i>			
	<i>M-F</i>	<i>F-M</i>	<i>M-M</i>	<i>F-F</i>	<i>M-F</i>	<i>F-M</i>	<i>M-M</i>	<i>F-F</i>
Gender equality	1.21* (.32) .35	.35 (.27) .16	3.55* (1.31) .23	.05 (.07) .09	-.12 (.23) -.04	-.03 (.11) -.02	-1.74* (.75) -.15	.01 (.05) .02
Sex-specific economic disadvantage	1.74* (.42) .49	1.13* (.37) .50	10.76* (1.72) .69	.22* (.10) .39	2.11* (.26) .69	1.08* (.12) .64	10.00* (.85) .81	.23* (.05) .02
Percentage moved	-.10 (.07) -.19	-.00 ^b (.05) -.01	-.04 (.28) -.02	-.01 (.01) -.01	.04 (.03) .10	-.01 (.01) -.04	.10 (.10) .07	-.00 ^d (.01) -.08
Sex-specific percentage 15 to 24 yrs	-.08 (.19) -.05	-.14 (.19) -.11	-.95 (.79) -.13	-.00 ^c (.05) -.01	-.52* (.15) -.29	-.09 (.08) -.08	-1.15* (.51) -.16	-.00 ^d (.04) -.01
Logged population	.48 (.43) .10	-.12 (.36) -.04	3.83* (1.78) .18	.06 (.10) .08	-.03 (.25) -.01	.12 (.12) .06	1.79* (.83) .13	.00 ^d (.05) .00
Percentage divorced males	.37* (.18) .20	.21 (.15) .18	.34 (.76) .04	.03 (.04) .09	.17 (.12) .13	.26* (.05) .35	.57 (.39) .10	.02 (.02) .09
R ²	.59	.32	.66	.21	.50	.62	.66	.23
Adjusted R ²	.55	.25	.62	.12	.48	.60	.65	.19

a. Data are presented in groups of three, with unstandardized coefficients on top, standard errors in parentheses underneath, and standardized coefficients under them; M-F = Male-Female, F-M = Female-Male, M-M = Male-Male, F-F = Female-Female.

b. The unstandardized coefficient for percentage moved in the female-male equation for southern cities is -.001851.

c. The unstandardized coefficient for sex-specific percentage young in the female-female equation is -.003915.

d. The unstandardized coefficient for percentage moved in the female-female equation is -.005129; the unstandardized coefficient for sex-specific percentage young is -.004593; the unstandardized coefficient for logged population is .0003495, and the standardized coefficient is .001.

* $p < .05$, two-tailed test.

significant, the effect of percent divorced, which is often regarded as an indicator of social disorganization, was positive. However, the pattern of significance was inconsistent across the regions and types of homicide. Logged population size exhibited a positive effect on male killings of males in both the South and non-South. Finally, the age structure measure had a significant negative effect on homicides committed by males in nonsouthern cities.

DISCUSSION

Violence is often considered an unfortunate cost of economic stratification. Research on the relationship between economic inequality and homicide, despite statistical and methodological debates, has generally provided support for such a position. In this article, we went beyond prior work by drawing on insights from feminist theory. Feminist theory suggests that gender stratification is related to gendered violence. Feminist hypotheses concerning gender inequality and violence are most often applied to female rape victimization. We extended such tests to the gendering of lethal violence and examined the relationship between gender equality and various rates of homicide defined with reference to the gender of both victims and offenders.

Although various feminist perspectives have been advanced, the hypothesis we coined, the ameliorative hypothesis, has received the most attention. This well-known hypothesis asserts that gender inequality is associated with higher rates of violence against women, whereas comparatively low levels of violence against women should accompany gender equality. In recent years, however, another hypothesis has emerged from the feminist literature. Now known as the *backlash hypothesis*, this perspective posits a positive relationship between gender equality and violence against women that emerges as a result of a threat to the established pattern of male dominance. At face value it appears that these hypotheses are contradictory and incompatible. However, given the limited and ambiguous state of the literature concerning the relative importance of each feminist perspective, it is important to examine the different social conditions under which ameliorative and backlash processes are invoked. Our research represents a step in that direction.

Using data on 191 U.S. cities in separate analyses for southern and nonsouthern regions, we evaluated the applicability of the two feminist hypotheses to the varying forms of gendered homicide: male killings of females, female killings of males, male killings of males, and female killings of females. Our results revealed that gender equality is positively associated with rates of lethal homicide involving male offenders in southern cities. These effects are large enough to be substantively important, and they

emerged despite controls for standard structural covariates of homicide. Thus, our analyses offer qualified support for the backlash interpretation of the consequences of gender stratification for lethal violence. The stronger effects of gender equality on male-female homicide and male-male homicide in the South perhaps reflect the distinctive "code of honor" among men that allegedly characterizes this region (Nisbett & Cohen, 1996). It is possible that increased gender equality is particularly threatening to southern men's sense of masculinity in the same way insults are interpreted as damaging masculine reputations (Cohen, Nisbett, Bowdle, & Schwarz, 1996). Further, backlash effects may appear in the South rather than other regions because Southerners, particularly men, who tend to hold more conservative gender role attitudes (e.g., Rice & Coates, 1995), may be especially resistant to increased gender equality in the workplace and in politics. Gauthier and Bankston (1997) also reported a gender equality and region interaction such that gender equality increased the rate of male killings of intimate female partners relative to female killings of male partners in the South but not in other regions.

In contrast, high levels of gender equality do not appear to function according to the backlash hypothesis outside the South. Gender equality is statistically unrelated to male-female homicide, female-male homicide, and female-female homicide, net of the effects of other structural determinants. Interestingly, gender equality exhibits a significant, *negative* effect on rates of male killings of males. This pattern is consistent with the ameliorative hypothesis. The reasons for the emergence of an ameliorative effect only in the North for male-male killings are unclear. Nevertheless, taken as a whole, our results for gender equality reaffirm previous analyses indicating that the different regions constitute distinctive *spatial regimes* (Baller et al., 2001). Accordingly, it is critical for homicide researchers to pay careful attention to the geographic context when assessing structural determinants. An important task for future inquiry is to identify the precise features of regions (e.g., cultural factors or structural factors not included in conventional baseline models) that condition the effects of the determinants of homicide.

We recognize that explanations other than feminist theory are possible for the various effects of gender equality on homicide. Indeed, some have interpreted the effects of gender equality and

more generally, women's absolute status, using perspectives grounded in opportunity theory or routine activities theory. For example, Gartner et al. (1990) suggest that as women become more involved in less traditional activities, they face greater risk of homicide because they are more likely to encounter potential offenders when in the public realm. Presumably, women's increased involvement in the public realm would also increase their potential for offending.

Without dismissing the utility of opportunity theories, our results appear to complicate the story. We found that, in the South, gender equality increased male killings of females *and* male killings of other males. Such a pattern of results—that gender equality influences rates of homicide involving male offenders and victims of either sex—can be readily interpreted within a feminist perspective. To the extent that increased gender equality threatens male dominance and challenges traditional notions of masculinity, it is likely to generate increased male violence against other men in addition to women. It is not clear how an opportunity perspective would explain this pattern of results. Furthermore, as suggested above, the differential effect of gender equality in the South and outside the South is suggestive of cultural differences with regard to a masculinized subculture of violence and a more conservative set of gender role attitudes, in addition to any opportunity dynamics.

An important limitation of our research is that the design was cross-sectional. We were thus unable to distinguish between short-term and long-term consequences of movement toward greater gender equality. The results of longitudinal studies of rape (Bailey, 1999; Whaley, 2001) suggest that there may be merit in both the ameliorative and backlash hypotheses. In those analyses, the backlash hypothesis was supported by cross-sectional data, whereas the ameliorative hypothesis was supported by change data. In fact, Whaley (2001) argued for the theoretical integration of the two seemingly contradictory hypotheses by explicitly introducing the element of time. She argued that in the short term, gender equality would increase rates of violence against women through mechanisms reflecting backlash, but that in the long term, as institutions reorganize to accommodate women, and as the patriarchal belief system weakened, increased levels of gender equality would reduce violence against women. Future

research should expand the application of feminist theory to homicide by examining longitudinal data.⁷ More generally, efforts to refine the feminist perspective by specifying the macro-level conditions that explain when ameliorative versus backlash effects emerge are sorely needed. What are the short- and long-term social conditions that explain the complexities identified in Whaley's research? To what extent does economic restructuring or shifts in the dominance of different industries impact these processes? Is increased gender equality more or less threatening in thriving communities versus disadvantaged communities?

Finally, a fruitful avenue for future research would be to examine the relationship between levels of gender equality and intersexual and intrasexual forms of homicide categorized by the relationship of the offender and victim. Does gender equality exhibit a positive effect on all relationship categories of male-female homicide or only on male-female intimate homicide? Similarly, is an effect of gender equality on female-perpetrated homicides suppressed because gender equality is associated with certain forms of female-male homicide but not others? Such analyses would require a sufficiently large sample to allow for reliable estimates of intersexual and intrasexual homicides by relationship. In any event, the results of the present study indicate that gender stratification is an important factor to consider in the explanation of macro-level variation in gendered patterns of lethal violence.

APPENDIX A
Correlation Matrix and Sample Description for Southern and Nonsouthern Cities.^a

<i>Southern Cities (N = 64)</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1. Male-female homicides	—																								
2. Female-male homicides	.64*	—																							
3. Male-male homicides	.78*	.60*	—																						
4. Female-female homicides	.40*	.24*	.46*	—																					
5. Male to female median income ratio	-.20	-.03	-.13	.02	—																				
6. Working men to working women ratio	-.10	-.09	-.03	-.07	.32*	—																			
7. Percentage labor force that is male	-.44*	-.31*	-.35*	-.20	.24	.67*	—																		
8. Percentage executives, managers, administrators that is male	-.21	-.04	-.16	-.09	.43*	.62*	.55*	—																	
9. Ratio of men to women with 4 or more years college	-.29*	-.10	-.34*	-.17	.23	.46*	.47*	.59*	—																
10. Gender equality	.31*	.17	.24	.13	-.59*	-.88*	-.81*	-.76*	-.65*	—															
11. Percentage Black female	.65*	.57*	.77*	.44*	-.07	-.38*	-.69*	-.40*	-.48*	.53*	—														
12. Percentage Black male	.66*	.57*	.77*	.43*	-.08	-.36*	-.69*	-.39*	-.48*	.52*	.998*	—													
13. Percentage female unemployed	.42*	.34*	.56*	.34*	.27*	.20	.02	-.05	-.11	-.16	.40*	.40*	—												
14. Percentage male unemployed	.48*	.28*	.54*	.27*	-.01	.45*	.10	-.16	.03	-.25*	.21	.23	.74*	—											
15. Percentage female poor	.53*	.31*	.61*	.31*	.01	.26*	-.10	.09	-.14	-.06	.40*	.40*	.77*	.79*	—										
16. Percentage male poor	.44*	.21*	.50*	.22	-.11	.32*	-.01	.16	-.09	-.11	.23	.24	.68*	.81*	.96*	—									
17. Gini Index	.59*	.45*	.66*	.32*	-.14	.23	-.18	.13	-.01	-.01	.46*	.46*	.56*	.70*	.85*	.82*	—								
18. Female economic disadvantage	.67*	.50*	.79*	.42*	.01	.09	-.30*	-.05	-.24	.10	.69*	.69*	.82*	.74*	.92*	.82*	.87*	—							
19. Male economic disadvantage	.66*	.45*	.75*	.38*	-.11	.19	-.23	.02	-.18	.05	.58*	.59*	.73*	.83*	.94*	.90*	.92*	.96*	—						
20. Logged population	.30*	.14	.39*	.20	-.26*	-.04	.04	-.06	-.06	.10	.15	.15	.27*	.37*	.16	.17	.24	.23	.27*	—					
21. Percentage young females	.01	-.01	.00	.05	-.11	-.21*	-.24	-.11	-.24*	.28*	.09	.07	.06	.03	.30*	.39*	.23	.22	.25*	-.11	—				
22. Percentage young males	-.04	-.05	-.02	.14	-.19	-.44*	-.14	-.19	-.27*	.34*	.02	-.01	.13	-.12	.19	.23	.04	.12	.07	-.01	.71*	—			
23. Percentage moved	-.35*	-.23	-.36*	-.18	-.28*	-.46*	.05	-.17	-.12	.31*	-.28*	-.30*	-.45*	-.58*	-.50*	-.42*	-.40*	-.49*	-.51*	-.03	.30*	.40*	—		
24. Percentage divorced	.30*	.26*	.22	.15	-.25*	-.11	.01	-.10	.23	-.01	.06	.07	-.07	.18	.07	.00	.32*	.11	.15	.16	-.35*	-.36*	.01	—	
Mean	5.89	2.98	22.40	.63	1.73	1.23	52.21	55.32	1.31	.09	27.23	25.03	4.07	4.85	17.93	13.11	.44	.23	.11	12.35	8.07	8.04	51.63	8.74	
SD	3.11	1.99	13.90	.50	.23	.10	2.35	3.91	.11	.91	17.57	16.23	1.00	1.40	6.63	5.53	.04	.87	.89	.64	1.86	1.54	5.89	1.68	
Skewness	.30	1.03	.51	.91	.07	-.07	.64	.21	.35	.31	.38	.45	.28	.34	.30	.77	-.48	.09	.11	.93	1.84	2.13	-.17	-.20	
Kurtosis	-.47	1.54	-.71	.76	-.45	2.57	.23	.64	1.03	.21	-.74	-.66	-.42	-.35	.17	1.38	.16	-.20	-.34	.34	4.73	8.69	.16	.58	

(continued)

APPENDIX A Continued

Nonsouthern Cities (N = 127)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1. Male-female homicides	—																								
2. Female-male homicides	.73*	—																							
3. Male-male homicides	.83*	.78*	—																						
4. Female-female homicides	.36*	.45*	.48*	—																					
5. Male to female median income ratio	-.03	-.04	-.11	-.07	—																				
6. Working men to working women ratio	-.05	-.09	.04	-.09	.39*	—																			
7. Percentage labor force that is male	-.26*	-.32*	-.19*	-.23*	.13	.72*	—																		
8. Percentage executives, managers, administrators that is male	-.10	-.08	-.05	.05	.19*	.13	.05	—																	
9. Ratio of men to women with 4 or more years college	-.24*	-.29*	-.33*	-.16	.39*	.25*	.16	.04	—																
10. Gender equality	.22*	.27*	.21*	.17	-.66*	-.82*	-.69*	-.35*	-.60*	—															
11. Percentage Black female	.66*	.69*	.76*	.48*	-.12	-.10	-.43*	-.03	-.37*	.35*	—														
12. Percentage Black male	.67*	.70*	.77*	.48*	-.12	-.11	-.44*	-.03	-.37*	.36*	.998*	—													
13. Percentage Female unemployed	.55*	.58*	.68*	.40*	-.01	.28*	.04	-.08	-.28*	.01	.73*	.73*	—												
14. Percentage male unemployed	.62*	.64*	.74*	.44*	-.06	.15	-.20*	-.07	-.27*	.14	.79*	.79*	.89*	—											
15. Percentage female poor	.53*	.62*	.68*	.41*	-.25*	-.01	-.37*	-.08	-.34*	.34*	.73*	.73*	.69*	.80*	—										
16. Percentage male poor	.45*	.54*	.63*	.39*	-.40*	-.05	-.27*	-.13	-.38*	.38*	.62*	.62*	.61*	.69*	.95*	—									
17. Gini Index	.34*	.42*	.47*	.29*	-.36*	-.24*	-.52*	-.06	-.33*	.50*	.53*	.52*	.30*	.47*	.75*	.76*	—								
18. Female economic disadvantage	.62*	.69*	.77*	.47*	-.20*	.01	-.34*	-.07	-.38*	.32*	.88*	.88*	.84*	.89*	.94*	.86*	.72*	—							
19. Male economic disadvantage	.61*	.67*	.77*	.47*	-.27*	-.06	-.40*	-.09	-.39*	.39*	.85*	.85*	.76*	.88*	.95*	.91*	.78*	.98*	—						
20. Logged population	.24*	.31*	.39*	.17	-.27*	-.11	-.10	-.13	-.25*	.27*	.29*	.29*	.21*	.24*	.31*	.33*	.40*	.34*	.36*	—					
21. Percentage young females	-.12	-.03	-.02	.06	-.23*	-.29*	-.24*	-.08	-.12	.31*	.10	.10	.04	.08	.43*	.51*	.32*	.25*	.30*	-.07	—				
22. Percentage young males	-.21*	-.15	-.09	.00	-.32*	-.14	.12	-.11	-.15	.18*	-.02	-.03	.04	-.01	.27*	.42*	.15	.13	.17	-.07	.88*	—			
23. Percentage moved	-.15	-.19*	-.23*	-.19*	-.09	-.22*	.14	-.16	-.02	.08	-.38*	-.38*	-.27*	-.40*	-.26*	-.13	-.17	-.32*	-.31*	-.14	.17	.21*	—		
24. Percentage divorced	.35*	.43*	.25*	.13	-.01	-.31*	-.32*	-.11	-.07	.27*	.10	.11	-.01	.06	.12	.09	.20*	.11	.13	.06	-.29*	-.42*	.22*	—	
Mean	3.87	1.44	12.90	.41	1.76	1.25	53.31	51.93	1.32	.12	13.92	13.06	3.93	5.61	14.91	11.29	.41	-.30	-.25	12.26	7.93	7.80	50.69	8.60	
SD	2.74	1.50	11.05	.47	.24	.08	2.54	12.57	.21	.92	15.37	14.04	1.38	1.85	5.96	4.66	.04	.89	.90	.78	1.53	1.36	7.05	2.01	
Skewness	1.36	1.49	1.91	1.34	.89	.78	.95	-4.10	-3.75	.52	1.87	2.03	1.35	1.15	.40	.14	-.40	1.04	.84	1.85	1.91	1.85	-.12	.44	
Kurtosis	2.00	2.10	4.62	1.96	2.01	2.97	1.45	18.44	29.50	.39	4.11	5.15	2.51	2.33	-.04	-.61	-.19	1.82	1.33	4.33	4.96	4.69	-.15	.36	

a. The gender inequality variables (variables 5 to 9) are coded such that high score = more inequality. The gender equality factor (used in the multivariate analyses) is the factor score based on these items and multiplied by -1 such that high score = more equality.

* $p < .05$ (two tailed).

APPENDIX B

Factor Loadings and Eigenvalues

<i>A. Gender Inequality</i>	<i>Factor Loadings</i>	
Ratio of male to female median income		.64
Ratio of working men to working women		.86
Percentage labor force that is male		.75
Percentage executives, managers, administrators that is male		.33
Ratio of men to women with 4 or more years college		.58
Eigenvalue (% explained)		2.16 (43.17)
<i>B. Sex-Specific Economic Disadvantage</i>	<i>Male</i>	<i>Female</i>
Percentage Black males/females	.76	.82
Percentage poor males/females	.90	.94
Percentage unemployed males/females	.77	.79
Gini Index	.86	.82
Eigenvalue (% explained)	2.72 (68.00)	2.85 (71.16)

NOTES

1. Support for the backlash hypothesis is also evident in early research on rape, but the results should be considered cautiously given methodological limitations. For example, in analyses limited by small sample sizes (26 cities and 25 SMSAs), Ellis and Beattie (1983) reported inverse associations between the official rape rate and income inequality, the sex disparity in employment, and the ratio of male to female police officers and detectives. Similarly, Baron and Straus (1984) reported that gender equality was positively associated with state rape rates net of other criminogenic factors. However, the authors' 1989 analysis, which involved a slightly modified index of gender equality and a different model specification, contradicted this early result as noted above. Multicollinearity may have been a problem in the early analyses.

2. Note also that analyses based on any macro-level unit will be unable to demonstrate social psychological dynamics implied by feminist theorizing, such as the generation of "perceptions" of threat. Such dynamics must essentially be regarded as premises for the derivation of hypotheses about structural relationships at the macro level. Support for these hypotheses with aggregated data thus lend credibility to the theoretical framework, but substantiation of social psychological processes requires individual-level data.

3. Excluding Amherst Town and Livonia, 88% of the cities filed reports for 1990, 1991, and 1992; thus for 22 cities, averaged rates were based on some other combination of years between 1990 and 1994. In that 5-year period, 67,154 homicide cases were reported to the SHR by cities with populations of 100,000 or more. Of these, 122 were cases of negligent manslaughter and 157 were of unknown type resulting in 66,875 murder and non-negligent manslaughter cases. Of those, 64,949 involved single victims of which 8,129 were known to have multiple offenders and 32,153 were known to have single offenders.

However, 24,717 cases involving single victims were missing data on the offender and could not be classified as single or multiple offender cases and thus were not included in our aggregation of cases for each city. Of the murder and non-negligent manslaughter cases known to be single offender/single victim ($N = 32,153$), missing data on the offenders' and/or victims' gender resulted in the omission of 55 homicide cases.

4. Although the factor loading for percentage executives who are male is relatively low, the item was retained because it is often reported to be significant in the literature.

5. In analyses not presented, we examined product terms for region and all other variables. In addition to the significant interaction between region and gender equality in the models with male offenders, a significant product term emerged for region by male economic disadvantage in the model for male-male homicide.

6. In other analyses, we substituted Gastil's southernness index (Gastil, 1971) modified for cities (Simpson, 1985) for our region dummy variable. The pattern of results was replicated. The product term for the southernness index and gender equality was positive and significant in the two models with male offenders, net of other structural determinants. The positive effect of gender equality is stronger in cities that exhibit more "southern culture".

7. Although SHR are available for the mid-1990s, an examination of the effect of gender equality on changes in homicide rates was beyond the scope of this analysis. Further, research by Whaley (2001) suggests that the backlash effect of gender equality on rape rates occurs cross-sectionally and in change models using 5-year periods, while ameliorative effects emerge when longer periods of change are examined (10 and 20 years).

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