

WHO KILLS WHOM IN SPOUSE KILLINGS? ON THE EXCEPTIONAL SEX RATIO OF SPOUSAL HOMICIDES IN THE UNITED STATES*

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A hitherto unremarked peculiarity of homicide in the United States is that women kill their husbands almost as often as the reverse. For every 100 U.S. men who kill their wives, about 75 women kill their husbands; this spousal "sex ratio of killing" (SROK) is more than twice that in other Western nations. Our analyses of spousal homicide samples from the United States, Canada, Australia, and Great Britain indicate that this contrast cannot be attributed to greater gun use in the United States, nor to a domain-general convergence of the sexes in their uses of violence. Significant predictors of the spousal SROK include registered versus de facto marriage, coresidency versus separation, ethnicity, and age disparity, but the impacts of these variables are not sufficient to explain the differences between U.S. and other nations' victim sex ratios.

During the 10 years from 1976 to 1985, a total of 18,417 people are estimated to have been killed by their spouses in the United States (Maxfield, 1989:677; see also Mercy and Saltzman, 1989). Estimated numbers of victims were 10,529 wives and 7,888 husbands. Hence, for every 100 men who killed their wives, about 75 women killed their husbands. We call this quantity the

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spousal "sex ratio of killing," or SROK (SROK = homicides perpetrated by women per 100 perpetrated by men).

A hitherto unremarked peculiarity of homicide in the United States is that the number of women who kill their husbands relative to the number of men who kill their wives (the spousal SROK) is exceptionally high. In Canada, for example, 812 wives and 248 husbands were slain between 1974 and 1983 (Daly and Wilson, 1988a, 1988b), yielding a spousal SROK of just 31. Table 1 presents our tabulations of the gross numbers of spousal homicides and SROK values for Canadian, Australian, British, and urban U.S. case-by-case data sets in our possession (described below), as well as results from published studies in which the requisite information was reported. The largest data sets in Table 1 are from Western industrialized nations, but other sorts of societies are also represented, including several aboriginal horticulturalist societies of India and Africa.

Why do women perpetrate a substantially larger proportion of spousal homicides in the United States than elsewhere? In this paper, we address several possible answers to this question by means of comparisons between spousal homicide samples from the United States and other predominantly English-speaking Western industrialized nations.

We confine our analyses of U.S. cases to urban files, which we have personally cross-checked in the relevant police departments, because of the unreliability of available national case-by-case data, namely the Federal Bureau of Investigation's Supplementary Homicide Reports (SHR). Wiersema (1987), for example, found a high rate of apparently random coding errors intruding between Baltimore's homicide case files and the SHR data ostensibly based on them. Similarly, in a sample of several hundred cases from the SHR (M. Wilson, 1989), we encountered several erroneous case duplications and several instances of logical impossibilities (e.g., "father" younger than his "son"). Moreover, SHR offender information is incomplete because files are not updated when cases are solved after the initial police report. (For further discussion of limitations of SHR data, see Maxfield, 1989; Rokow et al., 1990; and Williams and Flewelling, 1987.)

The several U.S. urban samples in Table 1 were compiled by research criminologists from police archives and are likely to be highly accurate within the limits of such archives. All produce SROK values even higher than the 75 estimated for the nation as a whole, which may mean that this index tends to be higher in large cities and/or those with higher homicide rates than elsewhere in the United States.

HOMICIDE DATA ARCHIVES USED

For analyses in this paper, we used case-by-case data files on all homicides known to the police in Chicago (1965–1989), in Detroit (1972), in Canada

Table 1. Number of Spousal Homicides and the Spousal Sex Ratio of Killing (SROK = Homicides Perpetrated by Women per 100 Perpetrated by Men) in Various Homicide Samples

Data Set	Killer		SROK	Source
	Man	Woman		
United States 1976–1985	10,529	7,888	75	Maxfield (1989)
Chicago, Ill. 1965–1989	844	862	102	this study
Detroit, Mich. 1972	36	43	119	this study
Detroit, Mich. 1982–1983	28	56	200	Goetting (1989)
Houston, Tex. 1969	19	26	137	Lundsgaarde (1977)
Miami, Fla. 1980	23	20	87	Wilbanks (1984)
Philadelphia, Pa. 1948–1952	53	47	89	Wolfgang (1958)
New South Wales 1968–1986	303	95	31	this study
Canada 1974–1983	812	248	31	this study
Denmark 1933–1961	96	16	17	Siciliano (1965)
England/Wales 1977–1986	981	223	23	this study
Scotland 1979–1987	99	40	40	this study
Africa, Mid-20th Century				
Tiv, Luo, Soga, Gisu, Nyoro, Luyia	70	4	6	Bohannon (1960)
India				
Bison-Horn Maria 1930–1940s	20	0	0	Elwin (1950) Saran (1974);
Munda, Oraon, Bhil 1960s	14	0	0	Varma (1978)

NOTE: Most published studies of homicides do not classify cases in a manner permitting inclusion in this table; often, the set of cases has been selected on some potentially biasing criterion, such as arrest or conviction, and even where all cases known to the police have been tabulated, spousal cases have seldom been distinguished from others.

(1974–1983), in England and Wales (1977–1986), and in Scotland (1978–1987), plus a sixth file consisting of only the spousal homicides in New South Wales, Australia (1968–1986). Police continue to close unsolved cases, even years later; our data files were current as of 1991 for Chicago, 1980 for Detroit, 1986 for Canada, 1990 for Great Britain, and 1988 for Australia.

In each data file, the homicides deemed “spousal” include both registered and de facto marital unions between persons of opposite sex, as well as separated or divorced couples. (However, detection of former de facto unions may have been a problem in some samples because of police characterizations of such relationships as “friends,” “acquaintances,” or “ex-boyfriend/girl-friend.”) A case was eligible for inclusion in each of these files if police had identified the killer to their satisfaction, regardless of whether the case was prosecuted. Thus, the files include murder-suicides and cases that were

deemed justifiable or were otherwise dismissed, two categories of cases that are especially prevalent among spousal homicides (Daly and Wilson, 1988b).

The Chicago file was created from materials in the Chicago Police Department by C. R. Block, R. Block, and the authors. The Detroit file was created from materials in the Detroit Police Department by M. Wilt Swanson and the authors. In both files, we included as de facto spousal homicides both those cases in which the killer-victim relationship was characterized in police investigative files as one of "common law marriage" and those called "boyfriend-girlfriend" if there was explicit evidence of current or past coresidency.

The files from Canada, Great Britain, and Australia are government-collated computer files based on legally mandated reports from police departments (cross-checked, in the case of Canadian and Scottish files, against newspaper and other information). Carlson (1984) confirmed the correspondence between the data in the Canadian government file and the investigative files of one police department.

The files for Chicago, Detroit, England and Wales, and New South Wales included a victim-killer relationship code for "ex-common law"; those for Canada and Scotland did not. All our files except that for England and Wales included a code for coresidency status at the time of the homicide. All our files except that for Scotland included codings of weapons.

IS THE UNUSUAL SEX RATIO IN U.S. SPOUSAL HOMICIDE A RESULT OF GUN AVAILABILITY?

An obvious hypothesis to explain the exceptionally high spousal SROK in the United States is that the availability of guns in the U.S. home has neutralized men's size and strength advantages in lethal marital conflict. This may be called the "old equalizer" hypothesis. The following three falsifiable predictions follow logically from this hypothesis:

1. Killings by gunshot will constitute a larger proportion of spousal homicides in U.S. samples with high SROK values than in other samples with lower values.
2. When shootings and homicides perpetrated by other means are considered separately, the difference between the U.S. spousal SROK and spousal SROK values from other countries will be diminished.
3. Within each sample, the spousal SROK will be higher for shootings than for other homicides.

The first of these three predictions is supported: Gun use is indeed relatively prominent in U.S. samples, accounting for 51% of 1,706 spousal homicides in Chicago and 67% of 79 Detroit cases, compared with 40% of 1,060 Canadian cases, 42% of 395 Australian cases, and just 8% of 1,204 cases in England and Wales. (Wilbanks, 1984, found that 82% of 39 Miami spousal

homicides in 1980 were committed by gun, and Goetting, 1989, reported that guns accounted for 58% of 84 Detroit spousal homicides in 1982–1983.) However, the data in Table 2 are contrary to predictions (2) and (3).

Table 2. Number of Spousal Homicides and the Spousal Sex Ratio of Killing (SROK) for Cases Perpetrated by Gun versus by Other Means

Data Set	Shootings			Other Cases			Chi-Square	P
	Killer		SROK	Killer		SROK		
	Man	Woman		Man	Woman			
Chicago 1965–1989	465	399	86	379	463	122	13.2	< .001
Detroit 1972	24	29	121	12	14	117	0.0	ns
New South Wales 1968–1986	128	37	29	172	58	34	0.4	ns
Canada 1974–1983	344	85	25	468	163	35	5.2	.023
England/Wales 1977–1986	76	22	29	903	201	22	1.1	ns

NOTE: Missing information on method of killing: New South Wales = 3 cases; England/Wales = 2 cases.

In refutation of prediction (2), the differences between countries remain large when shootings and other sorts of homicides are considered separately. The spousal SROK for gunshot cases is 86 for Chicago and 121 for Detroit, but does not exceed 29 for the non-U.S. samples. The spousal SROK for nongun cases is 122 for Chicago and 117 for Detroit, but does not exceed 35 for the non-U.S. samples. (Goetting's 1982–1983 Detroit sample yields SROK values of 172 for shootings and 250 for nongun cases.)

Most important, in direct contradiction of prediction (3), the spousal SROK tends to be lower for shootings than for other spousal homicides, an effect that is significant in Chicago and in Canada. Rather than guns equalizing, it appears that gun use is still predominantly the province of men and that women's lethality relative to that of men is actually greater when cases involving guns are excluded (see also C. Block, 1987a:74).

In further refutation of the "old equalizer" hypothesis, it is also worth noting that the near equivalence of husband and wife victims in the United States antedates the contemporary prevalence of gun killings. In Wolfgang's (1958) study of homicides in Philadelphia between 1948 and 1952, only 34 of 100 spousal homicide victims were shot; the SROK for those 34 gunshot cases was 79 (19 wives and 15 husbands thus slain), while for spousal homicide by other means, the SROK was 94 (34 wives and 32 husbands slain).

Whatever may explain the relatively similar death rates of U.S. husbands and wives, it is evidently not the "old equalizer."

IS KILLING GENERALLY LESS MALE-BIASED IN THE UNITED STATES THAN ELSEWHERE?

A second hypothesis to explain the high U.S. spousal SROK is that this is just one manifestation of a general behavioral and psychological convergence of women and men in the United States. Many commentators seem to believe that the United States leads other nations in the diminution or abolition of traditional sex roles, and some have argued that there has been or will be an increase in male-like criminality by women as a side effect of these changes (e.g., Adler, 1975; Nettler, 1978). This line of reasoning would lead one to predict that the national contrasts in spousal SROK values will extend beyond the spousal relationship. More specifically, the hypothesis that the high U.S. spousal SROK is a manifestation of a more general convergence of the sexes predicts that the ratio of female-perpetrated to male-perpetrated nonspousal homicides will also be higher in the United States than elsewhere.

This hypothesis is contradicted by the data in Table 3. *Whereas women in Chicago and Detroit perpetrated an exceptionally high proportion of spousal homicides compared with the other countries' samples, their share of non-spousal homicide perpetration was no higher than that of women elsewhere.*

Table 3. Number of Homicides Perpetrated by Men versus Women and the Sex Ratio of Killing (SROK), Contrasting Spousal versus Other* Homicides

Data Set	Spousal Homicides			Other Homicides		
	Killer			Killer		
	Man	Woman	SROK	Man	Woman	SROK
Chicago 1965-1989	844	862	102	11,589	1,246	11
Detroit 1972	36	43	119	385	49	13
Canada 1974-1983	812	248	31	3,927	456	12
England/Wales 1977-1986	981	223	23	3,777	556	15
Scotland 1979-1987	99	40	40	644	50	8

* Nonspousal cases in which victim-killer relationship is known.

Despite the data in Table 3, one might retain a modified version of the hypothesis that national differences in spousal SROK values reflect a peculiarly U.S. domain-general diminution of sexually differentiated violent inclinations. One way to defend such a view is to propose that the persisting sex differences in violent behavior shown in Table 3 reflect persisting differences between men and women in their routine activities in the public sphere, which afford men more "opportunities" to become involved in potentially lethal conflicts than are encountered by women. Gartner (1990) offers such a routine-activities explanation for variations in the degree to which homicide

victimization differs between women and men, and one could, in principle, make a similar argument regarding homicide perpetration. In other words, the modified hypothesis is that the lethality of U.S. women approaches that of men when their opportunities are equivalent, and that the high SROK in spousal cases reflects this domain-general convergence of the sexes rather than anything peculiar to spousal relationships. From such a hypothesis, one may predict that the difference between the spousal SROK values in the United States and other countries will be paralleled in other sorts of familial "at-home" homicides for which opportunity to kill is not lower for women than for men, such as infanticides and other filicides.

The data bases for Chicago, Canada, and England and Wales are large enough to test this prediction, and it, too, fails. As shown in Table 4, killings of one's children (or other relatives) were not unusually often female-perpetrated in Chicago compared with elsewhere. In fact, whereas the proportion of spousal killings perpetrated by women was significantly greater in Chicago than in Canada or England and Wales, the proportion of filicides perpetrated by women was significantly *smaller* in Chicago than in Canada or England and Wales, precisely contradicting the prediction (all comparisons $p < .001$ by Chi-square test).

Table 4. The Sex Ratio of Killing (SROK) and the Number of Homicides, by Victim-Killer Relationship

Victim-Killer Relationship	Canada			England & Wales			Chicago		
	Killer		SROK	Killer		SROK	Killer		SROK
	Man	Woman		Man	Woman		Man	Woman	
Spouse	812	248	31	981	223	23	844	862	102
Filicide									
\leq 1 Yr. Old	50	104	208	94	209	222	73	94	129
$>$ 1 Yr.	127	85	67	131	114	87	91	64	70
Other Blood	444	57	13	302	40	13	410	70	17
Affine	191	13	7	189	7	4	294	28	10
Acquaintance	1,931	139	7	1,733	151	9	7,063	824	12
Stranger	1,184	58	5	1,328	35	3	3,658	166	5

Thus, one cannot explain the high Chicago spousal SROK as a product of the combination of (1) a diminution of sex differences in violent inclinations or capabilities in the United States and (2) continuing sex differences in routine activities and hence in opportunities to kill. Such an explanation would have required that filicides (and perhaps other killings of relatives) also manifest higher SROK values in Chicago than elsewhere, when in fact the Chicago SROK values for familial homicides other than spousal killings tend to be unexceptional or low. Neither can the data be reconciled with a variant of

this hypothesis to the effect that women and men in Chicago are exceptionally alike in familial violence because violence on the part of women is socialized or legitimated with specific respect to the family or the home, whereas violence on the part of men is socialized or legitimated more generally. The unusually high proportion of female-perpetrated cases among spousal homicides in Chicago is peculiar to that relationship.

This result reinforces the conclusion from several recent analyses (e.g., C. Block, 1987a, 1992; Daly and Wilson, 1988b; Maxfield, 1989; Parker and Toth, 1990; Williams and Flewelling, 1987) that the important sources of variation in homicide rates between times and places will not be identified until gross rates are disaggregated into meaningful types of killings. A recent effort to make sense of sex ratios of killing illustrates this point: Best and Luckenbill (1990) compared state-level sex ratios of homicide perpetration rates, seeking to account for variation in terms of gross indices of sexual inequality. However, they did not ask whether the variation in female-perpetrated homicide, for which their inequality indicators accounted, resided in spousal killings, filicide-suicides, or other sorts of homicides; and it is therefore difficult to assess the plausibility of the psychological constructs (e.g., "frustrated" aspirations and "micro-protest") that Best and Luckenbill propose as mediators of the effect of state-specific levels of "male dominance."

GENDER EQUITY IN U.S. SPOUSAL HOMICIDE IS NOT NEW

Hypotheses linking the large proportion of U.S. spousal homicides that are perpetrated by women to recent social changes, such as "women's liberation" and increased labor force participation, are not supported by the data. As noted above, Wolfgang (1958) recorded 53 slain wives and 47 slain husbands in Philadelphia 40 years ago. Table 5 breaks 25 years of spousal homicides in Chicago into successive 5-year blocks. Although total spousal killing has declined dramatically, there is no conspicuous trend in sex ratios. For the United States as a whole, Browne and Flewelling's (1986) and Mercy and Saltzman's (1989) analyses of SHR data apparently indicate a considerable decline between 1976 and 1985 in the number of husband victims but only a slight decline in the number of wife victims and, hence, a decreasing rather than increasing trend in the spousal SROK.

FACTORS ASSOCIATED WITH VARIATION IN THE SPOUSAL SROK

Although there is little variability in Chicago's spousal SROK over time or in relation to gun use, the SROK is systematically related to other variables. The following analyses show that several demographic factors are related to

Table 5. Number of Spousal Homicides and the Sex Ratio of Killing (SROK) in Chicago, 1965–1989

Years	Killer		SROK
	Man	Woman	
1965–1969	235	224	95
1970–1974	211	222	105
1975–1979	175	174	99
1980–1984	119	120	101
1985–1989	104	122	117
25-Year Total	844	862	102

SROK variability and that their effects in the United States and other countries are often similar. Relevant variables include registered versus de facto marriage, coresidency versus separation, age disparity, and ethnic group membership.

REGISTERED VERSUS DE FACTO UNIONS

Legally registered marital unions can be contrasted with de facto (common law) unions within each homicide sample (Table 6). In general, the spousal SROK is higher in the de facto unions (that is to say, female-perpetrated cases are relatively prevalent). This comparison is significant within the largest samples, namely, Chicago, Canada, and England and Wales.

Table 6. Number of Spousal Homicides and the Sex Ratio of Killing (SROK) in Registered versus De Facto Marital Unions

Data Set	Registered Marriages			De Facto Marriages			Chi-Square	P
	Killer		SROK	Killer		SROK		
	Man	Woman		Man	Woman			
Chicago 1965–1989	490	426	87	354	436	123	12.8	< .001
Detroit 1972	20	25	125	16	18	113	0.1	ns
Canada 1974–1983	529	125	24	283	123	43	17.5	< .001
New South Wales 1968–1986	183	50	27	120	45	38	1.8	ns
Scotland 1979–1987	63	31	49	36	9	25	2.5	ns
England/Wales 1977–1986	768	149	19	213	74	35	13.2	< .001

Not only is the SROK higher in de facto unions, but the rate of spousal homicide victimization is substantially higher in de facto unions than in registered unions in Canada, in England and Wales, and in New South Wales

(Daly and Wilson, 1988b; Wallace, 1986; M. Wilson, 1989; Wilson and Daly, 1992b). Although precise comparisons are precluded for the United States because the census has not provided direct information on *de facto* unions for the population at large, the same appears to be true there. *De facto* unions constituted 46% of the 1,706 spousal homicides in our 25-year Chicago sample, as well as 35% of 43 spousal homicide cases in Miami in 1980 (Wilbanks, 1984), 31% of 45 in Houston in 1969 (Lundsgaarde, 1977), and 46% of 972 in Detroit in 1926–1968 (Boudouris, 1971). By contrast, recent national estimates of the prevalence of such unions are still only on the order of 9% (Bumpass and Sweet, 1989).

De facto and legally registered marital unions differ in many ways, and the higher risk of homicide in the former may be attributable to a combination of correlated factors. *De facto* marital unions are generally more prevalent among the poor and the young (e.g., Balakrishnan, 1989; Bumpass and Sweet, 1989; Carmichael, 1984; Khoo, 1985; Norland, 1983, 1984, 1985; Roussel, 1978; Spanier, 1983, 1985; Turcotte, 1988), and poverty and young adulthood are both associated with higher homicide rates (e.g., Daly and Wilson, 1990). A subtler difference is that *de facto* unions are more often childless than are registered unions for a given duration of marriage (e.g., Statistics Canada, 1987). Joint offspring promote solidarity between spouses, and childlessness is associated with higher spousal conflict and divorce (e.g., Rasmussen, 1981); homicide risk may parallel divorce risk. Moreover, whereas couples in *de facto* unions are less likely than those in registered unions to have children of the present marriage, they are more likely to have stepchildren (e.g., Bumpass et al., 1989; Khoo, 1987), and the presence of stepchildren is itself a risk factor for spousal conflict and violence (Daly and Wilson, 1992; White and Booth, 1985; Wilson and Daly, 1987).

The issue of why the SROK is higher in *de facto* than in registered unions is distinct from the issue of why the gross homicide rates differ. However, some of the same factors that appear to be relevant to the high homicide rate in *de facto* unions may also be relevant to their high spousal SROK. Regarding poverty, for example, we propose that poor men, lacking other resources, are more physically coercive in marital conflict than are men of means. At the same time, poverty is likely to be associated with circumstances in which a husband's presence imposes more costs than benefits on his wife (as, for example, when a "man in the house" rule means that the man's presence jeopardizes a woman's welfare benefits; see, e.g., Darity and Myers, 1984). Women may then be less tolerant of abuse and readier to engage in violent retaliation.

Step-relationships are another phenomenon that is more prevalent in *de facto* than in registered unions (e.g., Bumpass et al., 1989; Khoo, 1987). Here, a possible link to a higher SROK resides in the fact that children live

with stepfather and natural mother much more often than the reverse. Step-parents are much more often hostile and assaultive toward their wards than are natural parents (e.g., Daly and Wilson, 1992; Flinn, 1988; Wilson and Daly, 1987), and defense of the children appears to be a common motive in cases of wives killing husbands. Whether the impact of the *de facto* versus registered union variable on the SROK is indeed mediated by step-relationships, poverty, and/or other correlates of this distinction are questions for future research.

In any event, while the *de facto* versus registered distinction is strongly related to the SROK within nations, the influence of this variable is insufficient to account for the unusually large proportion of female-perpetrated cases among U.S. spousal homicides. *De facto* unions constitute 46% and 43% of the cases in Table 6 for Chicago and Detroit, respectively, compared with 39%, 41%, 32%, and 24% of those for Canada, New South Wales, Scotland, and England and Wales, respectively. The higher spousal SROK in U.S. samples as a whole can thus be attributed in small part to the greater prevalence of *de facto* unions within U.S. spousal homicide samples, but this is clearly a minor contributor to national differences since the spousal SROK is substantially higher in the U.S. samples than in the other samples within registered and *de facto* unions considered separately (Table 6).

CORESIDING VERSUS SEPARATED COUPLES IN REGISTERED MARRIAGES

Within those spousal homicides in which the relationship between victim and killer was one of registered marriage, we can distinguish between couples for whom information in the police files indicates that they were estranged or separated at the time of the homicide and those who were evidently coresiding. Such a case-by-case coding is available in all of our homicide files except that for England and Wales. As shown in Table 7, the SROK is higher among coresiding than among separated couples within every sample, and this comparison is significant within the largest samples (Chicago, Canada, and New South Wales).

The lower SROK among separated couples in each sample apparently reflects the fact that men frequently pursue, threaten, assault, and kill wives who have left them (e.g., Allen, 1990; Browne, 1985, 1987; Daly and Wilson, 1988b; Daly et al., 1982; Wallace, 1986; M. Wilson, 1989; Wilson and Daly, 1992a, 1992b), whereas jilted wives only rarely behave analogously.

Estranged couples constitute 18% and 27% of the cases in Table 7 for Chicago and Detroit, respectively, compared with 21%, 21%, and 14% of those for Canada, New South Wales, and Scotland, respectively. Other things being equal, this factor should thus reduce the SROK in the United States compared with other samples, and the higher spousal SROK in United

Table 7. Number of Spousal Homicides and the Sex Ratio of Killing (SROK) for Coresiding versus Estranged Couples in Registered Marriages

Data Set	Couples Evidently Still Coresiding			Couples Living Apart			Chi- Square	P
	Killer			Killer				
	Man	Woman	SROK	Man	Woman	SROK		
Chicago 1965-1989	373	374	100	117	52	45	20.0	< .001
Detroit 1972	13	20	154	7	5	71	1.3	ns
Canada 1974-1983	408	108	26	121	17	14	5.2	< .01
New South Wales 1968-1986	137	47	34	46	3	7	8.7	< .01
Scotland 1979-1987	53	29	55	10	2	20	1.7	ns

States samples as a whole cannot be attributed, even in part, to differential prevalence of coresiding versus estranged couples in the different spousal homicide samples. And again, as in the case of registered versus de facto unions, this factor is not an important source of national differences in the sense that the SROK remains substantially higher in the U.S. samples than in the other nations when coresiding and estranged couples are considered separately (Table 7).

AGE DISPARITY

Daly and Wilson (1988b) found that Canadian spousal homicide rates increased as the couple's age disparity increased. This was true for both wives and husbands, regardless of who was the older party. Mercy and Saltzman (1989) replicated these results in the United States. These findings raise the question of whether the SROK is related to the spouses' ages and age disparity.

Table 8 presents comparisons between the ages and age disparities of couples in wife-victim versus husband-victim cases. There is no evidence that either the man's or the woman's age considered alone distinguishes these two outcomes. However, there were some distinctions with respect to age disparity: The husband's age minus the wife's was significantly greater in male-victim than in female-victim cases in the two largest samples (Chicago and England and Wales) and nearly so in the third largest (Canada).

In general, the absolute age disparity distinguished wife- versus husband-victim cases less well than the signed difference. This means that although spousal homicide rates increase for both spouses as age disparity increases in either direction (Daly and Wilson, 1988b; Mercy and Saltzman, 1989), the two sorts of age disparity are not equivalent. In Chicago, for example, the SROK for couples with age disparities of less than 10 years ($n = 1,299$) was

Table 8. Mean Ages of Husband and Wife and Mean Age Difference (Husband's Age *minus* Wife's Age) in Female-Victim *versus* Male-Victim Spousal Homicides

Data Set	Husband Killed Wife	Wife Killed Husband	<i>t</i>	<i>df</i>	<i>P</i>
	Mean ± SE	Mean ± SE			
Chicago					
Husband's Age	38.3 ± 0.4	38.8 ± 0.4	0.84	1703	.400
Wife's Age	35.0 ± 0.4	34.3 ± 0.4	-1.15	1703	.250
Age Difference	3.3 ± 0.3	4.4 ± 0.3	2.75	1702	.006
Absolute Age Disparity	6.5 ± 0.2	6.8 ± 0.3	0.82	1702	.412
Canada					
Husband's Age	41.4 ± 0.5	40.9 ± 0.8	-0.47	1057	.641
Wife's Age	37.7 ± 0.5	36.1 ± 0.7	-1.67	1056	.096
Age Difference	3.7 ± 0.3	4.7 ± 0.5	1.87	1055	.061
Absolute Age Disparity	5.9 ± 0.2	6.8 ± 0.4	1.85	1055	.065
New South Wales					
Husband's Age	41.7 ± 0.8	39.0 ± 1.2	-1.74	393	.083
Wife's Age	37.8 ± 0.8	36.6 ± 1.1	-0.85	374	.398
Age Difference	3.8 ± 0.4	2.4 ± 0.7	-1.68	371	.095
Absolute Age Disparity	5.9 ± 0.3	5.0 ± 0.5	-1.59	371	.112
England/Wales					
Husband's Age	42.3 ± 0.5	43.6 ± 1.0	1.24	1200	.215
Wife's Age	39.7 ± 0.5	38.7 ± 0.9	-0.94	1201	.348
Age Difference	2.7 ± 0.2	4.9 ± 0.6	3.55	1199	.000
Absolute Age Disparity	5.4 ± 0.2	7.2 ± 0.5	3.54	1199	.000
Scotland					
Husband's Age	42.5 ± 1.4	41.0 ± 1.8	-0.61	137	.545
Wife's Age	40.4 ± 1.4	39.6 ± 1.7	-0.37	137	.712
Age Difference	2.0 ± 0.6	1.5 ± 0.9	-0.52	137	.604
Absolute Age Disparity	4.8 ± 0.4	4.3 ± 0.6	-0.63	137	.527

NOTE: Missing information on age of spouse: Chicago = 2 cases; Canada = 3; New South Wales = 22; England/Wales = 3; Scotland = 0.

102, but when wives were 10 or more years older than husbands ($n = 77$), the SROK was just 57, and when wives were 10 or more years younger ($n = 328$), the SROK was 117. Thus, although neither the man's nor the woman's age was a predictor of who killed whom, excess risk befell the older spouse in markedly age-discrepant couples (see also C. Block, 1987b:10). The generality of such effects is called into question, however, by the nonsignificant opposite trends in the smaller samples from New South Wales and Scotland.

ETHNIC GROUP DIFFERENCES

Table 9 shows the number of spousal killings and other killings perpetrated

by blacks, whites, latinos, and others in Chicago and the associated SROK values. (See C. Block, 1992, for definition of these "ethnic" categories as employed by Chicago police.) As was first noted by C. Block (1987a, 1987b), the high proportion of female-perpetrated cases among Chicago spouse-killing is predominantly a black phenomenon. Data in Mercy and Saltzman's (1989) Table 3 indicate that the same is true for the United States as a whole: Their national data for 1980 would yield a black spousal SROK of 122 versus a white value of 57.

Table 9. Number of Homicides and the Relationship-Specific Sex Ratio of Killing (SROK) for Spousal versus Other Homicides, by Ethnicity of Killer, in Chicago, 1965-1989

Relationship	Black			White			Latino			Other		
	Killer			Killer			Killer			Killer		
	Man	Woman	SROK									
Spouse	577	753	131	178	76	43	76	22	29	12	10	83
Other	8,715	1,107	13	1,222	87	7	1,569	39	2	69	12	17

NOTE: Missing information on killer's ethnicity: Spouse = 2 cases; Other = 15.

Moreover, the data in Table 9 show that the high SROK for blacks in Chicago is specific to the marital relationship; it is not replicated in other homicides. This fact means that a satisfactory explanation for the relatively high ratio of female to male killers among blacks must make specific reference to relationships between men and women. The unusually high spousal SROK among Chicago blacks cannot be accounted for merely by differential opportunity, nor can it be accounted for by a supposed domain-general convergence of the sexes among blacks in regard to violence or criminality, as many authors have claimed (see Laub and McDermott, 1985:84-85).

Notwithstanding the large differences in spousal SROK values among blacks, whites, and latinos in Chicago, the risk factors we discussed earlier, namely, registered versus de facto marital union, coresidency versus separation, and shootings versus other means of killing, show the same directional patterns of risk within each of these three groups (Table 10). De facto unions, separated couples, and nongun cases are characterized by higher SROK values than registered unions, coresiding couples, and shootings, respectively, within each group.

Homicide rates are higher among blacks than among whites in Chicago (e.g., C. Block, 1987a, 1987b, 1992; R. Block, 1976; Pokorny, 1965) and in other U.S. cities (e.g., Boudouris, 1971; Lundsgaarde, 1977; Wilbanks, 1984; Wolfgang, 1958). This differential apparently applies to both sexes. Black

Table 10. Number of Homicides and the Relationship-Specific Sex Ratio of Killing (SROK) for Spousal Homicides, by Ethnicity of Perpetrator and by Three Predictors of Victim's Sex, in Chicago, 1965-1989

Predictor	Black			White			Latino			Other		
	Killer			Killer			Killer			Killer		
	Man	Woman	SROK									
Type of Marital Union												
Registered*	309	365	118	130	46	35	44	11	25	6	3	50
De Facto	268	388	145	48	30	63	32	11	34	6	7	117
Coresidency versus Estrangement (Registered Marriages)												
Coresiding*	238	322	135	99	39	39	30	9	30	5	3	60
Estranged	71	43	61	31	7	23	14	2	14	1	0	0
Method of Killing												
Shooting	319	352	110	94	33	35	47	12	26	5	2	40
Other*	258	401	155	84	43	51	29	10	34	7	8	114

* Two cases of missing information on killer's ethnicity.

homicide rates within the United States have been related to economic circumstances, history, social structure, and political and legal disenfranchisement (e.g., Blau and Blau, 1982; R. Block, 1976; Curry and Spergel, 1988; Hawkins, 1986, 1990; Lane, 1986; Messner, 1982, 1983; Messner and Tardiff, 1986; Sampson, 1985, 1987).

Like total homicide rates, spousal homicide rates are much higher among blacks than among whites, both in Chicago (C. Block, 1987a, 1992) and in the United States as a whole (Mercy and Saltzman, 1989). The relationship between membership in the urban underclass and homicide rates is not straightforward, however. Like blacks, Chicago latinos are strongly represented in Chicago's underclass (W. Wilson, 1984), and their gross homicide rate is several times that of whites (C. Block, 1992). However, the latino spousal homicide rate is not much higher than that of whites, and their SROK is the lowest in Table 9, whereas the black index is the highest. Clearly, not all characteristics of spousal homicide among Chicago blacks and latinos can be accounted for by their underclass status, since their sex ratios of killing depart from that of the white majority in opposite directions. Similar economic and ecological circumstances have evidently inspired culturally differentiated responses, presumably depending upon historical factors, differences in social structure, and different intensities of racial stigmatization and disenfranchisement.

Whatever it is about being black in the United States that accounts for that group's exceptionally high spousal SROK, it is not some attribute of black people everywhere. Table 1 includes one African data set, which pools spousal homicides cases from anthropological studies of several tribal peoples under colonial rule (Bohannon, 1960); the SROK was just 6. In Canada (1974–1983), the spousal SROK for blacks was just 15 ($n = 31$ spousal homicides) compared with 24 for Caucasians ($n = 763$ spousal homicides).

The nearest Canadian analogue to Chicago's black underclass may be the economically impoverished and politically disenfranchised aboriginal peoples (e.g., Frideres, 1988; Statistics Canada, 1984; York, 1989). Like U.S. blacks, native Canadians have high homicide rates, and we find that they also have a high spousal SROK. For spousal homicides perpetrated by Canadians classified in the Statistics Canada homicide files as natives (Indians, Inuit, and Métis), the SROK is 76 ($n = 202$ spousal homicides), substantially and significantly higher (Chi-square = 53.9, $p < .0001$) than in the rest of the Canadian data set (SROK = 23; $n = 858$ spousal homicides).

It appears that the spousal SROK for native people in the United States may also be high. In the 1965–1989 Chicago homicide file, there were only 13 spousal cases in which the killers were identified by police as Amerindians: Victims were 10 husbands and 3 wives, yielding a SROK of 333. Despite the small numbers, this gender distribution is significantly different from that of the 254 cases perpetrated by whites ($p < .001$ by Fisher exact probability test).

Relatively high homicide rates may be widely prevalent among disenfranchised and impoverished minorities, but it does not follow that underclasses would necessarily have high *spousal* homicide rates, and still less that they should have high spousal SROK values. We suggest that the effects of political and economic circumstances on the spousal SROK are influenced by culturally variable social dynamics of kinship, by sexual conflicts, and by sex ratios, marriage markets, and the intensity of intrasexual competition (M. Wilson, 1989; Wilson and Daly, 1992a). Such influences are, again, subjects for future research.

A MULTIVARIATE ANALYSIS OF PREDICTORS OF WHO KILLS WHOM

Since ethnicity, registered versus de facto marital union, coresidency, and perhaps other factors related to the SROK are to some degree correlated with one another, assessment of their separate and cumulative impacts upon the number of male versus female spousal homicide victims requires a multivariate analysis. We subjected the data on Chicago spousal homicides to a stepwise discriminant function analysis (Norušis, 1986), using 1,704 cases for which the data were complete. (Two cases were excluded due to missing

information on one variable.) Our aim in this analysis was not to generate a classificatory "model," but simply to assess whether each of the variables found to be associated with SROK in the univariate analyses retained a significant relationship in a multivariate analysis. The dependent variable to be "predicted" was the victim's sex (1 = male; 2 = female), and the "predictor" variables were as follows:

- FemEthnic: the woman's ethnicity (1 = black; 2 = nonblack)
- MalEthnic: the man's ethnicity
- DiffAge: the man's age minus the woman's
- Union: registered versus de facto marital union (1 = registered; 2 = de facto)
- Coreside: coresidency versus separation (1 = coresidency; 2 = separation)
- Method: shooting versus other method (1 = shooting; 2 = nonshooting).

The results of this analysis (Table 11) reinforce the results of the univariate analyses presented above. Five variables proved to be statistically significant ($p < .0001$) predictors of whether the wife or husband was killed. In order of predictive power, they were FemEthnic, Coreside, Method, DiffAge, Union. MalEthnic was only slightly less strongly related to victim's sex than was FemEthnic. However, the two ethnicity variables were highly correlated with one another, such that only 5.6% of the couples were of different ethnicities, and MalEthnic did not add significantly to prediction once FemEthnic had entered the analysis. Thus, each of the variables that was significantly associated with victim's sex in univariate analyses remained a significant predictor in the multivariate analysis.

Table 11. Predictors of Victim's Sex in 1,704* Chicago Spouse Killings (Stepwise Discriminant Analysis)

Step	Variable	Wilks' Lambda	Partial R^2	Standardized Canonical Coefficient	F	P
1	FemEthnic	.93749	.0625	.79584	113.48	< .0001
2	Coreside	.91740	.0201	.44212	76.57	< .0001
3	Method	.91249	.0049	-.23388	54.34	< .0001
4	AgeDiff	.90754	.0050	-.24263	43.27	< .0001
5	Union	.90690	.0006	-.09005	34.86	< .0001

* Two cases of missing information on killer's ethnicity.

DISCUSSION

In the United States, an unusually high proportion of spousal killers are women. We have documented this phenomenon by contrasting U.S. homicide data with data from other nations, and we have eliminated several candidate explanations for it. The phenomenon cannot be attributed directly to the availability of guns in the United States, nor to a domain-general convergence of U.S. men's and women's violent inclinations, nor to recent social change.

It is important to note that although U.S. women kill their husbands almost as often as the reverse (and in some groups, such as Chicago blacks, even more often than the reverse), this does *not* imply symmetry in wives' and husbands' actions or motives. Men often hunt down and kill spouses who have left them; women hardly ever behave similarly. Men kill wives as part of planned murder-suicides; analogous acts by women are almost unheard of. Men kill in response to revelations of wifely infidelity; women almost never respond similarly, although their mates are more often adulterous. Men often kill wives after subjecting them to lengthy periods of coercive abuse and assaults; the roles in such cases are seldom if ever reversed. Men perpetrate familicidal massacres, killing spouse and children together; women do not. Moreover, it seems clear that a large proportion of the spousal killings perpetrated by wives, but almost none of those perpetrated by husbands, are acts of self-defense. Unlike men, women kill male partners after years of suffering physical violence, after they have exhausted all available sources of assistance, when they feel trapped, and because they fear for their own lives. These qualitative differences between wife killings and husband killings have been demonstrated in other Western nations (Bacon and Lansdowne, 1982; Daly and Wilson, 1988b; Polk and Ranson, 1991; Wallace, 1986; M. Wilson, 1989; Wilson and Daly, 1992b), and they are evidently just as true of spousal homicides in the United States, too (our unpublished analyses of Chicago cases; see also Bernard et al., 1982; Browne, 1985, 1987; Campbell, 1992; Dobash et al., 1992; Jones, 1980; Lundsgaarde, 1977; Showalter et al., 1980; Wilbanks, 1984; Wolfgang, 1958).

Progress toward an understanding of spousal homicide and its risk patterns will be slow until researchers confront the major sex differences in motives implied by the contrasts noted above. Moreover, an understanding of marital violence must be predicated on some theory of the nature of marriage. The marital union is a socially recognized, cross-culturally ubiquitous relationship in which a man and a woman form a partnership with mutual obligations, including a right of sexual access (often but not necessarily exclusive), and an expectation that the relationship will persist through pregnancy and child rearing and involve cooperative investment in offspring. Marriage is thus a particular kind of intimate relationship, distinct from both friendship and

blood kinship, to which people bring particular conceptions of their entitlements and obligations. These conceptions must be identified if researchers wish to know what will be perceived as betrayals of the relationship and what will elicit violence. Men, for example, are generally more concerned than women about the specifically sexual fidelity of their partners (e.g., Buss, 1988; Teismann and Mosher, 1978; Wilson and Daly, 1992a), and they exhibit a proprietariness about their spouses of a quality and vehemence rarely seen in women (Dickemann, 1981; M. Wilson, 1989; Wilson and Daly, 1992a, 1992b).

Unfortunately, rather than trying to elucidate the special characteristics of the marital relationship and the specific areas in which the agendas of women and men come into conflict, several authors have recently maintained that wives and husbands behave much alike in their mutual assaults (e.g., McNeely and Mann, 1990; McNeely and Robinson-Simpson, 1987; Steinmetz, 1977-78; Straus and Gelles, 1990), and are furthermore alike in their motives for violence (e.g., Shupe et al., 1987). The evidence offered in support of this "sexual-symmetry-of-marital-violence" thesis consists of (1) interviewees' acknowledgments of "acts" such as "hit or tried to hit with an object" and (2) the fact that not many more U.S. wives are slain than U.S. husbands. The self-report evidence has been heavily criticized by Dobash et al. (1992). As for the homicide data, the fact that the near equity in spousal homicide is a peculiarly U.S. phenomenon has not been recognized by the proponents of the sexual-symmetry thesis, nor have they addressed the evidence (see above) that there are large qualitative differences in husband killings versus wife killings even when their numbers are roughly similar.

Variations in homicide rates across relationship categories, demographic variables, and so forth, provide a sort of "assay" of variations in the prevalence and intensity of interpersonal conflicts (Daly and Wilson, 1988a, 1988b). When homicides are the outcomes of extreme interpersonal conflicts, their variable prevalence may reveal patterned variation in circumstances eliciting relationship-specific conflicts, and those patterns are likely to parallel patterns of other conflict manifestations. Age-discrepant couples, for example, have high homicide rates (Daly and Wilson, 1988b; Mercy and Saltzman, 1989) and high divorce rates (e.g., Day, 1964). It is not difficult to construct plausible "conflict" interpretations of the variation in spousal homicide rates that are associated with age discrepancy, the registered versus de facto union distinction, coresiding versus separated status, and perhaps ethnic group membership, as well. It is less obvious, however, why factors that exacerbate conflict and raise overall spousal homicide rates should also tend to be associated with higher sex ratios of killing (SROK values), or in other words, why increasing conflict should raise the rates of killing by wives more than by husbands.

We offer three hypotheses that might explain the variations in SROK values seen in Tables 6 through 10. All three are proposed tentatively and warrant much further research.

The first and most general of our three hypotheses is that increased marital conflict often takes the form of increased male coercion, with attendant constraint of female options, which inspires women to drastic forms of self-defense and escape. Poverty and other conflict-exacerbating circumstances must often lower a husband's utility in his wife's eyes while raising his concern about losing her. When men escalate their violence in such situations, the increments presumably consist mainly of coercive acts designed to control women and unlikely to kill them, whereas the trapped wives in such situations can be driven to new levels of self-defense, including the use of potentially lethal weapons. This hypothesis could explain the tendency for diverse variables that raise the gross spousal homicide rate to raise the SROK as well. To assess this hypothesis, a first question for future research is whether the frequency and severity of sublethal male coercion indeed parallels the SROK in its response to demographic and circumstantial variables.

The second hypothesis is that the spousal SROK rises when women feel socially empowered to retaliate against male coercion. In U.S. cities, including Chicago, many black women of the underclass maintain strong, accessible matrilineal kinship networks (e.g., Stack, 1974). Residence patterns are often matrilocal: Women with children are likely to live nearer to and to have more frequent contact with their own genealogical kin than with their husband's. It seems plausible that this variable is highly relevant to ethnic group differences in the spousal SROK. Latinos have a low spousal SROK and strongly patrilineal, patrilocal traditions; aboriginal North Americans have high SROK values and often have more matrilineal traditions and more matrilocal contemporary residence patterns (e.g., Schlegel, 1972). It is also noteworthy that the East Indian and African peoples in Table 1, among whom women scarcely ever killed their husbands, were strongly patrilineal societies with bride acquisition and patrilocal residence (Bohannon, 1960). In such societies, in which women are cut off from their kin and may be treated as household servants by their mothers-in-law, an abused wife may feel she has no recourse other than suicide or flight; violence against the husband is futile and almost unthinkable (see, e.g., Counts, 1990). Conversely, an abused wife who is surrounded by supportive relatives has more assertive options available for changing her situation, and she may be especially tempted to react violently in the absence of the service of legal or political institutions for protection. However, the majority presence of the wife's relatives might be expected to deter husbands from seriously assaulting wives, so that the incidence of serious wife battering might be lower in matrilineal kinship systems. We would predict that husbands' feelings of entitlement to beat

wives is greater in traditionally patrilineal societies since the cultural institutionalization of male sexual proprietariness is elaborate. On the other hand, there is an argument by which violence might be reduced in traditional patrilineal societies: Since women's marital fidelity is highly valued and women are relatively unlikely to terminate the marital relationship unilaterally, either temporarily or permanently, wives may be at less risk of violent masculine coercive control since control can be achieved by other means (Wilson and Daly, 1992a). Whether the spousal SROK is indeed higher when women are surrounded by matrilineal relatives than when they dwell among their husbands' relatives is amenable to study.

The third hypothesis is that women's lethality in marital conflict approaches or surpasses men's specifically when women feel the need to defend their children of former unions against their current mates. We suggested above that the higher SROK values in de facto than in registered unions might reflect a greater prevalence of stepfathers. Ethnic group contrasts may also be mediated, at least in part, by this variable. If black children in Chicago, for example, experience higher rates of their fathers' absence (e.g., Bachrach, 1983) and of new men in their mothers' lives than white children, and if latino children experience lower rates of substitute fatherhood than either blacks or whites, this could largely account for the ethnic contrasts in SROK values in Tables 9 and 10.

These three hypotheses are not necessarily alternatives. We expect that circumstances which in effect devalue the social and economic worth of husbands provoke both male coercion and female defense, and that the combination of such circumstances with matrilineal residential patterns and a high incidence of step-relationships has much relevance to the high spousal SROK in Chicago and to the ethnic group differences therein.

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