7 Evolutionary psychological perspectives on men's violence against intimate partners

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Introduction

Modern evolutionary psychological perspectives have been used to predict and understand a wide array of human behaviours, from cooperation and competition to mating and morality. Evolution is the centerpiece of biology, and in the last few decades many psychologists have recognized the value of using an evolutionary perspective to guide their research. With a focus on evolved mechanisms and associated information-processing features, evolutionary psychology has risen as a fruitful approach to the study of human psychology and behaviour. In this chapter, we use an evolutionary psychological perspective to address violence between intimate partners.

Paternal uncertainty and the function of male sexual jealousy

Jealousy is an emotion that is experienced when a valued relationship is threatened by a real or imagined rival, and generates responses aimed at stifling the threat. Jealousy functions to maintain relationships by motivating behaviours that deter rivals from mate-poaching and deter intimate partners from infidelity or outright departure from the relationship (e.g. Buss *et al.*1992). Because ancestral men and women recurrently faced the adaptive problems of retaining partners and maintaining relationships over human evolutionary history, men and women today do not differ in the frequency or intensity of experienced jealousy (e.g. White 1981). However, a sex difference is evident when considering two basic types of jealousy – emotional and sexual – and this sex difference coincides with sex differences in the adaptive problems that ancestral men and women recurrently had to solve over human evolutionary history in the context of their relationships (Buss 2000). Ancestral women's adaptive problem of securing the paternal investment needed to

raise offspring exerted a selection pressure for women to be more sensitive to, and more distressed by, cues associated with a partner's *emotional* infidelity. However, ancestral men's adaptive problem of paternal uncertainty exerted a selection pressure for them to be more sensitive to, and more distressed by, cues associated with a partner's *sexual* infidelity. Because emotional infidelity and sexual infidelity have been highly correlated throughout evolutionary history (i.e. if an individual were engaging in one type of infidelity, he or she was often engaging in the other type), researchers studying sex differences in jealousy have used forced-choice methods in which participants are asked to select which partner infidelity type upsets them more, although some researchers, such as Sagarin *et al.* (2003) and Wiederman and Allgeier (1993) have also found a sex difference in jealousy using continuous measures. At least two dozen studies have provided evidence of this sex difference in jealousy, documenting that men experience greater jealousy in response to the sexual aspects of an intimate partner's infidelity, whereas women experience greater jealousy in response to the emotional aspects of an intimate partner's infidelity. These results are corroborated by experimental data (e.g. Schützwohl and Koch 2004), physiological data (Buss *et al.* 1992), patterns of divorce (Betzig 1989) and the behavioural output of jealousy, such as mate retention behaviours (e.g. Buss and Shackelford 1997).

Men's sensitivity to, and distress as a result of, a partner's sexual infidelity are not surprising given the severe reproductive costs to men of cuckoldry – the unwitting investment of resources into genetically unrelated offspring. Some of the costs of cuckoldry include the potential misdirection of a man's resources to a rival's genetic offspring, his partner's investment in a rival's genetic offspring, and reputational damage if the cuckoldry becomes known to others (e.g. Platek and Shackelford 2006). Perhaps with the exception of death, cuckoldry is associated with the most severe reproductive costs for an individual man, and it is therefore likely that selection will have resulted in the evolution of male strategies and tactics aimed at avoiding cuckoldry and decreasing paternal uncertainty.

Intimate partner violence and sexual jealousy

Male sexual jealousy is one of the most frequently cited causes of intimate partner violence (e.g. Russell 1982; Frieze 1983; Daly and Wilson 1988; Buss 2000; Gage and Hutchinson 2006). Intimate partner violence is a tactic used by men to restrict a partner's sexual behaviour (Daly and Wilson 1988; Wilson and Daly 1996) and may be best understood as a behavioural output of male sexual jealousy. A man may afford his partner many freedoms, but these freedoms only rarely include sexual activity with other men (Buss 1996, 2000). Men are hypothesized to have evolved mechanisms dedicated to generating risk assessments of a partner's sexual infidelity. These mechanisms include, for example, assessments of the time spent apart from his partner (i.e. time during which she might have been sexually unfaithful), the presence of potential mate-poachers, his partner's reproductive value (i.e. expected future reproduction) and fertility (i.e. current likelihood of conceiving), and his partner's likelihood of committing infidelity (e.g. Shackelford and Buss 1997; Schmitt

and Buss 2001; Shackelford *et al*. 2002; Goetz and Shackelford 2006). Moreover, the male mind may be designed to be hypersensitive to cues of his partner's sexual infidelity, motivating more false positives than false negatives because the benefits of the former outweigh the costs of the latter (Haselton and Nettle 2006). Together with assessments of the likelihood of a partner's sexual infidelity, contextual factors – such as social and reputational costs, proximity of the partner's adult male kin (who might be motivated to retaliate for a man's violence against his partner), and economic dependency (Figueredo and McClosky 1993; Wilson and Daly 1996) – are processed by mechanisms of the male mind to inhibit or motivate men to inflict violence on their partners.

Occasionally, men's use of violence against their partners is lethal. As with non-lethal partner violence, male sexual jealousy is a frequently cited cause of intimate partner homicide across cultures (Daly and Wilson 1988). Killing an intimate partner is costly, but under specific circumstances might the benefits have outweighed the costs enough for selection to produce a psychology that motivates partner killing? According to Daly and Wilson (Daly and Wilson 1988; Wilson *et al*. 1995a), killing an intimate partner is not the designed product of evolved mechanisms, but instead is a byproduct of mechanisms selected for their non-lethal outcomes. This byproduct or 'slip-up' hypothesis states that men who kill their partners have 'slipped up' in that their violence – which was intended to control an intimate partner's sexual behaviour – inadvertently results in the partner's death.

The byproduct hypothesis is attractive in that it would seem too costly to kill an intimate partner. Why kill a partner and risk the enormous costs that often flow from such actions, when a man could simply end the relationship with the woman he suspects of sexual infidelity? But consider this. If killing an intimate partner is a slip-up or accident, as argued by Daly and Wilson, why are so many partner homicides apparently premeditated? Hiring someone to kill a partner, aiming at and shooting a partner with a firearm and slitting a partner's throat appear to be intentional killings, not accidental killings. Although some partner homicides may be accidental, too many seem premeditated and intended. This is one observation that led Buss and Duntley (1998, 2003) to propose that many intimate partner homicides are motivated by evolved mechanisms designed to motivate killing under certain conditions. Discovering a partner's sexual infidelity, Buss and Duntley argue, may be a special circumstance that motivates partner homicide. This 'homicide adaptation theory' does not argue that discovering a partner's infidelity inevitably leads to homicide, but that this circumstance would activate mechanisms associated with weighing the costs and benefits of homicide, and that under certain circumstances partner killing might be the designed outcome (for a fuller treatment see Buss 2005).

Daly and Wilson's (1988; Wilson *et al*. 1995a) and Buss and Duntley's (1998, 2003; Buss 2005) competing hypotheses have not yet been examined concurrently so that a single hypothesis remains that best accounts for the data (but see Shackelford *et al*. 2003), and our intention is not to critically evaluate these competing hypotheses. We intend to argue that intimate partner homicide, by design or as a byproduct, is often the behavioural output of male sexual jealousy stemming from paternal uncertainty.

Men's 'mate retention' or 'mate-guarding' behaviour is another example of the behavioural output of jealousy. Buss (1988) identified specific mate-guarding behaviours, such as vigilance (e.g. dropping by unexpectedly to check up on a partner) and concealment of mate (e.g. taking a partner away from a social gathering where other men are present). These mate-guarding behaviours vary in ways that suggest that they are produced by mechanisms that evolved as paternity guards. For example, a man guards his partner more intensely when she is of greater reproductive value (as indexed by her youth and attractiveness) and when the perceived probability of her sexual infidelity is greater (Buss and Shackelford 1997). In addition, men who are partnered to women who have characteristics that make them more likely to commit sexual infidelity guard their partners more intensely (Goetz *et al.* 2005), and men guard their partners more intensely when they are near ovulation – a time when an extra-pair copulation or sexual infidelity would be most costly for the in-pair man (Gangestad *et al.* 2002).

Recognizing that men's mate retention behaviours are manifestations of jealousy, Shackelford *et al.* (2005) investigated the relationships between men's mate retention behaviours and intimate partner violence, specifically whether some mate retention behaviours and seemingly innocuous romantic gestures may be harbingers of violence. Securing self-reports from men, partner reports from women and cross-spouse reports from married couples, Shackelford and his colleagues found that men's use of particular mate retention behaviours was related to partner violence in predictable ways. For example, men who dropped by unexpectedly to see what their partner was doing or who told their partner that they would 'die' if the woman ever left them were most likely to use serious violence against their partners, whereas men who attempted to retain their partners by expressing affection and displaying resources were least likely to use violence. These findings corroborated the results of research conducted by Wilson *et al.* (1995b), who found that women who affirmed statements such as, 'He insists on knowing who you are with and where you are at all times' and 'He tries to limit your contact with family or friends', were twice as likely to have experienced serious violence by their partners.

Sexual violence in intimate relationships and sexual jealousy

Between 10 and 26 per cent of women experience rape in marriage (e.g. Russell 1982; Finkelhor and Yllo 1985; Watts *et al.* 1998; Hadi 2000; Dunkle *et al.* 2004). Rape also occurs in non-marital intimate relationships. Goetz and Shackelford (2006) secured prevalence estimates of rape in intimate relationships from a sample of young men and from an independent sample of young women in a committed relationship for at least one year, but not necessarily married. Goetz and Shackelford documented that 7.3 per cent of men admitted to raping their current partner at least once, and 9.1 per cent of women admitted that they had experienced at least one rape by their current partner. Questions concerning sexual coercion and rape in relationships are emotionally loaded and may be subject to social desirability concerns. These percent-

ages therefore may be underestimates of the prevalence of rape in intimate relationships among young men and women who are not married.

Many hypotheses have been generated to explain why, across cultures, women are sexually coerced by their partners. Some researchers have hypothesized that sexual coercion in intimate relationships is motivated by men's attempts to dominate and control their partners (e.g. Frieze 1983; Bergen 1995, 1996; Watts *et al.* 1998; Gage and Hutchinson 2006) and that this expression of power is the product of men's social roles (e.g. Yllo and Straus 1990). Results relevant to this hypothesis are mixed. Several studies have found that physically abusive men are more likely than non-abusive men to sexually coerce their partners (e.g. Finkelhor and Yllo 1985; Donnelly 1993), a result that is consistent with the domination and control hypothesis. Gage and Hutchinson (2006), however, found that women's risk of sexual coercion by their partners is not related to measures assessing the relative dimensions of power in a relationship, such as who has more control over decision-making. That is, women partnered to men who hold the dominant position in the relationship are not more likely to experience sexual coercion by their partners than women partnered to men who do not maintain the dominant position in the relationship, a result that does not support the domination and control hypothesis. Although many researchers agree that *individual men* may sexually coerce their partners to gain or maintain dominance and control in the relationship, proponents of the domination and control hypothesis often argue that men are motivated *as a group* to exercise 'patriarchal power' or 'patriarchal terrorism' over women (e.g.Yllo and Straus 1990).

An alternative hypothesis has been advanced by researchers studying sexual coercion from an evolutionary perspective: sexual coercion in intimate relationships may be related to paternal uncertainty, with the occurrence of sexual coercion related to a man's suspicions of his partner's sexual infidelity (Thornhill and Thornhill 1992; Wilson and Daly 1992; Camilleri 2004; Lalumière *et al.* 2005; Goetz and Shackelford 2006). Sexual coercion in response to cues of his partner's sexual infidelity might function to introduce a male's sperm into his partner's reproductive tract at a time when there is a high risk of cuckoldry (i.e. when his partner has recently been inseminated by a rival male). This sperm competition hypothesis was proposed following recognition that forced in-pair copulation (i.e. partner rape) in non-human species followed female extra-pair copulations (sexual infidelities; e.g. Cheng *et al.* 1983; Lalumière *et al.* 2005) and that sexual coercion and rape in human intimate relationships often followed men's accusations of their partners' sexual infidelity (e.g. Russell 1982; Finkelhor and Yllo 1985). Before considering the case of partner rape in humans, we review briefly the animal literature on forced in-pair copulation. Examining the adaptive problems and evolved solutions to these problems in non-human animals may provide insight into the adaptive problems and evolved solutions in humans (and vice versa). Shackelford and Goetz (2006), for example, argued that because humans share with some avian species a similar mating system (social monogamy) and similar adaptive problems (e.g. paternal uncertainty, paternal investment in offspring, cuckoldry), humans and some birds may have evolved similar solutions to these adaptive problems.

Forced in-pair copulation in non-human animals

Instances of forced in-pair copulation are relatively rare in the animal kingdom, primarily because males and females of most species (over 95 per cent) do not form long-term pair bonds (Andersson 1994). Without the formation of a pair bond, forced in-pair copulation, by definition, cannot occur. Many avian species form long-term pair bonds, and researchers have documented forced in-pair copulation in several of these species (Goodwin 1955; Cheng *et al.* 1983; Birkhead *et al.*1989). Forced in-pair copulation reliably occurs immediately after female extra-pair copulations, intrusions by rival males and female absence in many species of waterfowl (e.g. Cheng *et al.* 1983; McKinney *et al.* 1983) and other avian species (e.g. Goodwin 1955; Birkhead *et al.* 1989; Valera *et al.* 2003). Forced in-pair copulation following observed or suspected extra-pair copulation in these avian species is often interpreted as a sperm competition tactic (Cheng *et al.* 1983; Lalumière *et al.* 2005).

Sperm competition is a form of male-male post-copulatory competition. Sperm competition occurs when the sperm of two or more males concurrently occupy the reproductive tract of a female and compete to fertilize her egg(s) (Parker 1970). Males can compete for mates, but if two or more males have copulated with a female within a sufficiently short period of time, males must compete for fertilization. Thus, the observation that in many avian species forced in-pair copulation immediately follows female extra-pair copulations has been interpreted as a sperm competition tactic because the in-pair male's forced in-pair copulation functions to place his sperm in competition with sperm from an extra-pair male (Cheng et al. 1983; Birkhead et al. 1989). Reports of forced in-pair copulation in non-human species make it difficult to claim that males rape their partners to humiliate, punish or control them – as is often argued by some social scientists who study rape in humans (e.g. Pagelow 1988).

Mounting evidence suggests that sperm competition has been a recurrent and important feature of human evolutionary history. Psychological, behavioural, physiological, anatomical and genetic evidence indicates that ancestral women sometimes mated with multiple men within sufficiently short time periods so that sperm from two or more males concurrently occupied the reproductive tract of the woman (e.g. Smith 1984; Baker and Bellis 1993; Wyckoff et al. 2000; Pound 2002; Shackelford et al. 2002; Gallup et al. 2003; Goetz et al. 2005; Kilgallon and Simmons 2005; Shackelford and Goetz 2007). This adaptive problem led to the evolution of adaptive solutions to sperm competition. For example, men display copulatory urgency, perform semen-displacing behaviours, and adjust their ejaculates to include more sperm when the likelihood of female infidelity is higher (Baker and Bellis 1993; Shackelford et al. 2002; Goetz et al. 2005).

The selective importance of sperm competition in humans, however, is an issue of scholarly debate. Those questioning the application of sperm competition to humans (e.g. Dixson 1998; Birkhead 2000) do not contend that sperm competition in humans is not possible or unlikely, but that it may not be as intense as in other species with adaptations to sperm competition. When considering all the evidence of adaptations to sperm competition in men and current non-paternity rates (e.g. Bellis *et al.* 2005; Anderson 2006), it is reasonable to conclude that sperm competition may have been a recurrent and selectively important feature of human evolutionary

history. Below, we discuss theory and research related to forced in-pair copulation in humans. In keeping with the established animal literature and a comparative evolutionary perspective, we often refer to partner rape in humans as forced in-pair copulation – the forceful act of sexual intercourse by a man against his partner's will.

Forced in-pair copulation in humans

Noting that instances of forced in-pair copulation follow extra-pair copulations in waterfowl and documentation that forced in-pair copulation in humans often follows accusations of female infidelity (e.g. Russell 1982; Finkelhor and Yllo 1985), Wilson and Daly (1992) suggested in a footnote that 'sexual insistence' in the context of a relationship might act as a sperm competition tactic in humans as well. Sexual coercion in response to cues of his partner's sexual infidelity might function to introduce a male's sperm into his partner's reproductive tract at a time when there is a high risk of cuckoldry.

Thornhill and Thornhill (1992) also hypothesized that forced in-pair copulation may function as an anti-cuckoldry tactic designed over human evolutionary history as a result of selective pressures associated with sperm competition. Thornhill and Thornhill argued that a woman who resists or avoids copulating with her partner might thereby be signalling to him that she has been sexually unfaithful and that the forced in-pair copulation functions to decrease his paternal uncertainty. Thornhill and Thornhill argued that the fact that the rape of a woman by her partner is more likely to occur during or after a break-up — times in which men express greatest concern about female sexual infidelity – provides preliminary support for the hypothesis. Thornhill and Thornhill, for example, cited research by Frieze (1983) indicating that women who were physically abused and raped by their husbands rated them to be more sexually jealous than did women who were abused but not raped. Similar arguments were presented by Thornhill and Palmer (2000) and Lalumière et al. (2005) suggesting that antisocial men who suspect that their female partner has been sexually unfaithful may be motivated to engage in forced in-pair copulation.

Both indirect and direct empirical evidence supporting this hypothesis has been documented. Frieze (1983) and Gage and Hutchinson (2006), for example, found that husbands who raped their wives were more sexually jealous than husbands who did not. Shields and Hanneke (1983) documented that victims of forced in-pair copulation were more likely to have reported engaging in extramarital sex than women who were not raped by their in-pair partner. Studying men's partner-directed insults, Starratt et al. (2007) found in two studies that a reliable predictor of a man's sexual coercion is his accusations of his partner's sexual infidelity. Specifically, men who accuse their partners of being unfaithful (endorsing items such as 'I accused my partner of having sex with many other men' and 'I called my partner a "whore" or a "slut" ') were more likely to sexually coerce them.

Direct empirical evidence supporting this hypothesis is accumulating. Camilleri (2004), for example, found that the risk of a partner's infidelity predicted sexual

coercion among male participants but not female participants. It is biologically impossible for women to be cuckolded, so one would not expect women to have a sperm competition psychology that would generate sexually coercive behaviour in response to a partner's sexual infidelity. Goetz and Shackelford (2006) documented in two studies that a man's sexual coercion in the context of an intimate relationship is related positively to his partner's infidelities. According to men's self-reports and women's partner reports, men who used more sexual coercion in their relationship were partnered to women who had been, or were likely to be, unfaithful, and these men were also likely to use more mate-retention behaviours.

Because cuckoldry is associated with substantial reproductive costs for males of paternally investing species, men are expected to have evolved adaptations to address the adaptive problem of paternal uncertainty. One such adaptation may be a sperm competition tactic whereby sexual coercion and forced in-pair copulation function to increase the likelihood that the in-pair male, and not a rival male, sires the offspring that his partner might produce. It may be that a proportion of sexually coercive behaviours (in the context of an intimate relationship) are performed by antisocial men who aim to punish, humiliate or control their partners independent of their perception of cuckoldry risk. We are not arguing that all sexual coercion and forced in-pair copulations are the output of evolved mechanisms designed to reduce the risk of being cuckolded. Instead, we are suggesting that sexual coercion might sometimes be the result of male-evolved psychology associated with male sexual jealousy.

Conclusions

It is possible to study intimate partner violence with little or no knowledge of evolution. Most do. Those who study intimate partner violence from an evolutionary perspective often ask questions that are different from those asked by most clinical and forensic psychologists. Evolutionary psychologists are interested in ultimate (or distal) explanations, referring to the evolved function of a trait, behaviour or mechanism. This is in contrast to proximate explanations, which refer to the immediate causes of a trait, behaviour or mechanism. Although the explanations are different, they are compatible and equally important (Sherman and Alcock 1994). A fuller understanding of intimate partner violence will be reached when both ultimate and proximate explanations are provided.