Wife Killing: Risk to Women as a Function of Age

Todd K. Shackelford
Florida Atlantic University
David M. Buss
University of Texas at Austin
Jay Peters
University of Maine

Younger women, relative to older women, incur elevated risk of uxoricide—being murdered by their husbands. Some evolutionary theorists attribute this pattern to men's evolved sexual proprietariness, which inclines them to use violence to control women, especially those high in reproductive value. Other evolutionary theorists propose an evolved homicide module for wife killing. An alternative to both explanations is that young women experience elevated uxoricide risk as an incidental byproduct of marriage to younger men who commit the majority of acts of violence. We used a sample of 13,670 uxoricides to test these alternative explanations. Findings show that (a) reproductive-age women incur an elevated risk of uxoricide relative to older women; (b) younger men are overrepresented among uxoricide perpetrators; and (c) younger women, even when married to older men, still incur excess risk of uxoricide. Discussion examines competing explanations for uxoricide in light of these findings.

According to the reports of battered wives, battering husbands, and friends and family of both parties, physical violence is a punishment inflicted by husbands on wives they suspect of sexual infidelity (Daly & Wilson, 1988; Dobash & Dobash, 1979). Male sexual jealousy or "male sexual proprietariness" is the most common cause of wife battery, cross-culturally (Daly & Wilson, 1988). Men worldwide think, feel, and act as if their wife is their exclusive sexual property. A woman's sexual intercourse with a man, not her husband, according to Daly and Wilson (1988), is treated by her husband as a property violation, demanding retribution and repayment for damages. Legal systems across cultures sometimes codify male sexual proprietariness, using phrasings for female infidelity that are similar to phrasings used for property violations (Daly, Wilson, & Weghorst, 1982; Wilson & Daly, 1987).

The fact that men attempt to control their spouses using a variety of tactics (Buss, 1988; Buss & Shackelford, 1997) suggests a conflict of interest between the sexes. According to some evolutionary arguments, women have evolved sexual strategies, such as the desire to control their own sexuality, that are at odds with the strategies of their partners. One female strategy, for example, is to secure investment and commitment from one man while securing better genes from another man (Gangestad, 1993; Smith, 1984). The conflicts

between the sexes that ensue can be called forms of "strategic interference," because the woman's strategy cannot be successfully enacted without interfering with the man's strategy, and vice versa (Buss, 1989).

According to Daly and Wilson (1988), Dickemann (1981), Buss (1988), and others, men have evolved several strategies designed to deter their spouses from committing adultery, ranging from vigilance to violence. At the most abstract level, men can control their wives by conferring benefits, by inflicting costs, or both. Not all men possess resources that might be used to confer benefits, and so these men are predicted to be especially prone to using violence, or the threat of violence, to control their partner's sexuality.

According to Daly and Wilson (1988), there is brinksmanship in using violence, and sometimes it slips over the edge: "Men . . . strive to control women . . . women struggle to resist coercion and to maintain their choices. There is brinksmanship and risk of disaster in any such contest, and homicides by spouses of either sex may be considered slips in this dangerous game" (p. 205). More recently, they note that " . . . the fatal outcome in [spouse killings] is hypothesized to be an epiphenomenal product of psychological processes that were selected for their nonlethal outcomes" (Wilson, Daly, & Daniele, 1995, p. 287). According to this argument, spousal homicide per se is not an adaptation, not a designed outcome, and does not imply that the killing of one's spouse ever was adaptive. Instead, homicide is an unintended outcome of the use of violence designed for control and deterrence, not designed for death.

An alternative evolutionary theory proposes that men have evolved specific homicide modules, including a spousal homicide module (Buss & Duntley, 1998). According to this theory, there have been some historical circumstances in which killing an unfaithful spouse, or one who has defected from the relationship, might have been adaptive. An infidelity by the wife might cause a man to devote 20 or more years of effort to another man's children, and the public discovery would inflict substantial reputational damage on him. Because evolution by selection operates on a relative metric, one man's loss of a wife is an intrasexual competitor's gain. According to Evolved Homicide Module Theory, although some instances of wife killing may be "slips" or "epiphenomena," most are intentional and designed products of the evolved homicide mechanisms.

The finding that younger wives tend to be killed more often than older wives poses a puzzle, especially for the "slip-up" theory of coercive control. Why would men be more inclined to kill younger women, since such women are higher in fertility and reproductive value than are older women? This finding is especially puzzling, according to the Daly and Wilson (1988) slip-up theory, in that it defies the way in which men treat all other forms of "property." Men are not more likely to "destroy" a new, expensive car than an old, cheap car, so why would "male sexual proprietariness" lead men to kill younger wives more often than older wives? Daly and Wilson (1988, p. 206) offer the following explanation: "We propose that . . . men are most jealous of the youngest women [presumably because of their high reproductive value] and are therefore most inclined to behave coercively toward such wives . . . Paradoxically, the high homicide risk incurred by young wives is indicative not of their low worth from the male perspective, but of precisely the opposite."

Evolved Homicide Module Theory offers a different explanation (Buss & Duntley, 1998). Younger women are killed more often than older women because the damage to the husband inflicted by an infidelity or defection is commensurately greater and homicide is one way to reduce the damage. When an older woman of low reproductive value defects to a rival, little may be lost in the currency of reproduction. When a younger women defects to

a rival, the husband's loss is compounded by the tremendous bonus that the rival gains. Thus, the greater risk of uxoricide experienced by younger women is consistent with Evolved Homicide Module Theory.

Both of these competing evolutionary theories may be challenged by a third explanation, which suggests that younger women incur a greater risk of uxoricide not because they are so reproductively valuable, but rather as an incidental byproduct of the fact that young women happen to be married to young men. It is well known, for example, that young men between the ages of 16 and 24 commit the majority of acts of aggression, including homicide (Wilson & Daly, 1985). So it might be that the greater risk that young wives incur has nothing to do with their own age per se, but is a byproduct of a tendency of young men to use violence in general, combined with assortative mating for age which places young women into close proximity to dangerous young men. A key method for adjudicating among these competing theories is to determine whether the uxoricide rate for reproductive age women is greater than the uxoricide rate for postreproductive age women, even after controlling for husband's age. This question can be addressed by comparing the uxoricide rate of reproductive age women with the uxoricide rate of postreproductive age women across two groups: one in which the husband is older and one in which the husband is younger. If the uxoricide rate for reproductive age women is higher than the uxoricide rate for postreproductive-age women among women married to older husbands, this would provide strong evidence that repro-ductive-age women are the special targets of uxoricide, and that this targeting is not attrib-utable to the relatively youthful age of their husbands. This was the primary goal of the study.

METHODS

Database. The United States Federal Bureau of Investigation (FBI) requests informa-tion from each state on criminal homicides. Supplementary Homicide Reports (SHRs) include incident-level data on every reported homicide, including the relationship of the vic-tim to the offender, and the ages of the victim and offender. The database analyzed for the present project includes SHRs for the years 1976-1994 (Fox, 1996), providing information on 429,729 homicides. Uxoricide rates were calculated according to relevant population estimates provided by the United States Census (available from the first author upon request).

Procedures. Of the over 400,000 cases of homicide included in the database, 13,670 were cases in which a man killed the woman to whom he was legally married. All analyses were restricted to these cases (one case was omitted due to probable coding error: A 3-year-old "wife" was murdered by her 31-year-old husband. Because of the large number of cases, the results do not change when this case is omitted). The average age of uxoricide victims was 39.4 years (SD = 15.4 years), ranging from 15 to 95 years. The average age of uxori-cide perpetrators was 43.3 years (SD = 15.7 years), ranging from 16 to at least 98 years (ages 98 and older were coded in the database as 98 years; 3 such cases were coded for men).

RESULTS

Figure 1 shows uxoricides per million married women per annum as a function of the age of the murdered wife. The uxoricide rate is highest for teenage women who have the greatest reproductive value, as has been found in smaller samples (Daly & Wilson, 1988). The uxori-cide rate for teenage women is about two times greater than that for women aged 20 to 24
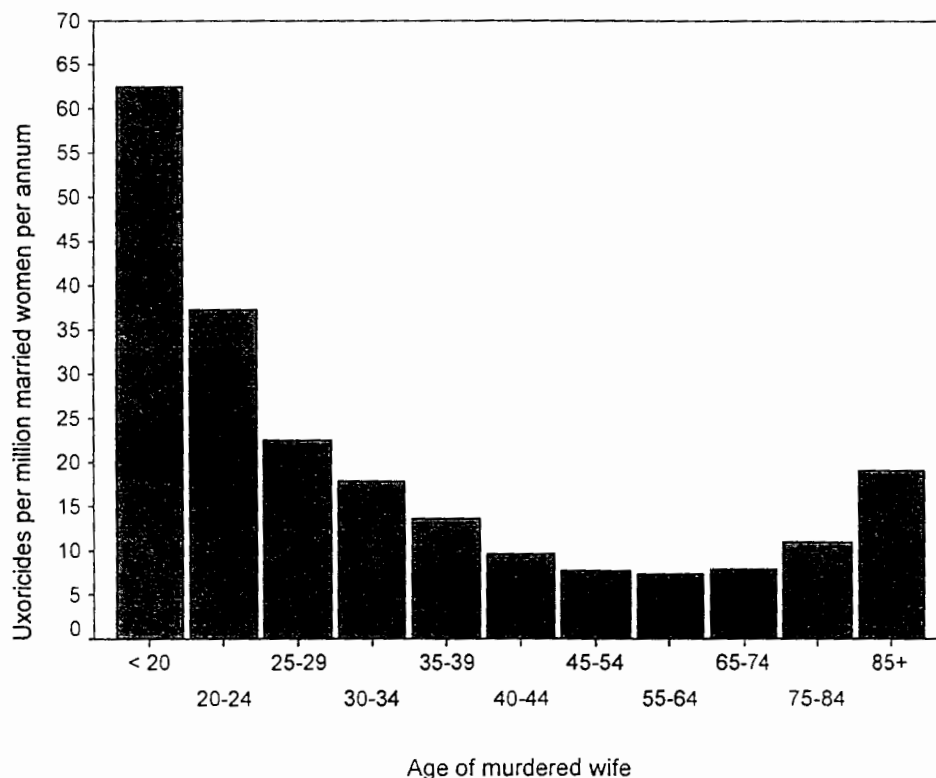
Figure 1. Uxoricides per million married women per annum as a function of age of murdered wife.

years. The uxoricide rate for women 20 to 24 years is about 1.5 times greater than that for women aged 25 to 29 years. The clear trend is for the uxoricide rate to decrease with the repro-ductive value of the woman. Older, postreproductive age women are killed by their husbands at much lower rates than are younger, reproductive age women. This trend shows a slight reversal at the oldest age category, for women who are 85 or older, a finding also reported by others and possibly reflecting "mercy killings" of wives with terminal illnesses.

We next investigated whether younger men were overrepresented among uxoricide per-petrators. Figure 2 shows uxoricides per million married men per annum as a function of the age of the uxoricidal husband. Consistent with previous work, relatively younger men inflict uxoricide at greater rates than do relatively older men. The highest uxoricide rate is for men in their early 20s. Paralleling the uxoricide victimization rates for women, the clear trend in uxoricide perpetration rates for men is a decrease with age, from the early 20s to the early 80s. Also consistent with previous work, the uxoricide rate appears to increase suddenly for men who are 85 years and older.

We next conducted a test to discover whether women married to much older men incur an elevated risk of uxoricide. To facilitate future work on the relationship between uxoricide rate and spousal age discrepancy, we constructed Table 1 (cf. Wilson, Daly, & Wright, 1993, for a similar tabulation of Canadian data). For the present project, our interest was in comparing the uxoricide rates of women married to relatively older men with the uxoricide rates of women married to same-age men and relatively younger men. Women at the greatest risk of getting killed are under the age of 25 and married to men between 45 and 54 years (95.9 uxoricides
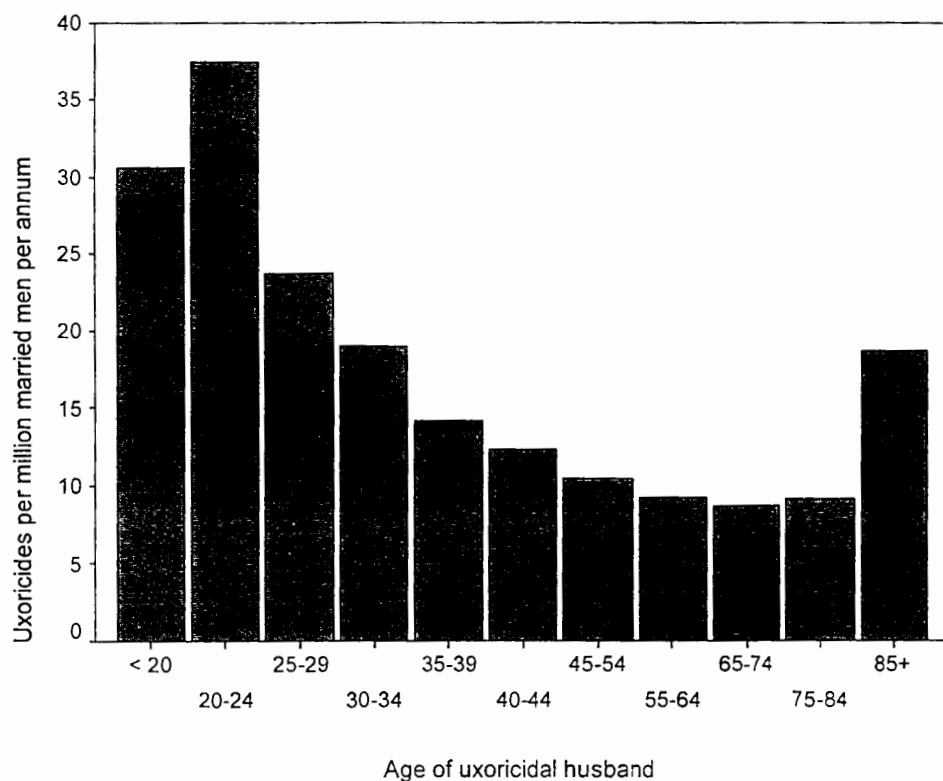
Figure 2. Uxoricides per million married men per annum as a function of age of uxoricidal husband.

dered wife.

an that for
the repro-
husbands
vs a slight
:ported by

ricide per-
unction of
inger men
ide rate is
omen, the
the early
ippears to

n incur an
ricide rate
993, for a
paring the
of women
of getting
uxoricides

Table 1. Uxoricides per Million Married Couples per Annum,
By Husband's Age and Wife's Age

Husband	Wife							
	< 25	25-34	35-44	45-54	55-64	65-74	75-84	85+
< 25	41.88	34.05	62.27	33.64	N/A	N/A	10.00	N/A
25-34	39.75	18.27	18.38	39.04	33.64	10.00	N/A	N/A
35-44	81.23	23.17	9.73	10.10	26.32	22.00	10.00	N/A
45-54	95.91	63.68	13.64	6.49	11.42	19.47	16.25	N/A
55-64	61.82	61.48	29.08	11.55	6.26	13.57	13.13	N/A
65-74	22.00	48.18	49.07	12.80	7.90	7.21	15.99	14.55
75-84	N/A	22.00	13.13	13.13	14.64	7.33	9.25	19.44
85+	N/A	0.00	N/A	14.55	N/A	20.83	15.81	24.15

Note. N/A = Population estimate of zero; therefore, uxoricide rate could not be computed.
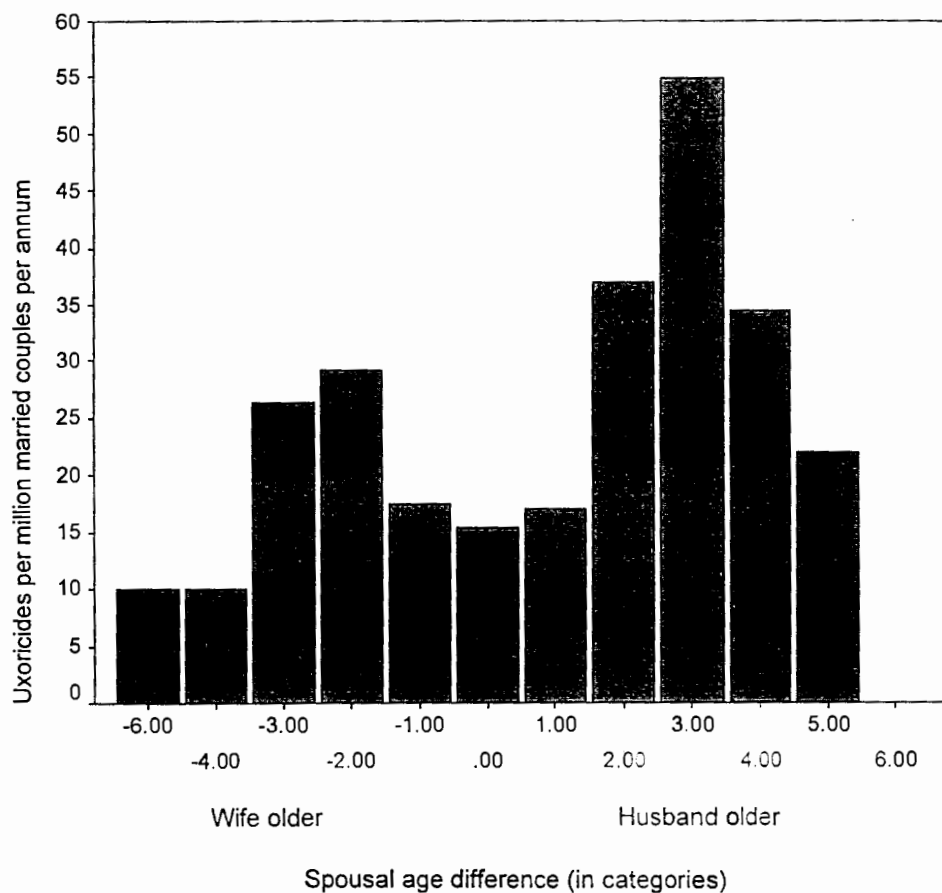
Spousal age difference (in categories)

Figure 3. Uxoricides per million married couples per annum as a function of spousal age difference, in categories. "1" indicates a one-category difference between the age of husband and age of wife, "2" indicates a two-category difference, and so on. Positive values refer to categorical differences in which the husband is older than the wife, whereas negative values refer to categorical differences in which the wife is older than the husband. "0" refers to cases in which husband and wife are in the same age category. Categories are as follows, in years: < 25, 25-34, 35-44, 45-54. 55-64, 65-74, 75-84, 85 and older.

per million per annum). Women who are toward the end of their reproductive years, between the ages of 35 and 44, and married to men in the 45-to-54 age bracket, incur only one-seventh the risk of being killed, with an annual rate of 13.6. Other age pairings show similar trends.

Figure 3 is constructed from the data in Table 1 and shows uxoricides per million married couples per annum as a function of spousal age difference, in categories. In this figure, "1" indicates a one-category difference between the age of a husband and the age of his wife, "2" indicates a two-category difference, and so on. Positive values refer to categorical differences in which a husband is older than his wife, whereas negative values refer to categorical differences in which a wife is older than her husband. "0" refers to cases in which the husband and wife are in the same age category. The age categories are as follows, in years: < 25, 25-34, 35-44, 45-54, 55-64, 65-74, 75-84, and 85 and older. Figure 3 shows that uxoricide rates for women married to relatively older men are higher than uxoricide rates for women married to same-age men and relatively younger men. The uxoricide rate for women
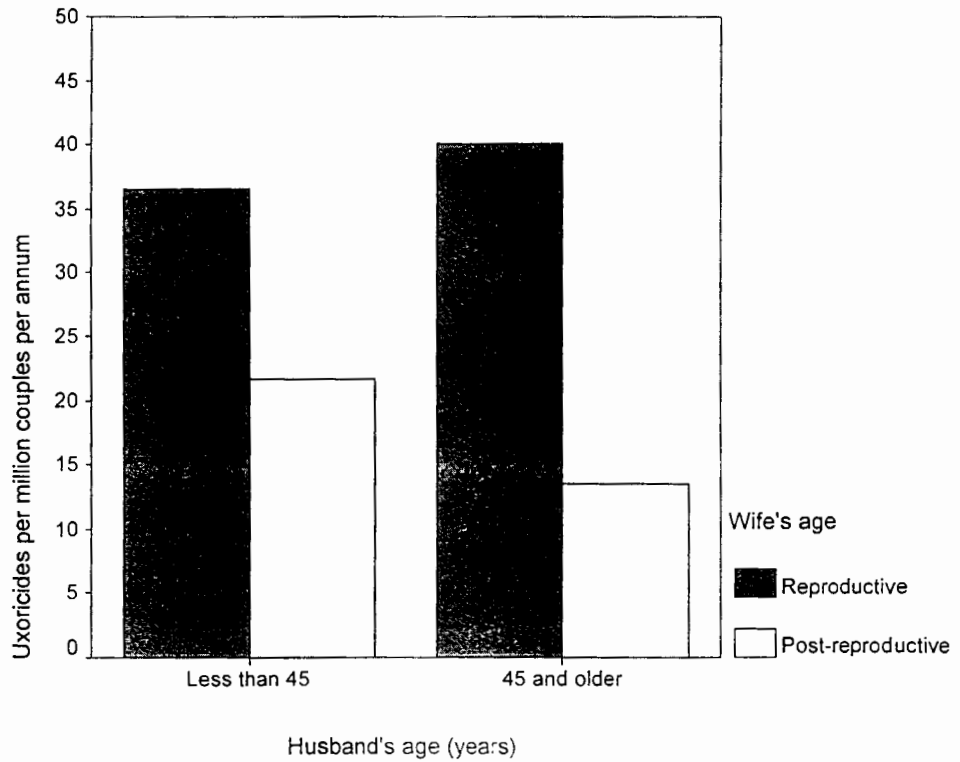
Figure 4. Uxoricides per million couples per annum as a function of husband's age and wife's reproductive status. Reproductive age women are less than 45 years old, whereas postreproductive age women are 45 years and older.

married to men who are older by three age categories is almost four times higher than the uxoricide rate for women married to same-age men, and almost three times higher than the uxoricide rate for women married to men who are younger by three age categories.

A critical test of the hypothesis that reproductive age women are at special risk of uxoricide is to compare the uxoricide rates for reproductive age women and postreproductive age women across two groups: women married to younger men and women married to older men. If reproductive age women are special targets of male sexual proprietariness, then reproductive age women should be murdered by their husbands at a higher rate than postreproductive age women, and this should be true for women married to younger men and women married to older men. This is precisely what Figure 4 reveals.

Figure 4 is constructed from the data in Table 1 and shows uxoricides per million couples per annum as a function of husband's age and his wife's reproductive status. The uxoricide rate for reproductive age women (younger than 45 years) is higher than the uxoricide rate for postreproductive age women (45 years and older) for marriages to younger men and for marriages to older men. Among women married to younger men, reproductive age women are killed at 1.5 times the rate of postreproductive age women. Among women married to older men, reproductive age women are killed at 3.5 times the rate of postreproductive age women. These rate differentials across husband age categories provide strong evidence that reproductive age women are special targets of uxoricide and that this excess risk is not attributable to their husbands' age.

DISCUSSION

Using a sample of nearly a half million homicides, we selected for analysis the 13,670 cases in which a man killed the woman to whom he was legally married. We documented that

1. reproductive age women incur an excess risk of uxoricide;
2. relatively younger men are overrepresented among uxoricide perpetrators; and
3. women married to much older men incur an excess risk of uxoricide.

These findings replicate with a much larger sample the findings of Daly and Wilson (1988), which were based on Canadian homicides.

A key contribution of the present research is a novel test of the hypothesis that reproductive age women incur excess uxoricide risk that is not solely attributable to their husbands' age. Because relatively young, reproductive age women tend to be married to relatively young men, and because younger men are overrepresented among homicide perpetrators in general, the elevated risk of uxoricide incurred by reproductive age women could be attributable to marriage to men who are overrepresented among homicide perpetrators. We compared the uxoricide rate of reproductive age women with the uxoricide rate of postreproductive age women across two groups: women married to younger men and women married to older men. Across both groups, the uxoricide rate for reproductive age women was higher than the uxoricide rate for postreproductive age women. Reproductive age women are special targets of uxoricide, and this special targeting cannot be attributed solely to marriage to relatively youthful men.

The current findings in principle are compatible with both evolutionary theories of wife killing—the "slip-up" theory, which suggests that young women elicit more jealousy and more intense male feelings of sexual proprietariness (Daly & Wilson, 1988), and the Evolved Homicide Module Theory, which suggests that most wife killings are intentional and designed (Buss & Duntley, 1998). Nonetheless, we note that the slip-up theory, which proposes a male psychology that treats women as "property," strains credulity in that men typically do not destroy other forms of valuable "property" that they "own." To the contrary, men go to great lengths to protect the property they own, and the more valuable the property, the more effort they expend to protect it. The fact that men kill wives who are most reproductively valuable directly contradicts the view that men treat such women as prized property. In contrast, it is precisely what is predicted by the Evolved Homicide Module Theory, because a spouse's infidelity or outright defection from the relationship constitutes the double-selective effect of one's own loss being an intrasexual rival's gain. Future tests must be conducted that more directly pit the competing evolutionary theories of mate killings against each other, with the above qualifications in mind.

Two additional findings are worthy of comment—the increase in the uxoricide victimization of women age 85 and older and corresponding perpetrator rates in the oldest age category (85 years and older). These wife killings may represent "mercy killings" in which an elderly man kills a sick, elderly wife who is suffering in her last weeks or months of life. If uxoricides in this oldest age category are "mercy killings," we might expect the murder to occur by the most painless methods, such as lethal injection or gassing, rather than by more painful methods such as bludgeoning that accompany the rage and anger typical of homicides of younger wives who defect or are suspected of infidelity (see Daly & Wilson, 1988). Future work can profitably address uxoricides in this oldest age group, particularly given the backdrop of an aging western population.

Wife killing is an abhorrent crime, but not all wives are at equal risk of being killed. Identifying a risk factor associated with the victims—in this case the age of the wife, and of the perpetrators—young men married to young women and older men married to younger

women, represents a first step toward developing a theory of homicide with tangible practical implications for intervention. Future research could profitably explore other risk factors, as well as safety factors that might lower a woman's risk of being killed. The presence of extended kin of the woman, for example, might deter husbands who are otherwise enraged about a wife's infidelity or defection (Figueredo, 1995; Figueredo et al., 1999). As another example, the availability and accessibility of a community shelter may provide refuge from a battering husband for a woman attempting to exit an abusive and potentially lethal relationship (Dobash & Dobash, 1979; Wilson & Daly, 1993). In this sense, the current study represents one small step toward understanding the baffling phenomenon of uxoricide.

REFERENCES

Buss, D. M. (1988). From vigilance to violence: Tactics of mate retention among American undergraduates. *Ethology and Sociobiology, 9*, 291-317.

Buss, D. M. (1989). Conflict between the sexes: Strategic interference and the evocation of anger and upset. *Journal of Personality and Social Psychology, 56*, 735-747.

Buss, D. M., & Duntley, J. D. (1998, July). *Evolved homicide modules.* Paper presented at the 10th Annual Meeting of the Human Behavior and Evolution Society, University of California at Davis.

Buss, D. M., & Shackelford, T. K. (1997). From vigilance to violence: Mate retention tactics in married couples. *Journal of Personality and Social Psychology, 72*, 346-361.

Daly, M., & Wilson, M. (1988). *Homicide.* Hawthorne, NY: Aldine de Gruyter.

Daly, M., Wilson, M., & Weghorst, S. J. (1982). Male sexual jealousy. *Ethology and Sociobiology, 3*, 11-27.

Dickemann, M. (1981). Paternal confidence and dowry competition: A biocultural analysis of purdah. In R. D. Alexander & D. W. Tinkle (Eds.), *Natural selection and social behavior* (pp. 417-438). New York: Chiron.

Dobash, R. E., & Dobash, R. P. (1979). *Violence against wives.* New York: Free Press.

Figueredo, A. J. (1995). *Preliminary report: Family deterrence of domestic violence in Spain.* Department of Psychology, University of Arizona, Tucson.

Figueredo, A. J., Corral-Verdugo, V., Frias-Armenta, M., Bachar, K. J., Goldman-Pach, J., McNeill, P. L., Kirsner, B. R., Castell-Ruiz, I., Valiente-Ots, M., & Villavicencio-Carrillo, P. (1999, June). *The sexual balance of power: Blood, solidarity, status, and honor in Sonora, Mexico.* Paper presented at the 11th Annual Meeting of the Human Behavior and Evolution Society, University of Utah, Salt Lake City.

Fox, J. A. (1996). *Uniform Crime Reports (United States): Supplementary Homicide Reports, 1976-1994.* (ICPSR version) [Computer file]. Boston: Northeastern University, College of Criminal Justice [Producer]. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [Distributor].

Gangestad, S. W. (1993). Sexual selection and physical attractiveness: Implications for mating dynamics. *Human Nature, 4*, 205-235.

Smith, R. L. (1984). Human sperm competition. In R. L. Smith (Ed.), *Sperm competition and the evolution of animal mating systems* (pp. 601-660). New York: Academic Press.

Wilson, M., & Daly, M. (1985). Competitiveness, risk taking, and violence: The young male syndrome. *Ethiology and Sociobiology, 6*, 59-73.

Wilson, M., & Daly, M. (1987). Impacts of the uncertainty of paternity on family law. *University of Toronto, Faculty of Law Review, 45*, 216-242.

Wilson, M., & Daly, M. (1993). Spousal homicide risk and estrangement. *Violence and Victims, 8,* 3-16.

Wilson, M., Daly, M., & Daniele, A. (1995). Familicide: The killing of spouse and children. *Aggressive Behavior, 21,* 275-291.

Wilson, M., Daly, M., & Wright, C. (1993). Uxoricide in Canada: Demographic risk patterns. *Canadian Journal of Criminology, 35,* 263-291.