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Lethal and Nonlethal Violence Against Wives and the Evolutionary Psychology of Male Sexual Proprietariness

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Violence against wives occurs in all societies, but the rates at which wives are beaten and killed are enormously variable over time and place. The rate of *uxoricide* (wife killing) in the United States, for example, is currently approximately five to ten times greater than in western Europe. In some societies, wife beating is normative and allegedly almost universal; in others, it is apparently rare and aberrant (Counts, 1990; Counts, Brown, & Campbell, 1992; Levinson, 1989). But despite this variability, the studies of anthropologists, criminologists, historians, psychologists, psychiatrists, and other family violence researchers suggest that the contexts and ostensible motives of violence against wives exhibit considerable cross-cultural consistency. One aim of this chapter is to identify a level of abstraction at which

AUTHORS' NOTE: We thank the following agencies for funding our research on violence against wives: the Arts and Humanities Research Board of McMaster University, the Harry Frank Guggenheim Foundation, the North Atlantic Treaty Organization, the Rockefeller Foundation, and the Social Sciences and Humanities Research Council of Canada.

one may describe a cross-culturally general masculine mind-set whose periodic use of violence is intelligibly contingent on experience and circumstance. A second aim is to suggest variables that may be responsible for husbands' differential use of violence in different social and cultural circumstances.

Our thesis is that the particular ways in which violence against wives is contingent on circumstances can be understood as systematic consequences of the evolved organization of the human male mind—in particular, of the functioning of psychological processes whose normal domain is the self-interested regulation of sociosexual interactions and conflicts. A phrase such as the "coercive masculine sexually proprietary complex" might be used to describe the intersection of sexually proprietary and violent psychological processes with which we shall be concerned.

If these (or any other) psychological phenomena are successfully characterized at a level of abstraction that transcends cultural particularity, then this provides strong support for the thesis that they were "designed" by the evolutionary processes of natural and sexual selection. Accordingly, violent capabilities and inclinations arose in our male ancestors in response to the demands of male-male competition, and they have presumably been further shaped in hominid evolution by selection in the contexts of big-game hunting and collective aggression or warfare. In addition to the utility of violent prowess in vanquishing enemies and in acquiring food, assaults and threats are effective coercive tactics more generally, whether in the context of helping oneself to another's property, in the pursuit of sexual access or in any other area in which interests are not consonant. Thus, although it is unlikely that any of the basic morphological and psychological necessities for violence evolved in the specific context of marital conflict, men have presumably used assaults and threats throughout history to deter wives from pursuing courses of action that their male partners disliked. An evolutionary perspective sheds considerable light on what it is that husbands dislike, why wives may be motivated to pursue such actions nevertheless, and what personal and situational variables affect the likelihood that husbands will resort to violence.

Our premise, then, is that violence against wives is a product of self-interested male motives directed at constraining wives' autonomy by "encouraging" them to prioritize their husbands' wants rather than their own. Unfortunately, we cannot address the issue of how effective such coercion really is (or was, in premodern social environments)

because there is virtually no systematic empirical evidence bearing on this issue. It seems obvious that threats and assaults would often have deterrent utility in controlling and monopolizing a wife, even though such coercion increases a woman's incentives to end the relationship. How violence against wives affects the victims' behavior and whether these effects serve the perpetrators' interests are important questions in need of further research.

Another issue that we will not pursue is that of the detailed functional organization of the psychology of coercion in general. Rather, we will simply assume that motives and emotions are usefully interpreted as adaptively contingent, that is, that their situational determinants can often be discovered by considering what are likely to be the contingent determinants of their utility for the actors. However, we stress that although we shall analyze risk factors for uxoricide, the utility of the underlying motives does not reside there: Killing wives is almost never an effective way of promoting the killer's interests, as we shall define "interests." Instead, we interpret uxoricides as epiphenomena (by-products) of the evolved psychology of the human male, in the sense that the relevant masculine psychological phenomena evolved because their nonlethal manifestations served the purposes of our male ancestors. The claim that uxoricide is an epiphenomenon rather than an adaptation in no way detracts from the relevance of evolutionary psychological reasoning for understanding where, why, and when these killings occur.

In what follows, we review some of our findings about patterned variation in the risk of uxoricide and consider whether risks of nonlethal violence against wives are similarly patterned. We discovered the empirical regularities that we shall review by considering this question: If the motives and emotions that comprise male sexual proprietariness have evolved by selection to promote the man's fitness, then what are the situational and demographic factors to which we should expect sensitivity? In brief, the answer is any variable that has been a statistical predictor of variations in the risk of loss of reproductive and productive control of his wife.

Notwithstanding cultural diversity, there are many cross-cultural regularities in men's sexually proprietary inclinations toward their women (Daly & Wilson, 1988b; Daly, Wilson, & Weghorst, 1982; Wilson & Daly, 1992a). However, the only expression of a sexually proprietary mind-set considered in this chapter will be violence against wives.

Psychological Links Between Sexual Proprietariness and Violence

If uxoricides are epiphenomena of male motives whose function is coercion and deterrence, then lethal and nonlethal violence should be found to share commonalities of motive, causal dynamics, and circumstance, and factors that exacerbate or mitigate the prevalence and severity of one should have parallel effects on the other. These implications are testable, and we shall review evidence supporting the conclusion that uxoricides are indeed largely, although not entirely, "the tip of the iceberg" of nonlethal violence against wives.

The ostensible motivating circumstances in most uxoricides reflect what we have called male sexual proprietariness: Husbands who kill usually appear to have been moved by an aggrieved intolerance of the alienation of their wives, either through (suspected or actual) adultery or through the woman's termination of the marriage. Daly and Wilson (1988b) reviewed several studies of well-described spousal homicide cases, and in each sample, such sexual proprietariness was apparently the primary motivational factor in over 80% of the cases. For more recent studies upholding this motive's primacy, see Allen (1990), Campbell (1992a), Crawford and Gartner (1992), Daly, Wiseman, and Wilson (1997), Mahoney (1991), and Polk (1994b). Studies of nonlethal violence against wives indicate a more diverse set of motives, but the predominant one is apparently the same: When asked what are the primary issues around which violent incidents occurred, both beaten wives and their assailants nominate "jealousy" above all else (e.g., Brisson, 1983; Dobash & Dobash, 1979, 1984; Rounsaville, 1978).

Jealousy (as distinct from envy) refers to a complex mental state or "operating mode" activated by a perceived threat that a third party might usurp one's place in a valued relationship. It motivates any of various circumstantially contingent responses, ranging from vigilance to violence, aimed at countering the threat (Daly et al., 1982; Mullen & Martin, 1994). Sexual jealousy is a relatively dynamic mental state of attentional focus and readiness to act, normally aroused by imminent cues of rivalrous threat. It is most often experienced and described, by both the jealous party and others, as a transitory emotional/motivational state like anger or fear, but it can also be relatively chronic. "Sexual proprietariness" refers to a more pervasive mindset, encompassing not only episodes of jealous arousal but also presumptions of entitlement and inclinations to exercise control and prevent threats of trespass or usurpation. Men who are especially proprietary

and controlling appear to go beyond jealous concern about their wives' interactions with other men, curtailing contacts even with female friends and family. However, even the most extreme claustrating tendencies invite interpretation as sexually exclusionary in motive and function. In a North Carolina study, for example, Hilberman and Munson (1978) reported that 95% of 60 rural wife batterers were so proprietary that "leaving the house for any reason invariably resulted in accusations of infidelity which culminated in assault" (p. 461).

The idea that the discovery of wifely infidelity is an exceptional provocation, likely to elicit a violent rage, is cross-culturally ubiquitous, perhaps universal (Daly & Wilson, 1988b). Indeed, such a rage is often considered irresistible, mitigating the responsibility of violent cuckold (Daly et al., 1982). In Anglo-American common law, for example, killing a wife upon discovery of her adultery is deemed the act of a "reasonable man" (Edwards, 1954), and such violence is also considered normal both in societies in which the cuckold's violence is seen as a reprehensible loss of control (e.g., Dell, 1984) and in those in which it is seen as a praiseworthy redemption of honor (e.g., Bresse, 1989; Chimbos, 1993; Safilios-Rothschild, 1969).

Granting that adultery is a potent elicitor of men's anger, why target the wife? Of course, assaults against rival males are also frequent, and they too are apt to be treated leniently because they are "provoked." However, although much male-male violence is motivated by sexual rivalry (Daly & Wilson, 1988b), "errant" wives are targeted too. If directing anger and assaults at wives is to be understood as functionally coercive, an implication is that the sexually proprietary male psyche sometimes responds to adulterous events as predictive of further infidelities, unless the wife's inclinations are punished and deterred. But what if there is no reason to suspect her of unfaithful inclinations? Some "infidelities" are involuntary, such as in cases of rape, and we would then expect that violent anger, if it is functionally deterrent, will be directed mainly at the usurper. Even in the case of rape, however, signs of weak resistance, such as a lack of injuries, may elicit hostility directed at the "adulterous" wife too (see Thornhill & Thornhill, 1983, 1992).

If we accept that male sexual proprietariness is a causal factor in violence against wives, it is still important to ask whether those husbands who are especially proprietary and controlling are also especially violent. In 1993, Statistics Canada conducted a national survey on violence against women, interviewing a stratified probability sample of 12,300 women about their experiences of sexual harassment threats, and sexual and physical violence by marital

Table 8.1. Percentage of Wives Agreeing to Five Statements About Current Husband (Registered and Common-Law Unions Combined) According to Type of Violence Perpetrated by Husband of Present Union, Canada 1993

	Type of Violence		
	<i>None</i> <i>n=7060</i>	Only "Nonserious" <i>n=1039</i>	"Serious" <i>n=286</i>
"He is jealous and doesn't want you to talk to other men"	3.5	13.0	39.3
"He tries to limit your contact with family or friends."	2.0	11.1	35.0
"He insists on knowing who you are with and where you are at all times."	7.4	23.5	40.4
"He calls you names to put you down or make you feel bad."	2.9	22.3	48.0
"He prevents you from knowing about or having access to the family income, even if you ask."	1.2	4.6	15.3
Autonomy-limiting Index ^a	0.17	0.74	1.78

SOURCE: See Wilson, Johnson, and Daly (1995).

a. Index: average number of items affirmed by wives

partners and other men, including injuries sustained (see Johnson, this volume; Johnson & Sacco, 1995; Statistics Canada, 1994). Interviewees included 8,385 women currently residing with a spouse: 7,363 in registered marriages and 1,022 in common-law marriages. Several bits of demographic information were also collected, as were measures of the women's perceptions of safety and their assessments of the applicability to their own husbands of five statements about "autonomy-limiting" aspects of some men's behavior.

Table 8.1 indicates that each of the five autonomy-limiting behaviors was attributed much more often to men who were also reported to have behaved violently than to nonviolent husbands. Moreover, women who had experienced relatively serious violent incidents, as defined by their affirmation of one or more of a set of particularly violent acts, were more likely to affirm each of the five items than were women who had experienced only lesser violence (Wilson, Johnson, & Daly, 1995). (The validity of the behavioral criterion of "seriousness" is supported by the fact that among a subset of women who were further interrogated about one incident of marital violence, 72% of those who described a "serious" incident required medical attention versus 18% of those whose incident did not meet the criterion. In addition, wives reported being fearful for their lives in

Table 8.2. Average Autonomy-Limiting Index Values (Ranging from 0 to 5) According to Number of Violent Incidents Perpetrated by Husbands Of the Current Marital Relationship, Canada 1993

	<i>Mean ± S.D.</i>
No Violence	0.17 ± 0.53
Single incident	0.63 ± 1.01
2-10 incidents	1.16 ± 1.33
11 or more incidents	2.19 ± 1.56

SOURCE: See Wilson, Johnson, and Daly (1995)

56% of the incidents that met the "serious" criterion versus 9% of the violent incidents that did not.)

The women were also asked "How many different times did these things happen?" and the more violent episodes a woman reported, the more likely she was to verify that her husband had engaged in the autonomy-limiting behaviors as well (Table 8.2). Thus, if these replies are valid, it appears that especially proprietary, controlling husbands are indeed especially violent husbands. Rather than wife assault being one of an alternative set of controlling tactics of proprietary men, it appears to go hand in hand with other tactics of control (see also Dobash & Dobash, this volume; Dobash, Dobash, Cavanagh, & Lewis, 1998; Gagné, 1992).

Those who deal professionally with domestic assault are aware that women who leave proprietary husbands may be pursued, threatened, and even killed (e.g., Crawford & Gartner, 1992; Ellis, 1987; Mahoney, 1991). In fact, a remarkable proportion of uxoricide victims are estranged from their killers (e.g., Barnard, Vera, Vera, & Newman, 1982). The most substantial body of relevant data comes from New South Wales (NSW), Australia. Allen (1990) reported that almost one half of all slain wives in NSW in the late 19th century were separated from their killers at the time of murder and that the proportion was even higher in the 1930s. Similarly, Wallace (1986) reported that 45% of the 217 NSW women slain by husbands in 1958-1983 had left their killers or were in the process of leaving; 47% of these victims had been separated for less than 2 months. Wilson and Daly (1993b) computed uxoricide rates for coresiding and estranged wives at three locations, with the results shown in Figure 8.1. Elevation of uxoricide risk in the immediate aftermath of separation is presumably even more severe than the contrasts in Figure 8.1 would suggest, because the denominators for "separated" uxoricide rates include all separated women

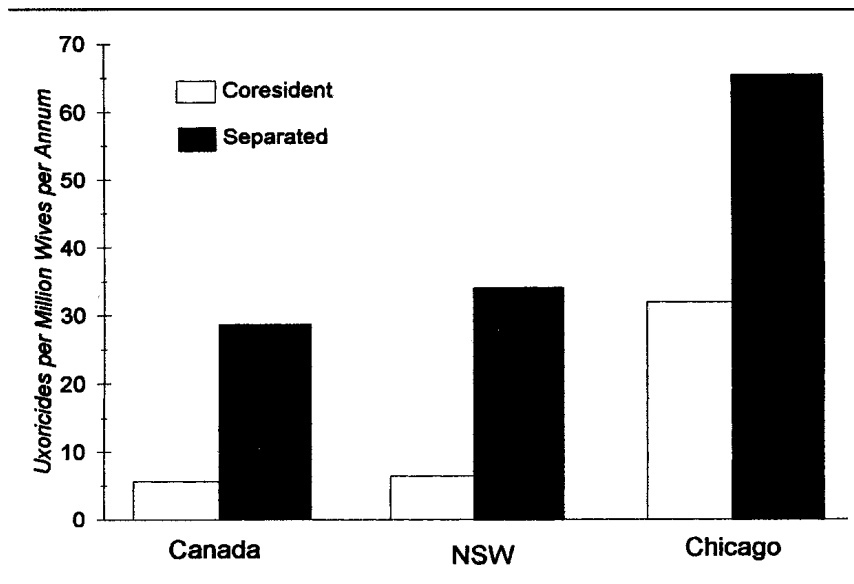


Figure 8.1. Uxoricide Rates for Coresiding and Separated Couples in Canada (1974-1990); New South Wales, Australia (NSW, 1968-1986); and Chicago, United States (1965-1990) for Registered Marriages

NOTE: *Uxoricide* rate is defined as the number of registered-married wives killed per annum per million registered-married wives in the population at large who were coresiding or separated (see Wilson & Daly, 1993b).

regardless of duration, whereas the case reports indicate that, as in Wallace's NSW data, risk is temporally concentrated.

Of course, temporal association need not mean that separation is a cause of uxoricide. The mere fact that separated couples constitute a subset of marriages with a history of discord might explain their higher homicide rates, and it is also plausible that women are especially likely to leave when their husbands are at their most violent. Nevertheless, case descriptions frequently imply that the link between separation and murder was direct. Past threats to pursue and kill his wife if ever she should leave are often on the record, and the killer is likely to explain his behavior as a response to the intolerable stimulus of her departure (e.g., Allen, 1990; Campbell, 1992a; Crawford & Gartner, 1992; Daly et al., 1997; Mahoney, 1991; Wallace, 1986; Wilson & Daly, 1993b).

But why should men be motivated to pursue and kill women who have left them? Such acts present a challenge to the evolutionary psychological premise that motives and emotions are organized in such a way as to promote the actor's interests. Killing is "spiteful"—an

act that is costly to the perpetrator as well as the victim—and the evolution of spiteful motives is not readily explicable. Moreover, if the utility of the motivational processes underlying violence against wives resides in proprietary control, killing seems all the more paradoxical. Resolution of these issues is most likely to come from developing theoretical understandings of the evolutionary psychology of threat and coercion (Clutton-Brock & Parker, 1995a, 1995b; Cohen, 1996; Daly & Wilson, 1988b; Frank, 1988; Gray & Tallman, 1987). In brief, a threat is an effective social tool, and usually an inexpensive one, but it loses its effectiveness if the threatening party is seen to be "bluffing," that is, to be unwilling to pay the cost of following through when the threat is ignored or defied. Such follow-through may appear spiteful—a costly act too late to be useful—but effective threat must convey that such follow-through will occur nonetheless. Thus, although killing an estranged wife seems clearly to be counterproductive, threatening her can be self-interested and so can displays of "uncontrollable" anger and apparent obliviousness to costs. Effective threatening behavior does not "leak" signs of bluff, and the best way to appear sincere may be to be sincere. Nevertheless, most men who coerce, pursue, and threaten women do not go so far as to kill them, and those who do may be considered the dysfunctional overreactors in a game of brinkmanship.

An Evolutionary Psychological Framework for Understanding Links Between Male Sexual Proprietariness and Violence Against Wives

In criminology textbooks, "psychology" is invoked mainly with reference to attributes that differ among individuals, especially attributes that can be interpreted as deficits or pathologies. In fact, psychological science is mainly concerned with species-typical attributes, not with constitutional differences among individuals and pathologies. And even pathologies are best understood as defective versions of complex, functional subsystems of the brain/mind.

Violence and jealousy as Pathology

Extreme acts of violence sometimes reflect dysfunction. We have stressed elsewhere (Daly & Wilson, 1994) that violent capability is a complex adaptation, not a pathology, but there are undeniable

pathologies of violence. (Rabies provides an obvious example, and the almost chronic rage of some patients with limbic system damage is another.)

Violent offenders are fairly often considered insane. Some uxoricidal men (and some nonlethal wife assaulters too) are found "unfit to stand trial" or "not guilty by reason of insanity." Psychiatrists call such cases "morbid jealousy," "delusional jealousy," or "Othello syndrome," more or less synonymous diagnoses that are based on obsessive concern with a (presumably imaginary) interloper and/or a tendency to invoke bizarre evidence in support of jealous suspicions (e.g., Dell, 1984; Mowat, 1966; Shepherd, 1961; Vauhkonen, 1968). Morbidly jealous people are not always violent; they may be clinically depressed. Nor are wives and interlopers the only persons at risk of violence; some unknown proportion of suicides are precipitated by a despondent reaction to imagined (or actual) risk of losing the affection of a valued person. .

Even when such pathological jealousy is the result of brain damage, it can shed light on the normal structure and functioning of the mental mechanisms of sexual proprietariness, just as the detailed characterization of deficits caused by stroke or other trauma can illuminate other aspects of the functional organization of the mind/brain (e.g., Silva, Leong, & Weinstock, 1992; Silva, Leong, Weinstock, & Wine, 1993; Young, Reid, Wright, & Hellawell, 1993). Exploration of the circumstantial determinants of extreme and presumably dysfunctional, but relatively unequivocal, forms of violence against wives may shed light on the functional organization of less extreme motives and tactics of marital conflict. The prevalence of highly focused jealous obsessions and delusions, often stroke-induced, would seem to lend some support to the notion that sexual proprietariness is a mental "module" with dedicated brain structures, but it is not yet clear whether the morbidly jealous syndrome(s) can be differentiated neuroanatomically or neurochemically from other obsessive or delusional disorders.

Violence and jealousy as Personality Traits

There is a fairly extensive literature concerning "personality" traits of wife assaulters (e.g., Holtzworth-Munroe & Stuart, 1994). Implicated traits include (a) a proclivity to be angry and use violence, (b) a tendency to lack empathic concern, especially for women, and (c) dependency and insecurity in romantic or marital relation-

ships. A personological or individual differences perspective on psychological traits generally assumes that the traits are characteristic of the person throughout a lifetime or at least throughout adulthood, such that his particular constellation of personality traits would account for his patterns of behavior in various circumstances. But, in fact, situational factors have been more successful predictors of the dangerousness of individuals suffering from various kinds of mental illness than have psychiatric syndrome or personality measures (Monahan & Splane, 1980), and they may be better predictors for those who are not mentally ill as well.

An evolutionary psychological approach grants the value of understanding how individual differences modulate perception and interpretation of social events and inclinations to act, but it insists that these individual differences cannot be understood except in relation to the functional design of the underlying psychological processes (Buss, 1991; Simpson & Gangestad, 1991; Tooby & Cosmides, 1990; Wilson, Daly, & Daniele, 1995). Whence the consistency of an individual's response to various social and other cues? Is this largely a result of the fact that subjective probabilities change only gradually with the incremental information gains of day-to-day experience, or of preferences for choosing courses of action that are proven and in which one is skilled, or of constrained imagination, or of adjusting one's expectations to one's assets and liabilities? The evolutionary perspective places a greater emphasis than has traditional personality psychology on the role of social and other events modulating inclinations and behavior in systematic ways as a result of the activation of evolved psychological processing mechanisms.

Evolutionary Psychology

Psychological science is primarily a quest to discover the mechanisms and processes that produce behavior and to characterize them at a level of abstraction that applies to everyone (or at least to everyone of a given sex and life stage). Psychology's constructs include things like memory encoding and retrieval, attention processes, recognition, categorization, attitudes, values, self-concepts, motives, and emotions. When postulating such constructs (and more specific and detailed variants of these), psychologists aim for a level of abstraction at which historical, cultural, ecological, and individual variability can be explained as the contingent products of panhuman psychological processes responding to variable circumstances and experiences.

All psychological explanations rest on models of the functional organization of the mind/brain: The primary goal of psychological science is and always has been the discovery and elucidation of information-processing subsystems and their domains. Evolutionary psychologists are simply those who think it useful to recall that species-typical functional parts of the brain/mind are evolved "adaptations" (Williams, 1966) and to think about how the process of natural selection operates in "designing" adaptations. Psychological adaptations are evolved solutions to recurring information-processing problems, and they entail contingent responsiveness to environmental features that were statistical predictors, on average, of the fitness¹ consequences of alternative courses of action in the past. Adaptation is not prospective. The apparent purpose in organismic design depends on the persistence of essential features of past environments. For more thorough accounts of evolutionary psychology, see, for example, Barkow, Cosmides, and Tooby (1992); Bock and Cardew (1997); Cronin (1991); Daly and Wilson (1997); and Wright (1995).

Evolutionists often refer to functionally integrated systems consisting of many evolved mechanisms as constituting a "strategy." Sprouting in response to a threshold soil temperature, flowering at a certain day length, maturing the female parts of one's hermaphroditic flowers before the male parts, and so forth are all elements in a particular flowering plant's "reproductive strategy." In this case, the metaphorical nature of the language of strategy is obvious. No one imagines that the plant has intentionality. But with animals, this metaphor can be misleading, especially with species with complex cognitive capacities, as one may slip unwittingly from claims about what the organism is "designed" to achieve into claims about what it is "trying" to achieve.

Invoking natural selection as the designer of the human psyche does not imply any particular psychological theory, and in particular, the notion that the components of our minds and bodies have been shaped to promote fitness does not imply that fitness is a goal. When the fitness consequences of behavior are invoked to explain it, they are properly invoked, not as direct objectives or motivators but as explanations of why particular more-proximal objectives and motivators have evolved to play their particular roles in the causal control of behavior and why they are calibrated as they are. When male birds continuously follow their mates closely during the breeding season, for example, ornithologists interpret the behavior as "mate-guarding" and its fitness-promoting function as paternity assurance. These interpretations have suggested numerous hypotheses about the contingent

causal control of behavior. In some species, mate-guarding has been found to vary in relation to several cues of the onset of female fertility, and in relation to the proximity, abundance, and attractiveness of male rivals; and the male's success in keeping his mate under guard has been found to be predictive of his subsequent level of effort in the care of his putative offspring (e.g., Davies, 1992; Møller, 1988). These facts were discovered as a direct result of theorizing that the adaptive function of mate-guarding psychology in these species resides in paternity assurance, but paternity itself is not something that the animal monitors or responds to in any way.

Male Sexual Proprietariness Is an Adaptation That Evolved to Deal With the Problem of Paternity Uncertainty

Using a similar logic of analysis, we propose that sexual proprietariness in humans is a sexually differentiated motivational/cognitive subsystem of the human mind, with behavioral manifestations that are culturally and historically variable but are nevertheless predictably related to various aspects of the status and circumstances of the focal man, his partner, and his rivals.

The proposition that men's sexual proprietariness evolved to defend their probability of paternity implies that female infidelity has been a genuine threat to male fitness. Men certainly feel and act as if there were some risk that their wives might deceive them in this domain (Daly et al., 1982). Is their apprehension realistic or a fantastic projection? The answer is that their concern has some foundation. Survey data consistently indicate that although there are sex differences in adulterous inclinations, a substantial minority of women are interested in extramarital sex and turn that interest into action (see, e.g., Johnson, Wadsworth, Wellings, Field, & Bradshaw [1994] and studies reviewed by Buss [1994]).

So the stereotypical characterization of men as polygamous and women as monogamous is at best an exaggeration, and of course this is not exactly news to sensitive observers. There is abundant historical and ethnographic evidence that women are to some degree polyandrously inclined and that even closely guarded women may expend much effort and incur much risk attempting to evade their mates. Moreover, evolutionists have now identified a number of potential benefits that polyandrous females can accrue even in species in which parental investment is predominantly maternal, including both material and genetic benefits, and protection of self and young from future

mistreatment by males as a result of having distributed some possibility of paternity (e.g., Hrdy, 1981; Smith, 1984; Wilson & Daly, 1992a).

Undetected cuckoldry and paternal investment pose a major threat to a man's fitness by enhancing the survivorship and reproductive prospects of his rival's offspring. If there is a corresponding threat to a woman's fitness, it is not that she will be analogously cuckolded but rather that her mate will channel resources to other women and their children to the detriment of her own children. It follows that men's and women's proprietary feelings toward their mates are likely to have evolved to be qualitatively different, men being more intensely concerned with sexual infidelity per se and women more intensely concerned with the allocation of their mate's resources and attentions (Daly et al., 1982).

Research indicates that men are indeed more distressed by sexual infidelity of their partners than by affectional infidelity, whereas women are more distressed by affectional infidelity. Buss, Larsen, Westen, and Semmelroth (1992) had undergraduates imagine the following scenario:

Please think of a serious committed romantic relationship that you have had in the past, that you currently have, or that you would like to have. Imagine that you discover that the person with whom you've been seriously involved became interested in someone else. What would distress or upset you more?

A. Imagining your partner forming a deep emotional attachment to that person.

B. Imagining your partner enjoying passionate sexual intercourse with that other person.

Sixty percent of the men reported that the sexual intercourse would be more upsetting, but 83% of the women chose the "deep emotional attachment" instead (p. 253). Buunk, Angleitner, Oubaid, and Buss (1996) replicated this U.S. study in the Netherlands and in Germany, with similar results. Of course, self-report data are vulnerable to the criticism that people may say what is expected of them rather than what they really feel, so Buss et al. (1992) collected physiological measures of autonomic arousal as well. Electrodermal activity (sweaty palms), pulse rate, and electromyographic activity of the corrugator supercilii muscle (furrowed brow) were all higher when men imagined a sexual infidelity by their partners rather than an emotional infidelity, whereas women showed greater autonomic arousal to the latter scenario. Interestingly, the furrowed brow response appears as a conditioned response to cues associated with anger and not to other

emotional states like fear, even if the person is unaware of the conditioned association (Dimberg & Öhman, 1996). These experimental methods could be used to explore variations in anger and jealousy in relation to cues indicative of varying risks of infidelity and desertion (see below).

Male Sexual Proprietariness Is an Adaptation That Evolved to Deal With the Problem of Male-Male Reproductive Competition

There is morphological, physiological, developmental, and psychological evidence that human beings evolved under chronic circumstances of somewhat greater variance in fitness in males than in females. In hunter-gatherer societies, which provide our best model of the social circumstances in which the human psyche's characteristics evolved, there is less disparity of wealth than in agricultural societies or nation-states, and marriage is mainly monogamous, but it is still the case that men are both more likely to have more surviving children than women—and more likely to have none (Hewlett, 1988; Hill & Hurtado, 1996; Howell, 1979). When the zero-sum game that partitions paternal ancestry among males is played with different rules or parameters than the corresponding game among females, the selective process favors different attributes in the two sexes. Sex differences in psychological processes underlying competitive violence, reckless life-threatening risk-proneness, and proprietary concern with the sexual alienation of mates (whether temporarily or permanently) follow logically from consideration of the selection pressures associated with sex differences in the intensity of intrasexual competition (Daly & Wilson, 1988b; Rubin & Paul, 1979; Trivers, 1972; Williams, 1966). So in addition to the selection pressures engendered by the specific risk of unwittingly investing in children one did not sire, there has been a more general selection pressure of male-male competition for access to women and reproductive opportunity affecting the evolution of a masculine sexually proprietary mind-set and its links with violence against wives. It follows that sexual proprietariness is likely to be aroused by informational cues of the intensity of local competition and of one's own value in the "marketplace" of rival courtiers and marital negotiations.

Hypotheses About Patterned Variations in Male Sexual Proprietariness and Violence

Wilson and Daly (1993a) proposed that variations in violence against wives within and between societies are largely attributable to variations in exposure to social circumstances and other factors that cue the arousal of male sexual proprietariness. We predicted that such cross-culturally general factors as age-related changes in female fertility would account for within-society variability in more or less similar ways, whereas other factors, such as the risk imposed by desperate, disenfranchised male rivals, would vary across societies and thus account for some of the between-society variance in proprietary manifestations. Hypotheses were proposed with respect to five thematic issues.

1. Intensity of Intrasexual Competition

If coercive constraint and violence are responses to perceived threats to sexual exclusivity, then we would expect husbands to be sensitive to indicators of the current local intensity of male sexual competition and poaching. These indicators could include his rate of encounter with potential rivals and evidence bearing on how many of those men are "bachelors." Moreover, the arousal of sexual proprietariness is likely to be affected by indicators of the status, attractiveness, and resources of potential male rivals relative to oneself, because the perceived risk of alienation of one's wife presumably rises as the relative appeal of rival suitors rises.

We also suggested that local cues of life trajectory and life expectancy would be relevant, because they are likely to affect men's tactics of social competition. One's rivals are likely to be relatively undeterred by the dangers associated with adulterous overtures, for example, when their own life prospects are poor, so a husband may be more proprietary in times and places of insecurity (e.g., rumors of impending war or economic disaster). Being part of a relatively large age cohort may also be expected to intensify male-male competition, especially when same-age women are unavailable; thus, cohort size effects on intrasexual rivalry and hence on the coercive constraint of women may be especially evident where age disparities at marriage are large.

Parameters like relative cohort size, expected lifespan, local marital stability, local prevalence of adultery, and so forth clearly cannot be "cued" simply by stimuli immediately available at the time of behavioral decisions. They must instead be apprehended cumulatively over large portions of the lifespan. This suggests that people will

develop mental models that cannot be quickly modified or discarded, and these considerations may explain some of the "inertial" aspects of individual differences in behavior, as noted above. Many social scientists seem to imagine that if reliable developmental precursors to violent behavior could be identified, other explanations of violence would be superseded. But developmental processes and sensitivities are themselves products of evolution by selection, and sound hypotheses about the functional significance of their time courses and other details are both useful tools for discovering developmental phenomena and explanatory in their own right.

We also predicted that marital coercion and violence would be more extreme in polygynous than in monogamous societies because of the threat posed by disenfranchised men in the former, and we noted that Levinson's (1989) cross-cultural analyses supported this prediction despite his use of a coarse measure of marital polygyny.

2. Factors Affecting the Woman's Attractiveness to Rivals

A man is vulnerable to the fitness cost of misattributed paternity as a result of wifely infidelity only if his wife is fertile. While he may be concerned to protect a pregnant wife from various sorts of harms, he need not protect her from insemination by rivals, and we might therefore expect that mate-guarding inclinations will have evolved to vary in relation to the partner's reproductive condition.

In a rare investigation of human mate-guarding, Flinn (1988) found that men indeed appear to be sensitive to correlates of the wife's fertilizability. He recorded the identity, whereabouts, and activities of everyone he saw during standardized walks through a Caribbean village in which sexual relationships were unstable and often nonexclusive, and men directed paternal investments selectively to children they believed themselves to have sired. What Flinn found was that (a) men spent more time with partners who reported having menstrual cycles than with those who were pregnant or postmenopausal; (b) men displayed more agonism both to their wives and to other men when their wives were cycling than in other reproductive conditions; (c) there was more agonistic interaction between sexual partners whose relationship was nonexclusive than between monogamous pairs; and (d) hostile male-male interactions were especially characteristic of men who were simultaneously sexually involved with a nonmonogamous woman. All of these contrasts seem to bespeak arousal of sexually proprietary motives in response to cues of risk of

rival insemination.

The statistically expected future reproduction of an individual, given her age, condition, and circumstances, is her "reproductive value" (RV) (Fisher, 1930/1958). A woman's RV is maximal soon after puberty and begins to decline steeply in her 30s. As one would then expect, if men have evolved to value women largely as reproductive resources, youth is a major determinant of women's sexual (Kenrick & Keefe, 1992) and marital (e.g., Borgerhoff Mulder, 1988; Buss & Barnes, 1986; Glick & Lin, 1987) attractiveness. These considerations (as well as other factors, especially their greater likelihood of still being childless) suggest that young wives may be more likely than older wives to terminate an unsatisfactory marriage, more likely to be courted by rivals of the husband, and more likely to form new sexual relationships. Hence, we have suggested that men with young wives may be especially proprietary. (It is sometimes suggested that sexual jealousy cannot be an evolved adaptation because men remain jealous of postmenopausal women. This argument ignores the fact that adaptations can only have evolved to track ancestrally informative cues of fertility and not fertility itself. In a modern society with contraception, improved health, and diverse cosmetic manipulations, postmenopausal women are likely to exhibit fewer cues of age-related declining RV than still-fertile women in foraging societies. But even in the modern West, women's sexual attractiveness and their partner's jealousy are both maximal in young adulthood and begin to decline long before menopause.)

In Canada, the highest rates of both lethal and nonlethal marital violence indeed befall the youngest wives (Daly & Wilson, 1988b; Figure 8.2). Mercy and Saltzman (1989) replicated this finding with respect to U.S. uxoricides, and it holds in Australia and Great Britain too (Figure 8.3). This pattern may seem to belie the proposition that male minds place high "value" on young wives, but again, as with the estranged husband who pursues and kills a woman he can't abide losing, violent inclinations seem best understood as coercive tools for controlling wives about whom men feel proprietary—and the lethality is a rare and dysfunctional outcome of the most extreme feelings.

Notwithstanding these interpretations, we must concede that these dramatic age patterns do not establish the direct relevance of wives' youth. Many other variables are confounded with wife's age, including parity and childlessness, duration of the union, and the

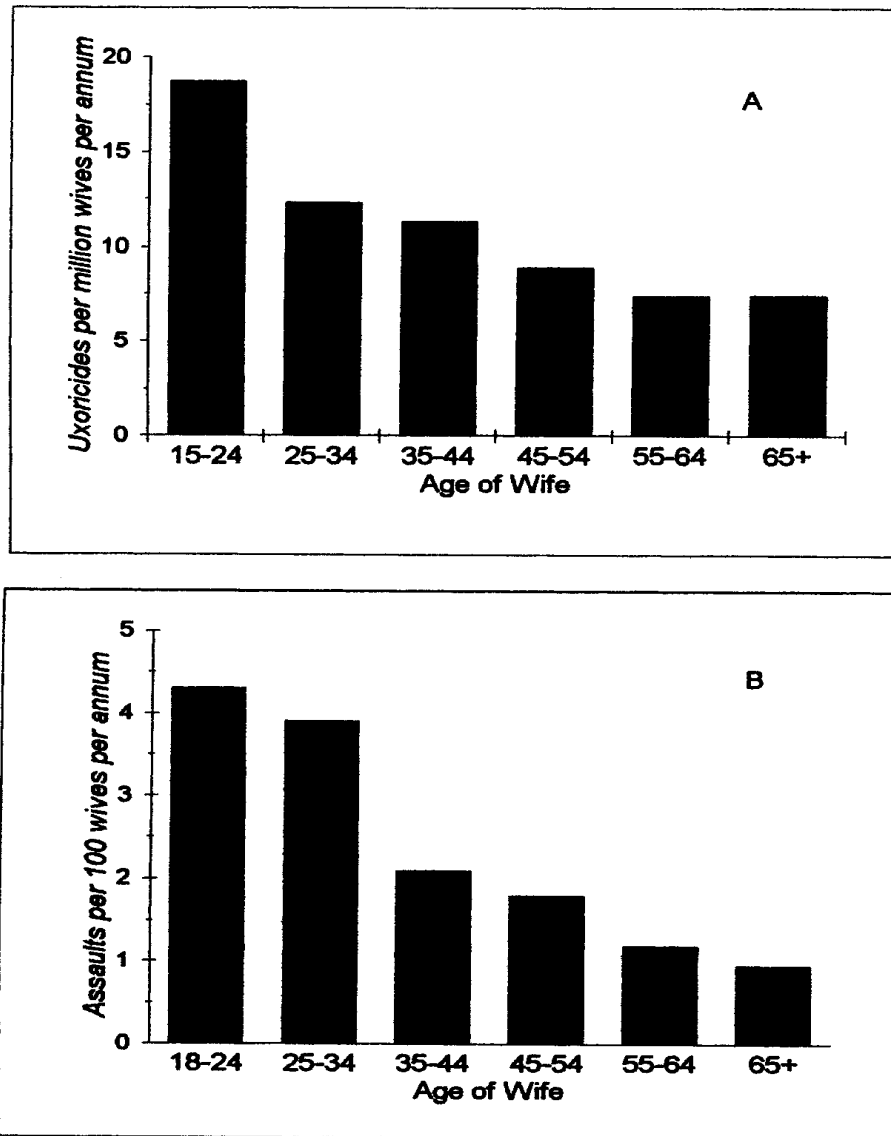


Figure 8.2. Comparison of Age-Specific Rates of Lethal (Upper Panel) and Nonlethal Assaults (Lower Panel) in Registered Marriages

Upper panel: Uxoricides per million wives per annum as a function of wife's age in Canada (1974-1992)

Lower panel: Nonlethal assault rates per hundred wives per annum as a function of wife's age in Canada (1993) (see Wilson, Johnson, & Daly, 1995)

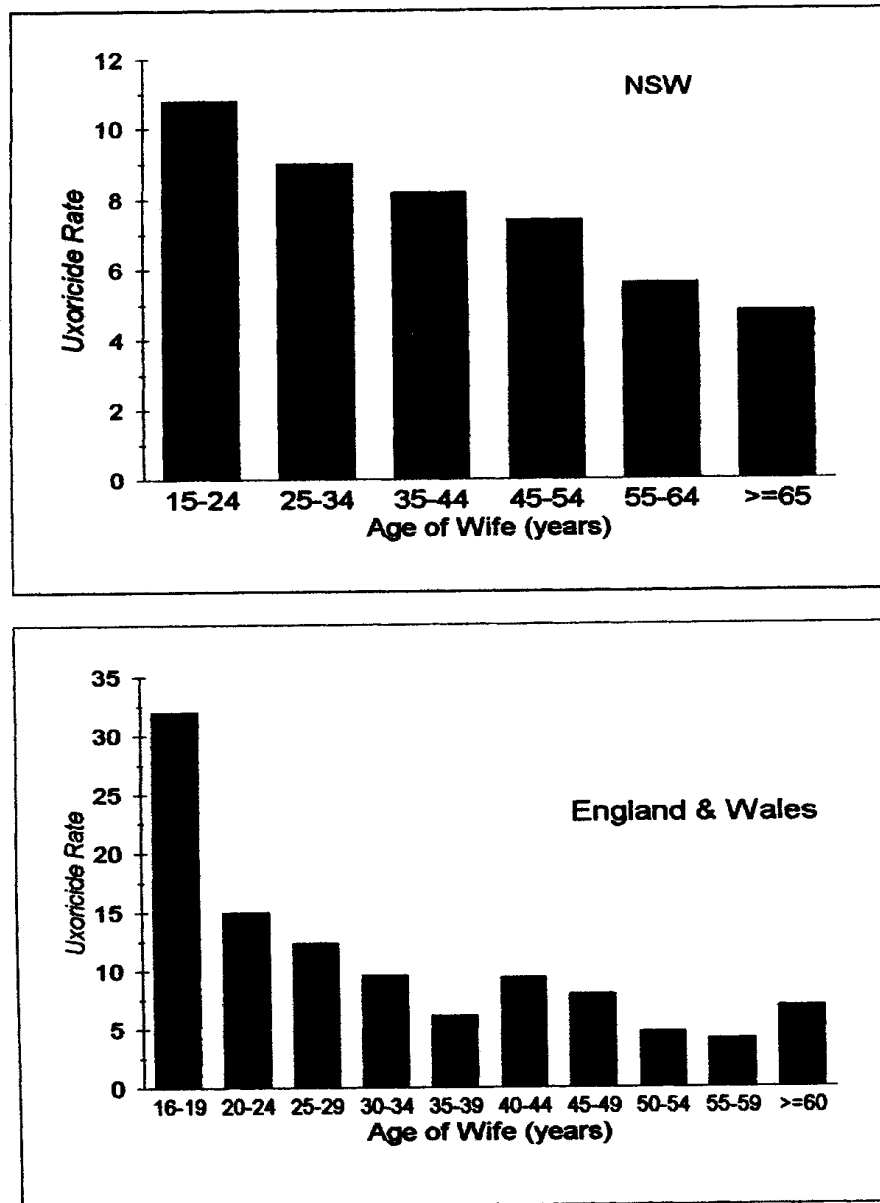


Figure 8.3. Uxoricide Rates by Age of Wife Victims for New South Wales, Australia (1968-1986) and for England and Wales (1977-1990)
NOTE: *Uxoricide rate* is defined as number of wives killed per annum per million wives in the population at large for each age category.

man's own age. Because young men are in general the most violent age-sex class (e.g., Daly & Wilson, 1990; Wilson & Daly, 1985), an

obvious hypothesis is that male age is actually the relevant factor. This seems not to be the case, however, or at least not the whole story, because age disparity between husband and wife is a major risk factor for homicide (Daly & Wilson, 1988a, 1988b; Mercy & Saltzman, 1989; Wilson, Daly, & Wright, 1993), such that a young wife is actually more likely to be slain if her husband is much older than she than if he too is in his 20s. (Age disparity had no demonstrable relevance to the risk of nonlethal assaults in the Canadian survey, however; see Wilson, Johnson, & Daly, 1995.)

3. Situational Cues of Possible Infidelity

In addition to those attributes of women that affect their attractiveness to men, husbands may respond to situational information concerning risks of infidelity. A man whose wife has been under continuous surveillance, either by himself or by trusted allies such as close kin, can be relatively confident; conversely, unmonitored absences may be cause for concern (e.g., Fricke, Axinn, & Thornton, 1993). Baker and Bellis (1989) reported a particularly intriguing psychophysiological response to lapses of personal surveillance in the form of increased sperm transfer in sexual intercourse as a function of the proportion of time that one's partner had spent out of sight since the couple's last sexual contact. The utility of increased sperm transfer resides in "sperm competition." It has been shown in other species, although not in humans, that when a female has mated with more than one male in a given fertile period, the relative numbers of sperm transferred are one important determinant of which of the rival males is likely to sire any resultant offspring. We hypothesize that, all else equal, men will also be more sexually demanding, threatening, and coercive when circumstances dictate that their wives are relatively unmonitored.

Where control of women by husbands and husbands' kin is constrained, as, for example, in matrilineal-matrilocal societies in which men may make prolonged excursions fishing at sea or engaging in warfare, men sometimes play little paternal role and direct their "parental" efforts to their sisters' children. Evolution-minded anthropologists have interpreted such "avuncular" investment and inheritance as a response to uncertain paternity (e.g., Flinn & Low, 1986). Because men in these societies incur no risk of misdirected paternal

Table 8.3. Rates of Violence Against Wives by Coresiding Partners According to the Type of Marital Union

	<i>Registered Union</i>	Common-Law Union
Uxoricide	7.2	55.1
Nonlethal assault in past year	2.0	9.0

SOURCE: See Wilson et al. (1993); Wilson et al. (1995)

NOTE: Uxoricide rates are expressed per million couples per annum, and nonfatal assault rates are expressed per hundred couples per annum

efforts due to cuckoldry, it is sometimes suggested that they should be relatively unconcerned about wifely fidelity. However, sexual proprietariness may still be functional because there is still intense male intrasexual competition (and cues thereof). Male sexual jealousy and violence against wives are not unknown in matrilocal avuncular societies (e.g., Hill & Hurtado, 1996), but whether they are reduced has yet to be adequately explored.

The ease, prevalence, and social acceptability of divorce in the local milieu may also be relevant to risk of violence against wives, because men who perceive marriage as generally unstable may see their own as relatively threatened in otherwise equivalent circumstances. Similar considerations may apply to the contrast between registered and common-law marital unions within a society, as the latter are more easily and in fact more frequently dissolved, hence presumably perceived by the participants as relatively fragile. Furthermore, both men and women report more extramarital sexual partners with common-law than with registered marriages (Forste & Tanfer, 1996; Johnson et al., 1994; Laumann, Gagnon, Micahel, & Michaels, 1994). In Canada, both lethal and nonlethal violence against wives is indeed substantially more prevalent in common-law unions (Table 8.3).

4. Female Choice

To the degree that marriages are politicized transactions between kin groups, women may find themselves married to men they would not otherwise have chosen as husbands. In medieval England, for example, children could be espoused as early as 7 years of age, with the Christian church sanctifying the commitment (Ingram, 1987). Any recalcitrant bride who eloped with the man of her own choice before her espoused marriage was solemnized and consummated could cause

severe repercussions for her father who had promised her to another man, and fathers were likely to launch proceedings against their daughters' "abductors" in such circumstances. Legislation reinforced fathers' interests by stripping eloping daughters of claims against their families' property. It would not be surprising to discover that wives in unsatisfactory arranged marriages incurred risk of violence by jealous husbands.

One vivid example of the violence that women will risk to escape from their husbands comes from Chagnon's study of the Yanomamö of Venezuela. Many women are married off by their kinsmen with little regard for their consent, and others are abducted. Violence and threats then deter women from leaving to pursue their own preferences. Chagnon (1992) reports that husbands sometimes mutilate and even kill recaptured wives in front of others. But a woman may take the risk, and "on her own, flees from her village to live in another village and find a new husband there. If the woman's own [husband's] village is stronger than the one she flees to, the men will pursue her and forcibly take her back—and mete out a very severe punishment to her for having run away. Most of the women who have fled have done so to escape particularly savage and cruel treatment, and they try to flee to a more powerful village" (Chagnon, 1992, p. 149).

A paradoxical consequence of living with chronic threats of violence is that women may value men for their violent capabilities. Women often rely on brothers and other male kin to protect them from abusive husbands (Campbell, 1992b); Yanomamö women, for example, "dread the possibility of being married to men in distant villages, because they know that their brothers will not be able to protect them" (Chagnon, 1992, p. 149). Moreover, violent capability may be valued in the husband himself, where women are at risk of being abducted by other men, as among the Yanomamö or even where sexual harassment and assault are chronic risks that a husband with a reputation for vengeful violent action can deter. Thus, we would anticipate that wherever local rates of sexual assault are chronically high or where material and social rewards are gained by the effective use of violence, a reputation for controlled use of violence may be perceived as a valuable trait in a husband, notwithstanding the hazards of affiliating oneself with a violent man.

In a review of mating alliances in the animal kingdom, Mesnick (1997) argues that one benefit to females of forming a bond with a male partner is a reduction in risk of sexual aggression from other males. Several subsidiary hypotheses follow from this "bodyguard"

hypothesis, including (a) that females may be most attracted to large and/or dominant mates where high risk of sexual aggression prevails and (b) that the cross-species distribution of pair-bonding may be accounted for, in part, by cross-species variation in risks of sexual aggression.

In the case of humans, Mesnick reviews several empirical studies suggesting that being married is associated with significant reductions in risk of sexual assault and harassment. The bodyguard hypothesis suggests that, controlling for the age of the woman, the risk of sexual assault victimization by men other than husbands would be less for "married" women than "unmarried" women. And that is the case in Canada (Figure 8.4).

5. Costs to Husbands of Using Violence

There is no reason to expect an evolved psychology to be insensitive to costs, so we would not expect angry men, however genuine their emotional arousal, to ever be impervious to social controls. Several authors have argued that wife battering is rarer or less severe in societies in which wives retain close contact with their genealogical kin, who deter husbands' violence (e.g., Campbell, 1992b; Chagnon, 1992; Draper, 1992; Smuts, 1992). Variation in the protection provided by male kin is apparently related to variable vulnerability of wives within societies, too, including societies that are relatively matrilocal (H. Kaplan & K. Hill, personal communication, June, 1990).

Oddly, in a cross-cultural analysis, Levinson (1989) could find no support for the hypothesis that access to her kin protects a wife from abuse in nonstate societies; prevalence of wife-beating was apparently unrelated to postmarital residence practices. One problem with this null result is, of course, that estimates from ethnographic materials of wife-beating are noisy. However, Levinson's codings did prove to be significantly related to other variables, including widow remarriage proscriptions and the presence or absence of all-female work groups. A more important problem is that Levinson's test of the hypothesized relationship was a rank-order correlation, even though postmarital residence practices were coded on a five-point scale whose ordering did not correspond to lesser/greater access to genealogical kin. We hypothesize that better cross-cultural methods will overturn Levinson's null result.

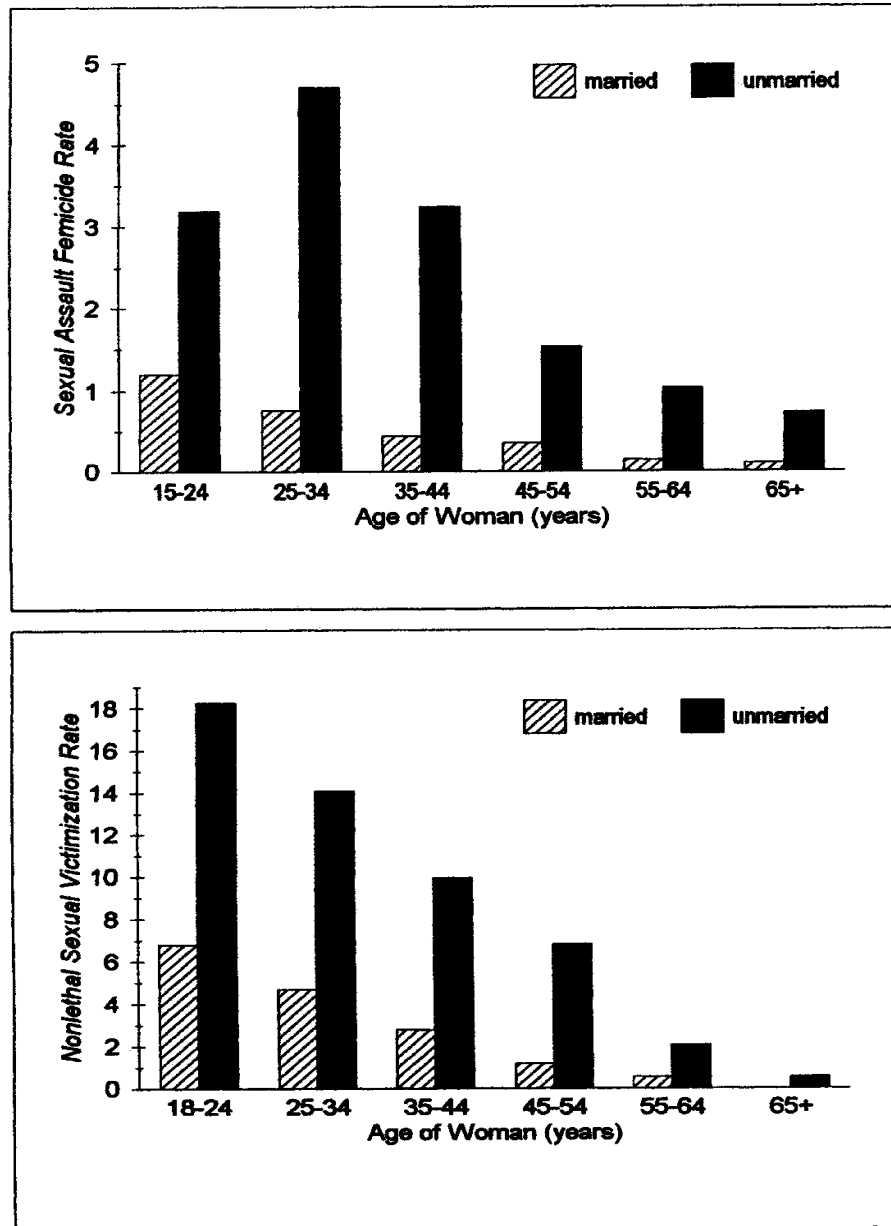


Figure 8.4. Sexual Victimization Rates of Women by Age and Marital Status, Canada

Upper panel: Number of Canadian Women (1974-1992) per annum per million women in the population at large who were killed by a man other than their husband in the context of a sexual assault.

Lower panel: Number of Canadian women per hundred women in the population at large who reported in 1993 either sexual assault or unwanted sexual touching in the past year by men other than husbands or dates or boyfriends (see Wilson & Mesnick, 1997).

Wives themselves can impose retaliatory costs on violent husbands, sometimes even killing them. In most societies, wives vastly outnumber husbands as homicide victims, but the death toll in spousal homicide in the United States is almost equal (Wilson & Daly, 1992b). Ethnocentric U.S. social scientists have cited the near equity in spousal homicides there as if it were universally true (it is in fact exceptional, maybe even unique [Wilson & Daly, 1992b]) and as if it constituted evidence that marital violence is sexually symmetrical (a curiously fashionable thesis debunked by Dobash, Dobash, Wilson, & Daly [1992]). Even in the United States, the exceptional similarity in numbers of female and male spousal homicide victims does not imply that wives' and husbands' actions or motives are alike. Rather, in the United States, as elsewhere, men often pursue and kill estranged wives, whereas women hardly ever behave similarly; men, but not women, kill spouses as part of planned murder-suicides; men perpetrate familicidal massacres, killing spouse and children together, whereas women do not; men, but not women, often kill after the spouse's prolonged subjection to coercive abuse; men kill in response to revelations of wives' infidelity, whereas women almost never react similarly; and women, unlike men, kill mainly in circumstances with strong elements of self-defense or defense of children (references in Daly & Wilson, 1988b; Dobash et al., 1992; Wilson & Daly, 1992b).

Violence Against Wives and Children

From the perspectives of both evolutionary psychology and cultural anthropology, children (extant or prospective) are central to a fundamental understanding of marital relationships (see Daly & Wilson, 1996b; Wilson & Daly, 1992a). Children of the marital union enhance husband-wife solidarity and reduce the risk of divorce, compared with children of former mates who are often a source of conflict. How does violence against wives relate to the presence of children?

Certainly, there is some sort of statistical association between violence against wives and violence directed at the children, too, and there are probably several reasons for this. One is that men vary in their individual ("personality") readiness to use violence in general. A second reason is that threats and assaults against the children can be another tactic of coercive control of the wife. A third is that a man's

mistreatment of the children, perhaps especially when they are not his own, can be a source of marital strife, as the wife/mother attempts to intervene on their behalf, leading more or less directly to violence against the woman.

Familicidal Massacres

One relatively infrequent but persistent variety of uxoricide is that in which the children are also killed. Wilson, Daly, & Daniele (1995) proposed that there are two rather different types familicide scenario, differing with respect to the killer's emotional state, yet both reflecting an uxorial proprietariness. In the first variety, the killer professes a grievance against his wife, usually with respect to alleged infidelities and/or her intending or acting to terminate the marriage. Overt and even public expressions of his aggrieved hostility are often conspicuous, and a history of violence may be noted. Apparently rather different are cases in which the killer is a depressed and brooding man, who may apprehend impending disaster for himself and his family, and who sees familicide followed by suicide as "the only way out." Expressions of hostility toward the victims are generally absent (or at most ambiguous) in such cases, and the despondent killer may even characterize his deed as an act of mercy or rescue. These despondent men are presumably those who commit suicide at the scene, something that many familicidal men do: About half of Canadian men who killed their wives and children also killed themselves, compared with 25% of other uxoricidal or filicidal men and just 3% of other male killers; similarly, in England and Wales, half the familicide perpetrators committed suicide, compared to 15% of other uxoricides and 11% of other filicidal men (Wilson, Daly, & Daniele, 1995).

This proposed taxonomy of angry versus despondent perpetrators of familicide is founded in the case descriptions, but its validity and usefulness have yet to be established. The distinction is not simply a matter of suicide, because accusatory killers can be suicidal too (and despondent killers' suicide attempts may fail). As different as these two proposed categories of familicides appear, they have this in common: The killer's professed rationale for his actions invokes a proprietary conception of wife and children. The hostile, accusatory familicidal killer is indignant about the alienation of his wife, and may declare "If I can't have her, no one can." The despondent killer

bizarrely construes homicide as protection, apparently believing that his victims could not persist or cope in his absence. In both cases, the killer feels entitled to decide his victims' fates.

Violence Against Wives and Stepchildren

There are both theoretical and empirical reasons for suspecting that marital conflict and violence may be elevated in stepfamilies. ("Stepparent" here includes anyone in *loco parentis* to a child by virtue of coresident marital partnership with the child's genetic parent, regardless of whether the marriage is registered or the stepparent has legally adopted the child.) Stepchildren are abused and killed at very much higher rates than genetic offspring (Daly & Wilson, 1988a, 1988b, 1996a, 1996b), so mistreatment of stepchildren is itself a likely source of conflict between the stepparent and the genetic parent.

Daly, Singh, and Wilson (1993) reported that women with children sired by a former partner sought refuge from assaultive husbands in a Canadian women's shelter for battered women at a per capita rate about five times greater than did same-age mothers whose children were all sired by the present husband (Figure 8.5). It was also the case that the stepchildren were more likely to have been assaulted too. In a study of fatal assaults on wives in the same Canadian city, Daly et al. (1997) found that uxoricide rates were also substantially elevated in stepfather families (Figure 8.5). Information was not available on how many children had been assaulted, but in three of the 32 couples, the man killed his wife and child in contexts that were similar to the familicides previously described.

These two studies demonstrate that the presence of children of former unions is a major risk marker for violence against wives. They are the first and only studies to have asked whether that might be so. This discovery is testimony to the value of an evolutionary psychological approach, for no researcher lacking this perspective ever thought to ask. Hotaling and Sugarman (1986) culled a list of 92 proposed "risk markers" for violence against wives from the family violence literature, but paternity of the children was not among them. Similarly, no family violence researcher lacking an evolutionary perspective ever thought to ask whether step-relationship might be associated with assaults against children, and it has turned out to be the most powerful risk factor yet discovered; see Daly and Wilson (1996a, 1996b). Study of how stepparental status may influence the psychology of male sexual proprietariness could be valuable.

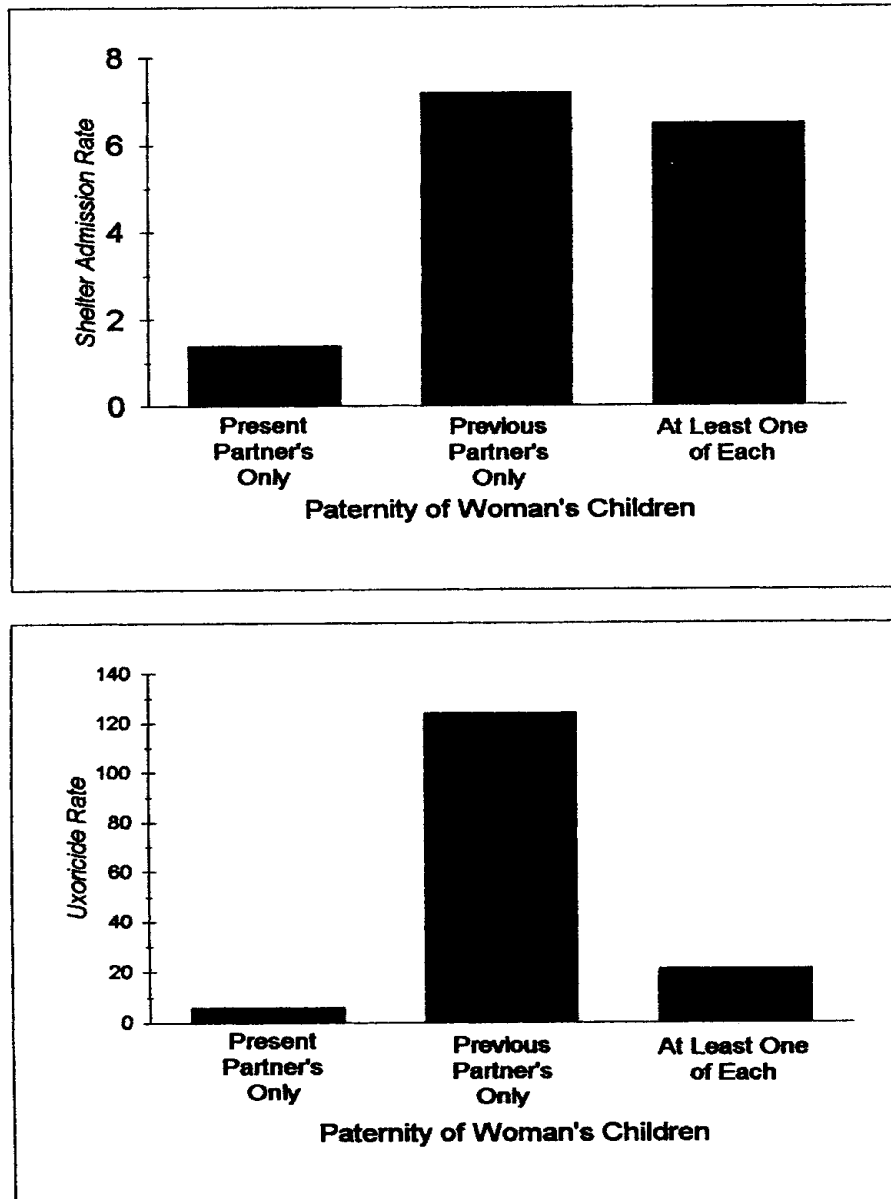


Figure 8.5. Violence Against Wives in Relation to Paternity of Her Children, Hamilton, Ontario, Canada

Upper panel: Comparison of rates of admission to a shelter for battered women per hundred such women in the population, for women who had children according to whether her children had been sired by the present perpetrator husband or a previous partner (see Daly et al., 1993).

Lower panel: Comparison of uxoricide rates for wives who had children per million such women in the population, according to whether her children had been sired by the killer husband or a previous partner (see Daly et al., 1997).

Concluding Remarks

An evolutionary psychological perspective provided us with the requisite framework to develop several hypotheses about patterns of risk of violence against wives. We used homicide and assault data from Canada and elsewhere to compute rates of violence to assess the merit of our hypotheses. Our findings include the following: (a) much higher rates of uxoricide after estrangement than in coresiding couples, (b) highest rates of uxoricide and nonlethal assaults for the youngest wives and a steady decline with age, (c) higher rates of uxoricide and nonlethal assaults in common-law marital unions than in registered marital unions, and (d) higher rates of violence when the woman has coresident minor children sired by a previous partner. Furthermore, there are empirical regularities in wives' attributions of husbands' efforts to limit their autonomy, indicating that the most violent husbands are the most controlling husbands. These results are consistent with our expectations based on reasoning about the links between sexual proprietariness, coercive control, and assaults against wives. We also have proposed several hypotheses about cross-cultural variations in levels of men's sexual possessiveness and violence against wives, but empirical testing of these hypotheses remains to be done.

Two important assumptions that helped us generate our hypotheses about risk patterns were as follows. First, violence against wives is a product of motives whose adaptive function is coercive control. Uxoridal husbands have overstepped the bounds of utility, and the fatal outcomes can be considered maladaptive by-products of powerful motives whose utility resides in the effectiveness of sincere, credible threats and nonlethal punishments for defying the assailant's wishes. For every wife who is killed, hundreds or thousands are intimidated, and we simply do not know whether wife assault is often (perhaps even typically) effective in shaping the victim's behavior in ways that suit the perpetrator. It might be worthwhile to try to find out.

Secondly, we have supposed that male sexual proprietariness is modulated by perceptions of cues indicative of a wife's likelihood of sexual infidelity or desertion. The man's perceptions may be veridical or delusional, but in any case, we would anticipate that the perceived "threat" of loss or trespass in this valued relationship will be affected by information or cues pertaining to her apparent attractiveness to other men, her commitment to the marital union, and the sexual rivalry "pressure" indicated by such considerations as local sex ratios and densities of potential competitors and the man's own "mate value"

relative to that of rivals. We use the phrase sexual "proprietariness" rather than "jealousy" mainly because the latter implies a sentiment focused on a specific rival, whereas we conceive of proprietariness as a more encompassing mind-set that might be effective in reducing the opportunity for usurpation by any rival.

We expect that sexual proprietariness has a lot in common with the proprietary mind-sets associated with possessing any valued commodity, whether it be food, real estate, money, or people. In all cases, the intensity of guarding may be expected to vary in relation to variations in the attributes for which the commodity is valued and in response to cues of risk of alienation and trespass. There are, however, likely to be some interesting and important differences in such proprietary mind-sets as a function of the particular commodities in question.

This paper offered some suggestions as to the informational cues modulating the perceptions of sexually proprietary men, but there has been a paucity of empirical research delineating the kinds of information affecting perceptions and the effects of such perceptual processing on attention structures, memory, motivational and emotional processing, as well as decision making. Recent research in neuroscience revealing the complex integration of many specific functional domains of neural activity as well as more precisely delineated hypotheses about informational processing for specific tasks and content domains in psychology should facilitate the development of a clearer understanding of the links between male sexual proprietariness and violence.

Such an approach will clarify to what degree individual differences in personality traits associated with using violence against wives represent stable individual differences in information processing and to what degree personality tests have instead indexed relatively short-term states of mind modulated by the current social and material circumstances of the individual. We imagine that personality traits associated with violence against wives do reflect stable individual differences in information processing, at least in part, as a result of considerable inertia in the mental models one builds of one's social universe on the basis of cumulative experience over years.

Research in a diversity of cultural settings is needed in order to determine whether factors such as female youth and children of former unions indeed raise the risk of violence against wives in general, as we have implicitly supposed, or are instead cross-culturally variable in their effects. We also hope to see tests of our several hypotheses about cross-cultural diversity. No one can manipulate life

experiences or perceived social costs of using violence against wives or cues of "bachelor pressure" experimentally, but systematic cross-cultural comparisons can test ideas about the factors modulating male sexual proprietariness and violence against wives.

Note

¹ "Fitness" refers to the expected value (in the statistical sense and in a natural environment) of a phenotypic design's success in promoting the relative replicative success of its bearer's genes, in competition with their alleles (alternative variants at the same genetic locus). We owe the term *fitness* not to Darwin but to the sociologist Herbert Spencer who epitomized the theory of natural selection as "survival of the fittest." Even Darwin and Wallace adopted Spencer's phrase, but it has produced a lot of misunderstanding, because evolutionists use the term in several slightly different senses, none of which corresponds to its vernacular meaning of physical condition (see Dawkins, 1982).

References

For references, please check a copy of the book.